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This fully updated ninth edition of The Technology, Media and Telecommunications Review provides an overview of evolving legal constructs in 26 jurisdictions around the world. It is intended as a business-focused framework rather than a legal treatise, and provides a general overview for those interested in evolving law and policy in the rapidly changing TMT sector.

Broadband connectivity (regardless of the technology used) continues to drive law and policy in this sector. Next-generation wireless connectivity will be provided by a network of networks, with multiple technologies – both wired and wireless, using licensed and unlicensed spectrum – playing an integral role in delivering service to the end user. By way of example, free WiFi service in homes and businesses today carries the majority of the data that is transmitted to smartphones and wireless tablets that also rely on paid service from a wireless carrier. And wireless carriers otherwise rely on a variety of technologies to ultimately connect the customer to the internet or someone on the other end of the phone.

The disruptive effect of new technologies and new ways of connecting people and devices creates challenges around the world as regulators both seek to facilitate digital inclusion by encouraging the deployment of state-of-the-art communications infrastructure to all citizens, and also seek to use the limited radio spectrum more intensively than before. At the same time, technological innovation makes it commercially practical to use large segments of ‘higher’ parts of the radio spectrum for the first time. Moreover, the global nature of TMT companies requires them to engage on these issues in different ways than before.

A host of new demands, such as the developing internet of things, the need for broadband service to aeroplanes, vessels, motor vehicles and trains, and the general desire for faster and better mobile broadband service no matter where we go, all create pressures on the existing spectrum environment. Regulators are being forced to both ‘reform’ existing spectrum bands and rewrite their licensing rules, so that new services and technologies can access spectrum previously set aside for other purposes that either never developed or no longer have the same spectrum needs. Regulators also are being forced to seek means for coexistence in the same spectrum between different services in ways previously not contemplated.

Many important issues are being studied as part of the preparation for the next World Radio-communication Conference (WRC) of the International Telecommunication Union (ITU), to be held in 2019. No doubt, this conference will lead to changes in some long-standing radio spectrum allocations. And the conference also may include some political spectrum allocations that are based on pressures brought by well-heeled industries, rather than logic or sound policy. Indeed, these pressures already exist around the world in decisions being made by national regulators outside of and before the WRC.

Legacy terrestrial telecommunications networks designed primarily for voice are being upgraded to support the broadband applications of tomorrow. As a result, many governments
are investing in or subsidising broadband networks to ensure that their citizens can participate in the global economy, and have universal access to the vital information, entertainment and educational services now delivered over broadband. Many governments are re-evaluating how to regulate broadband providers, whose networks have become essential to almost every citizen. However, many policymakers still have not solved the problem caused when their incumbent service providers fail to extend service to all of their citizens for business reasons – because those businesses deem ‘unprofitable’ those who are the hardest to serve. Curiously, policymakers sometimes exacerbate this failure by resorting to spectrum auctions to award the right to provide service in a given frequency band to the highest bidder, failing to require service availability to everyone in the auctioned area, and then making the auction winner the gatekeeper for anyone else who wants to use the same spectrum. Too often, decisions are based (explicitly or implicitly) on expected auction revenues, which consumers end up paying for in the end through higher costs of service. Far too infrequently do policymakers factor in the benefits of ensuring ubiquitous connectivity: new jobs, economic growth, security, social inclusion, and improvements in healthcare, education and food production, to name a few. Indeed, treating spectrum as a property right rather than as the valuable public resource it is often leads to perverse results in the marketplace.

Convergence, vertical integration and consolidation can also lead to increased focus on competition and, in some cases, to changes in the government bodies responsible for monitoring and managing competition in the TMT sector. Similarly, many global companies now are able to focus their regulatory activities outside their traditional home, and in jurisdictions that provide the most accommodating terms and conditions.

Changes in the TMT ecosystem, including increased opportunities to distribute video content over broadband networks, have led to policy focuses on issues such as network neutrality: the goal of providing some type of stability for the provision of the important communications services on which almost everyone relies, while also addressing the opportunities for mischief that can arise when market forces work unchecked. While the stated goals of that policy focus may be laudable, the way in which resulting law and regulation are implemented has profound effects on the balance of power in the sector, and also raises important questions about who should bear the burden of expanding broadband networks to accommodate capacity strains created by content providers and to facilitate their new businesses.

The following chapters describe these types of developments around the world, as well as the liberalisation of foreign ownership restrictions, efforts to ensure consumer privacy and data protection, and measures to ensure national security and facilitate law enforcement. Many tensions exist among the policy goals that underlie the resulting changes in law. Moreover, cultural and political considerations often drive different responses at the national and the regional level, even though the global TMT marketplace creates a common set of issues.

I thank all of the contributors for their insightful contributions to this publication, and I hope you will find this global survey a useful starting point in your review and analysis of these fascinating developments in the TMT sector.

John P Janka
Latham & Watkins LLP
Washington, DC
November 2018
LIST OF ABBREVIATIONS

3G  
Third-generation (mobile wireless technology)

4G  
Fourth-generation (mobile wireless technology)

5G  
Fifth-generation (mobile wireless technology)

ADSL  
Asymmetric digital subscriber line

AMPS  
Advanced mobile phone system

ARPU  
Average revenue per user

BIAP  
Broadband internet access provider

BWA  
Broadband wireless access

CATV  
Cable TV

CDMA  
Code division multiple access

CMTS  
Cellular mobile telephone system

DAB  
Digital audio broadcasting

DECT  
Digital enhanced cordless telecommunications

DDoS  
Distributed denial-of-service

DoS  
Denial-of-service

DSL  
Digital subscriber line

DTH  
Direct-to-home

DTTV  
Digital terrestrial TV

DVB  
Digital video broadcast

DVB-H  
Digital video broadcast – handheld

DVB-T  
Digital video broadcast – terrestrial

ECN  
Electronic communications network

ECS  
Electronic communications service

EDGE  
Enhanced data rates for GSM evolution

FAC  
Full allocated historical cost

FBO  
Facilities-based operator

FCL  
Fixed carrier licence

FTNS  
Fixed telecommunications network services

FTTB  
Fibre to the building
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>FTTC</td>
<td>Fibre to the curb</td>
</tr>
<tr>
<td>FTTH</td>
<td>Fibre to the home</td>
</tr>
<tr>
<td>FTTN</td>
<td>Fibre to the node</td>
</tr>
<tr>
<td>FTTP</td>
<td>Fibre to the premises</td>
</tr>
<tr>
<td>FTTx</td>
<td>Fibre to the x</td>
</tr>
<tr>
<td>FWA</td>
<td>Fixed wireless access</td>
</tr>
<tr>
<td>Gb/s</td>
<td>Gigabits per second</td>
</tr>
<tr>
<td>GB/s</td>
<td>Gigabytes per second</td>
</tr>
<tr>
<td>GSM</td>
<td>Global system for mobile communications</td>
</tr>
<tr>
<td>HDTV</td>
<td>High-definition TV</td>
</tr>
<tr>
<td>HITS</td>
<td>Headend in the sky</td>
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<tr>
<td>HSPA</td>
<td>High-speed packet access</td>
</tr>
<tr>
<td>IaaS</td>
<td>Infrastructure as a service</td>
</tr>
<tr>
<td>IAP</td>
<td>Internet access provider</td>
</tr>
<tr>
<td>ICP</td>
<td>Internet content provider</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communications technology</td>
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<tr>
<td>IoT</td>
<td>Internet of things</td>
</tr>
<tr>
<td>IPTV</td>
<td>Internet protocol TV</td>
</tr>
<tr>
<td>IPv6</td>
<td>Internet protocol version 6</td>
</tr>
<tr>
<td>ISP</td>
<td>Internet service provider</td>
</tr>
<tr>
<td>kb/s</td>
<td>Kilobits per second</td>
</tr>
<tr>
<td>kB/s</td>
<td>Kilobytes per second</td>
</tr>
<tr>
<td>LAN</td>
<td>Local area network</td>
</tr>
<tr>
<td>LRIC</td>
<td>Long-run incremental cost</td>
</tr>
<tr>
<td>LTE</td>
<td>Long Term Evolution (4G technology for both GSM and CDMA cellular carriers)</td>
</tr>
<tr>
<td>Mb/s</td>
<td>Megabits per second</td>
</tr>
<tr>
<td>MB/s</td>
<td>Megabytes per second</td>
</tr>
<tr>
<td>MMDS</td>
<td>Multichannel multipoint distribution service</td>
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<tr>
<td>MMS</td>
<td>Multimedia messaging service</td>
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<tr>
<td>MNO</td>
<td>Mobile network operator</td>
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<tr>
<td>MSO</td>
<td>Multi-system operator</td>
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<tr>
<td>M2M</td>
<td>Machine-to-machine</td>
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<tr>
<td>MVNO</td>
<td>Mobile virtual network operator</td>
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<tr>
<td>MWA</td>
<td>Mobile wireless access</td>
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<tr>
<td>NFC</td>
<td>Near field communication</td>
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<td>NGA</td>
<td>Next-generation access</td>
</tr>
<tr>
<td>NIC</td>
<td>Network information centre</td>
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<tr>
<td>NRA</td>
<td>National regulatory authority</td>
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<tr>
<td>OTT</td>
<td>Over-the-top (providers)</td>
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<tr>
<td>PaaS</td>
<td>Platform as a service</td>
</tr>
<tr>
<td>PNETS</td>
<td>Public non-exclusive telecommunications service</td>
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<tr>
<td>PSTN</td>
<td>Public switched telephone network</td>
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<tr>
<td>RF</td>
<td>Radio frequency</td>
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<tr>
<td>SaaS</td>
<td>Software as a service</td>
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<tr>
<td>SBO</td>
<td>Services-based operator</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>SMS</td>
<td>Short message service</td>
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<td>STD–PCOs</td>
<td>Subscriber trunk dialling–public call offices</td>
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<td>UAS</td>
<td>Unified access services</td>
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<tr>
<td>UASL</td>
<td>Unified access services licence</td>
</tr>
<tr>
<td>UCL</td>
<td>Unified carrier licence</td>
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<tr>
<td>UHF</td>
<td>Ultra-high frequency</td>
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<tr>
<td>UMTS</td>
<td>Universal mobile telecommunications service</td>
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<tr>
<td>USO</td>
<td>Universal service obligation</td>
</tr>
<tr>
<td>UWB</td>
<td>Ultra-wideband</td>
</tr>
<tr>
<td>VDSL</td>
<td>Very high speed digital subscriber line</td>
</tr>
<tr>
<td>VHF</td>
<td>Very high frequency</td>
</tr>
<tr>
<td>VOD</td>
<td>Video on demand</td>
</tr>
<tr>
<td>VoB</td>
<td>Voice over broadband</td>
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<tr>
<td>VoIP</td>
<td>Voice over internet protocol</td>
</tr>
<tr>
<td>W-CDMA</td>
<td>Wideband code division multiple access</td>
</tr>
<tr>
<td>WiMAX</td>
<td>Worldwide interoperability for microwave access</td>
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Chapter 1

AUSTRALIA

Angus Henderson, Richard Dampney and Irene Halforty

I  OVERVIEW

The TMT sectors in Australia are currently in the middle of several transitions, among the most significant of which is the transition to the wholesale-only, government-owned national broadband network: nbn™ network. This is creating a significant shift in the fixed telecommunications industry structure as Australia moves to a structurally separated model focused on services-based competition.

Convergence within the TMT sectors continues to take place, with traditional broadcast media facing increasing competition from OTT, on-demand media providers that use broadband networks to deliver their content. However, as outlined below, Australia retains separate regulatory regimes for broadcasting and telecommunications (despite having a converged regulator in the form of the Australian Communications and Media Authority (ACMA)).

II  REGULATION

i  The regulators

The ACMA, established in 2005, is the converged regulator for the internet, broadcasting, telecommunications and radiocommunications sectors. The key responsibilities of the ACMA include:

- licensing and regulating telecommunications carriers, carriage service providers and content service providers;
- licensing and regulating RF spectrum;
- regulating television and radio broadcasting, including content regulation;
- regulating telecommunications and radiocommunications equipment; and
- regulating telephone and email marketing, and online content.

The structure and powers of the ACMA are set out in the Australian Communications and Media Authority Act 2005. The key pieces of legislation administered by the ACMA are the Telecommunications Act 1997, which regulates carriage and content services; the Radiocommunications Act 1992, which regulates RF spectrum; and the Broadcasting Services Act 1992, which regulates television and radio industry structure and content.

1 Angus Henderson is a partner, Richard Dampney is a senior associate and Irene Halforty is a lawyer at Webb Henderson.
The Australian Competition and Consumer Commission (ACCC) is responsible for access regulation in the telecommunications sector, and also oversees the telecommunications-specific anticompetitive conduct and consumer protection provisions within the Competition and Consumer Act 2010 (CCA).

The Department of Communications and the Arts is the government department responsible for developing policy relevant to the TMT sectors.

### ii Regulated activities

A carrier licence is required for owners of network units that are used to provide fixed, mobile or satellite services to the public. A network unit includes line links (e.g., optical fibre and copper links) as well as radiocommunications transmitters and receivers (e.g., mobile telephony base stations and satellite-based facilities). The owner of the network unit must apply to the ACMA for a carrier licence. The application must be accompanied by a non-refundable application fee of A$2,122 (as at September 2018). The ACMA has 20 business days to make a decision in respect of issuing a carrier licence and must consult with the Attorney General’s Department. If no decision is made within 20 business days, the application is deemed to have been refused. Carriers must pay an annual licence fee to the ACMA comprising a fixed amount as well as a variable amount based on the carrier’s eligible revenue (being the gross sales revenue of the carrier and related entities, less any proscribed revenue and expense deductions). A carrier licence has no set duration, and remains in force until it is either surrendered by the licensee or cancelled by the ACMA.

No licence is required for entities that provide telecommunications services to the public without owning any network units. These entities are classified as carriage service providers and must comply with a range of regulatory obligations, including wholesale access, interception and data retention obligations. A similar regime applies to entities providing content services to the public (e.g., pay-TV services) without owning any network units. Such entities are classified as content service providers and are subject to certain regulatory obligations without requiring a licence.

Carriage service providers and content service providers that provide standard telephone services, public mobile telecommunications services or internet access services must also join the Telecommunications Industry Ombudsman (TIO) scheme. In addition, providers of standard telephone services must provide access to local, national and international calls, emergency service numbers, operator-assisted and directory services, and itemised billing (including itemised local calls on request).

Since April 2015, pre-selection obligations only apply to providers of fixed-line telephony services over the legacy PSTN or integrated services digital networks, rather than all fixed-line telephony providers. These changes were effected through the Telecommunications Legislation Amendment (Deregulation) Act 2015, which more broadly seeks to remove outdated regulation of the telecommunications sector.

There are three types of radiocommunications licences overseen by the ACMA. A spectrum licence is required for the use of a particular RF band within a particular geographic area. The spectrum licensing regime is being reviewed by the ACMA (see Section IV). Currently, spectrum licences are allocated using a market-based approach, typically an
Auction, and are issued for up to 15 years. Spectrum licences are technology-neutral, allowing licensees to operate any type of equipment for any purpose as long as they comply with licence conditions and certain technical standards.

An apparatus licence is an individual licence required for the operation of radiocommunications devices under specific technical conditions of use relating to such matters as frequency, power and geographic area. There are a number of apparatus licence types, including, *inter alia*, for aircraft, broadcasting, datacasting, defence and scientific transmitters, as well as defence, fixed and space receivers.

The operation of certain radiocommunications devices is regulated through a class licence (rather than an individual apparatus licence). Following industry consultation, the ACMA has introduced the Radiocommunications (Intelligent Transport Systems) Class Licence 2017 to support intelligent transport systems (ITS), which will enable vehicle-to-vehicle, vehicle-to-person or vehicle-to-infrastructure communications through the use of complying wireless technologies and devices. Other devices that the ACMA currently authorises through a class licence include satellite communications equipment and Wi-Fi devices.

### Ownership and market access restrictions

There are now three key restrictions on cross-ownership of media companies:

- **the two-to-a-market radio rule**, which prevents control of more than two commercial radio licences in the same licence area;
- **the one-to-market TV rule**, which prevents control of more than one commercial TV licence in the same licence area; and
- **the number of voices rule**, which prevents cross-media mergers or acquisitions that result in the number of independent media operations falling below five voices in metropolitan radio licence areas and four voices in regional radio licence areas (the four/five rule).

These restrictions on cross-ownership of media companies were watered down significantly by the Broadcasting Legislation Amendment (Broadcasting Reform) Act 2017. That legislation repealed, from 17 October 2017, the following key restrictions on media control and diversity rules that previously applied: the two out of three rule, which prevented a person from being in a position to exercise control of more than two of the three media platforms (commercial television, commercial radio and newspapers) in the same licence area; and the 75 per cent reach rule, which prevented a person from being in a position to exercise control of commercial television broadcast licences whose total licence area populations are greater than 75 per cent of the Australian population.

Foreign ownership restrictions depend on the specific sector in which the target entity is located. For foreign investments in the telecommunications sector, the Foreign Investment Review Board must be notified if a foreign person (or several foreign people) acquires a substantial interest in an Australian corporation whose assets exceed A$252 million (indexed

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3 The ITS class licence was made under Section 132 of the Radiocommunications Act 1992 and is consistent with the ITS arrangements in other jurisdictions. This harmonisation with wider global developments will likely facilitate the introduction of the latest transport communications technology in Australia’s ITS arrangements with wider global developments.
annually). A substantial interest will have been acquired if a single foreign person holds 20 per cent or more, or several foreign persons hold 40 per cent or more, of the issued shares, units or voting power of the target corporation.

For investments in the media sector, the Foreign Investment Review Board must be notified if a foreign person seeks to acquire 5 per cent or more of an Australian media business, regardless of value. A foreign person is defined as an individual who is not ordinarily a resident in Australia or a corporation where one or more foreign persons hold a combined total of 20 per cent or more of the issued shares, units or voting power.

In addition, from September 2018, a foreign person with company interests of 2.5 per cent or more in an Australian media company is required to notify the ACMA of its interests within 30 days. The ACMA includes details of these notifications in a publicly available register of foreign owners of media assets.

The foreign investment notification rules for the media and telecommunications sectors apply even to investors from countries that have free trade agreements with Australia, such as Chile, China, Japan, New Zealand, South Korea and the United States.

iv Transfers of control and assignments

A carrier licence cannot be assigned or transferred, since it is granted to a particular entity. Spectrum can be freely traded in the form of spectrum trading units (STUs), which refer to a particular block of bandwidth within a given geographic area. A spectrum licensee can transfer some or all of the STUs within the scope of its licence. This means that spectrum licences can effectively be divided or amalgamated to respond to market-based needs.

Apparatus licences are also generally transferrable. An application must be lodged to the ACMA and be signed by both the original licensee and the proposed new licensee. The ACMA has the power to declare that particular types of apparatus licence are not transferrable or that, in specified circumstances, an apparatus licence is not transferrable.

Mergers and acquisitions in the TMT sectors are subject to the general merger control regime overseen by the ACCC. Under this regime, there is no requirement for parties to a merger to notify the ACCC before completing a merger. However, under Section 50 of the CCA, the ACCC (or a third party) can investigate a merger and take court action if a merger or acquisition would have the effect or likely effect of substantially lessening competition in any market. If the parties to a merger want to obtain greater certainty in relation to the competition risks of the merger, there are two optional pre-merger approval processes that a party may apply for:

a merger authorisations: the ACCC will grant a merger authorisation if either the proposed acquisition would not be likely to substantially lessen competition, or the likely public benefit from the proposed acquisition outweighs the likely public detriment. If the ACCC grants a merger authorisation, the ACCC or a third party cannot take any action in respect of the merger under Section 50 of the CCA. The ACCC must make a

4 Broadcasting Legislation Amendment (Foreign Media Ownership, Community Radio and Other Measures) Act 2018, Section 74F.

5 These processes were amended by the introduction of the Competition and Consumer Amendment (Competition Policy Review) Act 2017 and the Competition and Consumer Amendment (Misuse of Market Power) Act 2017 in November 2016.
determination within 90 days (unless that time period is extended with the consent of the applicant). Failure by the ACCC to make a determination within the 90-day time limit is deemed as a refusal to grant authorisation.

**b informal merger review:** the ACCC provides an indication of its views on whether a merger is likely to breach Section 50 of the CCA. While an informal merger clearance may provide merger parties with a significant level of comfort regarding the ACCC’s position, it does not prevent the ACCC or a third party from taking action against the merger parties at a later date under Section 50 of the CCA. There are no formal time frames within which the ACCC must provide informal clearance; however, the indicative time frame for this process is six to eight weeks.

In undertaking a media merger assessment, the ACCC will consider the impact of the proposed merger on competition and media diversity, access to key content, the impact of technological change, two-sided markets and network effects, bundling and foreclosure, and minority shareholdings. An applicant or person who has a sufficient interest in a merger authorisation may appeal an ACCC determination to the Australian Competition Tribunal.

### III TELECOMMUNICATIONS AND INTERNET ACCESS

**i Internet and internet protocol regulation**

The ACMA considers providers of managed VoIP services to be carriage service providers. This is the same regulatory category that mobile and fixed telephony providers sit within, and involves a range of regulatory obligations, including membership of the TIO scheme, consumer protection obligations, obligations to comply with the numbering plan and provide number portability, and lawful access and interception obligations.

Moreover, VoIP services that allow users to make calls to, and receive calls from, traditional PSTN telephony services are treated as standard telephone services. This entails certain additional obligations, such as providing operator and directory assistance services, access to emergency call services, access to the National Relay Service, and itemised billing.

OTT VoIP services (provided over an existing carriage service), as well as OTT messaging services, are not subject to the same degree of regulation. The Department of Communications and the Arts and the ACMA do not currently have any definitive plans to regulate OTT IP-based services.

**ii Universal service**

A universal service regime was created by the Telecommunications (Consumer Protection and Service Standards) Act 1999. The regime requires Telstra, which has been designated as the default universal service provider, to ensure that standard telephone services and payphones are reasonably accessible to all Australians on an equitable basis. The supply of standard telephone services under the USO is subject to a range of minimum performance standards and benchmarks, including maximum periods for connecting a new service and for rectifying a fault.

The statutory USO is implemented through the Telstra Universal Service Obligation Performance (TUSOP) Agreement entered into between the government and Telstra in July 2012. The TUSOP Agreement lasts for a period of 20 years, and involves the government...
paying Telstra A$253 million per annum for the supply of standard telephone services and A$44 million per annum for the supply, installation and maintenance of payphones under the USO.

The costs of the universal service regime are funded through the telecommunications industry levy, which is imposed on all carriers with eligible revenue in excess of A$25 million. The universal service regime has been overseen by the Department of Communications and the Arts since 1 July 2015. It was previously administered by the Telecommunications Universal Service Management Agency.

The government does not directly subsidise the construction of broadband infrastructure or the use of retail broadband services. However, in 2009, the government set up a state-owned corporation, NBN Co (known as nbn) to design, build and operate a wholesale-only next-generation network. Currently, nbn relies on government funding, and earns revenue primarily by selling wholesale (Layer 2 bitstream) access to its network to retail telecommunications operators.

According to the government’s ‘Telecommunications infrastructure in new developments’ policy (issued in March 2015), nbn has an infrastructure provider of last resort (IPOLR) obligation in relation to new property developments that are within its fixed network footprint (or that will be within the next 12 months), or where a development has 100 lots or more. The IPOLR obligation requires nbn to roll out high-speed broadband infrastructure to these developments on request from the developer.

On 22 October 2015, the Regional Telecommunications Independent Review Committee (RTIRC) released its final report. The RTIRC was established by the government to review the adequacy of telecommunications services in regional, rural and remote parts of Australia. The final report made a series of recommendations, including a proposal to reform the universal service regime and to provide subsidies for nbn’s non-commercial fixed wireless and satellite services through a new consumer communication fund.

Following the release of the RTIRC’s final report, the government requested the Productivity Commission to hold an inquiry into the future direction of the USO, the final report of which was released in June 2017. The report provides a range of recommendations regarding the future of universal access to a minimum level of retail telecommunication services, with its key findings including the fact that the USO should be wound up by 2020; broadband via the nbn™ network and mobile networks will increasingly be the main medium for voice services; and to the extent that there is any remaining availability, accessibility or affordability gaps, these should be addressed by specific government programmes rather than by way of an industry levy.

In December 2017, the government released its response to the Productivity Commission’s report outlining its intention to establish a universal service guarantee (USG). The USG will provide all Australian premises (regardless of their location) with access to both voice and broadband services delivered on a commercial basis by the market in the first instance, or targeted government measures where warranted. The USG will leverage the nbn™ network, with access to the network underpinned by the statutory infrastructure provider legislation currently before Parliament. The government established a USO Taskforce responsible for developing delivery options for the USG, including examining the

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feasibility and cost implications of providing alternative means for providing voice services to premises in nbn’s satellite footprint, the potential impact on nbn costs and its network design if premises serviced by Telstra under the USO migrate to the nbn™ network, and where and when it may be appropriate for Telstra to reduce the number of payphones provided under the USO.

In connection with the release of the Productivity Commission’s report, in June 2017, the government also introduced into Parliament the Telecommunications Reform Package (TRP). The TRP includes the Telecommunications Legislation Amendment (Competition and Consumer) Bill 2017, which aims to establish statutory infrastructure provider (SIP) obligations to ensure that all Australians have access to a high-speed broadband network, with nbn becoming the default SIP; clarify the wholesale-only rules that apply to high speed broadband networks; and enforce functional separation for other wholesale and retail carriers.

Additionally, the TRP proposes to establish a regional broadband scheme (RBS) via the Telecommunications (Regional Broadband Scheme) Charge Bill 2017. The RBS is intended to provide sustainable industry funding for the loss-making fixed wireless and satellite networks in regional Australia that are owned by nbn. This funding, which is expected to amount to A$9.8 billion over 30 years, will have a 95 per cent reliance on internal cross-subsidies within nbn, with the remaining 5 per cent paid for by competing nbn-comparable wholesale broadband networks. Both the Telecommunications Legislation Amendment (Competition and Consumer) Bill 2017 and the Telecommunications (Regional Broadband Scheme) Charge Bill 2017 are currently before the Senate.

The government (in partnership with the state and territory governments) has also invested in the improvement of mobile coverage in remote and regional Australia through its mobile black spot programme, which was launched in June 2015. The mobile black spot programme is over halfway complete, with 572 base stations activated (as at 30 June 2018), and all 867 base stations funded under the first three rounds of the programme are expected to be operational by 30 June 2019. The government announced in June 2018 that it will invest a further A$25 million towards the mobile black spot programme.

In May 2018, the Department for Communications and the Arts appointed an independent committee to undertake a review of regional telecommunication services (2018 Regional Telecommunications Review), as is required every three years by Part 9B of the Telecommunications (Consumer Protection and Service Standards) Act 1999. The 2018 Regional Telecommunications Review will consider how rural Australians can maximise the economic and social benefits that modern telecommunication services can provide and undertake an analysis of the coverage achieved under the mobile black spot programme. The committee was expected to report to the Minister for Regional Communications by 30 September 2018. However, as at November 2018 there has been no public announcement regarding the outcome of this Review.

iii Restrictions on the provision of service

There is currently no price regulation of retail telecommunications services. On 18 March 2015, the Minister of Communications revoked retail price control arrangements that applied to Telstra’s fixed-line voice services. However, the Minister retains the power to reintroduce retail price regulation at a future date.

Wholesale access regulation is effected through the telecommunications-specific access regime in Part XIC of the CCA. The ACCC has the power to declare a listed carriage service or a service that facilitates the supply of a listed carriage service. Once a service is declared by the ACCC, all providers of that service are subject to a range of standard access obligations. These include an obligation to supply the service on request (with certain exceptions) and to take all reasonable steps to ensure that the technical and operational quality of the service (and of fault detection, handling and rectification) that is equivalent to that which the access provider provides to itself.

The telecommunications services declared by the ACCC include, among others, fixed origination and termination, mobile termination, unconditioned local loop service, line sharing service, wholesale line rental, wholesale ADSL service, and domestic transmission capacity service.

On 31 August 2018, the ACCC announced an inquiry seeking views on the future of the existing declarations, due to expire on 31 July 2019, in respect of the unconditioned local loop service, line sharing service, wholesale line rental, PSTN originating access (OA) and PSTN terminating access (TA). The ACCC is considering whether these declarations should be remade, further extended, revoked, varied, allowed to expire, or extended and then allowed to expire. Consultation closed on 12 October 2018.

In October 2017, the ACCC decided not to declare wholesale domestic mobile roaming services. Legal proceedings commenced by Vodafone challenging aspects of the conduct of the inquiry were dismissed by the Federal Court on 21 December 2017.

The nbn™ network, which is a wholesale-only network, is subject to a slightly different set of access obligations. As the network operator, nbn has an obligation to supply any declared services that relate to nbn on request to an access seeker (with limited exceptions), and to not discriminate between access seekers in doing so. In November 2017, the ACCC announced a public inquiry into nbn’s wholesale service standard levels. The inquiry is still ongoing; however, the ACCC accepted a court-enforceable undertaking (on 11 September 2018) by nbn to make changes to its wholesale service level commitments and associated rebates.

There is no net neutrality-style regulation in Australia that prohibits carriage service providers from favouring or excluding certain content, applications, services or devices.

The Spam Act 2003, administered by the ACMA, makes it illegal to send commercial electronic messages with an Australian link without the express or inferred consent of the recipient. Electronic messages include emails, instant messages and messages sent using the SMS and MMS services. Commercial electronic messages must also contain a functional unsubscribe mechanism and accurate information about who authorised the sending of the message. Exemptions from these rules apply for purely factual messages, as well as messages from government bodies, registered political parties, registered charities and educational institutions (sent to current and past students and their households).8

In addition, the ACMA administers a Do Not Call Register, designed to prevent unsolicited telemarketing calls being made to fixed and mobile telephone numbers as well as marketing faxes. Users can register their telephone or fax number on the Do Not Call Register for free. Once a number is registered, it is prohibited to make unsolicited telemarketing calls to that number.

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8 Spam Act 2003 (Cth), Schedule 1.
calls or send marketing faxes to that number. Exemptions apply for public interest calls and faxes, including from government bodies, registered political parties, registered charities, educational institutions and political candidates.9

The ACMA also administers a number of other standards and codes of practice, including the Telecommunications Consumer Protections Code, which set out various specific requirements that carriage service providers and other entities are required to comply with (as applicable). On 1 July 2018, the ACMA introduced new complaints handling rules, which were designed to ensure carriage service providers effectively manage complaints in relation to consumer problems with nbn services.10

### Security

Lawful access and interception is governed by the Telecommunications (Interception and Access) Act 1979. Law enforcement agencies have the power to intercept telecommunications provided that they obtain a warrant from an eligible judge or member of the Administrative Appeals Tribunal. The Australian Security Intelligence Organisation (ASIO) only requires a warrant from the Attorney General to engage in the same activities. The interception regime is technology-neutral and applies to voice calls, faxes, SMS and MMS messages and IP-based communications (including email).

Carriers and carriage service providers are obliged to provide and maintain facilities enabling them to execute interception warrants. Carriers and carriage service providers must also lodge annual interception capability plans with the ACMA and the Attorney General’s Department. The costs of maintaining interception capabilities must be covered by carriers and carriage service providers, even though the requesting agencies pay for the costs of accessing the intercepted communications.

Australia acceded to the Council of Europe Convention on Cybercrime in March 2013. To implement its obligations under the Convention, a number of amendments were made to the existing legislation. These amendments allow law enforcement agencies and ASIO to issue notices to carriers that require them to store communications (including the content of communications) that assist in a specified domestic or foreign criminal or national security investigation. Unlike interception requests, these preservation notices do not require a warrant. However, the stored communications can only be accessed through a warrant issued by a judge or member of the Australian Appeals Tribunal.

From 18 September 2018, following the introduction of the Telecommunications and Other Legislation Amendment Act 2017, all carriers, carriage service providers and carriage service intermediaries are legally required to do their best to protect telecommunications networks and facilities owned, operated or used by the carrier or provider from unauthorised interference or unauthorised access to ensure the confidentiality of communications carried on, and of information contained on, telecommunications networks or facilities; and the availability and integrity of telecommunications networks and facilities. For carriers and carriage service providers, this obligation includes a requirement to maintain competent supervision of, and effective control over, telecommunication networks and facilities owned or operated by them. In addition, carriers and carriage service providers are required to

9 Do Not Call Register Act 2006 (Cth), Schedules 1 and 1A.
notify the Communications Access Co-ordinator of proposed changes to their networks and services that could have a material adverse impact on their ability to comply with these new obligations.

On 20 September 2018, the government introduced the Draft Exposure Telecommunications and Other Legislation Amendment (Assistance and Access) Bill 2018 in Parliament. Under that Bill, domestic and foreign designated communication providers would be required to provide assistance (including, where required, to develop a capability to provide the assistance requested) to law enforcement and security agencies to access certain communications.

In addition, carriers and carriage service providers are now also subject to a mandatory metadata retention regime. This requires them to retain, for a period of two years, metadata relating to the communications of their subscribers (e.g., the phone numbers of the parties to a call or message, the time and duration of a call, the email address of the sender and recipient, and the time the email message was sent). The regime does not require retention of the content of a communication or web browsing history.

Personal information is regulated through the Privacy Act 1988 and the Australian Privacy Principles (APPs), which came into force in March 2014. The APPs apply to both government and private entities. In particular, the APPs require that, before an entity discloses personal information overseas, it must take reasonable steps to ensure that the recipient of the personal information does not breach the APPs (e.g., through a contractual obligation). From 22 February 2018, APP entities are required to notify the Office of the Australian Information Commissioner (OAIC) and affected individuals of eligible data breaches in respect of personal information. Under the Notifiable Data Breaches Scheme, APP entities can undertake remedial action to reduce the risk of serious harm of a data breach and the associated obligation to notify affected individuals (although the OAIC will still need to be notified). There are also a range of exceptions to the notification obligation, including where:

\( a \) the data breach has been reported by another entity holding that personal information;
\( b \) notification would likely prejudice an enforcement-related activity;
\( c \) the requirement to notify would be inconsistent with the secrecy provisions; or
\( d \) the Commissioner has declared that an entity does not need to provide such a notification.

In addition, Part 13 of the Telecommunications Act 1997 requires carriers, carriage service providers, number database operators and emergency service operators to protect the confidentiality of certain information. This includes the content of communications that have been, or are being, carried by carriers or carriage service providers, as well as the affairs

11 Telecommunications (Interception and access) Amendment (Data Retention) Act 2015 (Cth).
12 An eligible data breach arises when there is unauthorised access to, or disclosure or loss of, personal information, and a reasonable person would conclude that the unauthorised access to, or disclosure or loss of, personal information would likely result in serious harm to one or more individuals to whom the personal information relates. See: Privacy Amendment (Notifiable Data Breaches) Act 2017 (Cth), Section 26WE.
14 Privacy Amendment (Notifiable Data Breaches) Act 2017 (Cth), Section 26WF.
15 Ibid., Section 26WQ.
or personal particulars of other persons. Disclosure of such communications or information is permitted only in certain circumstances, such as where authorised by law enforcement agencies or where reasonably necessary to prevent threats to life and health.

Compliance with both the Privacy Act 1988 and Part 13 of the Telecommunications Act 1997 is overseen by the OAIC.

IV  SPECTRUM POLICY

i  Development

The government is in the process of overhauling the current spectrum management system to replace it with a simplified singular licensing scheme. This aligns with the government’s wider policy of deregulation.

In August 2015, the government announced that it will implement the key recommendations of the Spectrum Review Report undertaken by the Department of Communications and the Arts and the ACMA. The Report found that existing spectrum management arrangements were slow, rigid, administratively cumbersome and unnecessarily costly for users. In May 2017, the government released an exposure draft of the Radiocommunications Bill 2017, with the Department of Communications and the Arts considering submissions to the consultation package and exposure draft bill.

Spectrum pricing, including for Commonwealth-held spectrum, was considered separately from the Radiocommunications Bill 2017. In February 2018, the Department of the Communications and the Arts published the final recommendations accepted by the government with respect to the spectrum pricing review and Commonwealth-held spectrum review. The spectrum pricing review included 11 final recommendations in respect of ACMA’s allocation decisions, market-based allocations, administered allocations and the cost recovery framework.

The final recommendations with respect to the Commonwealth-held spectrum review included recommendations to establish an advisory committee of relevant government agencies to provide advice to the Minister for Communications on issues of spectrum policy, improve transparency though publishing a consolidated report of Commonwealth spectrum holdings every two years, and exploring a whole-of-government approach to share and trade Commonwealth-held spectrum.

ii  Flexible spectrum use

Currently, three types of licences are available under the Radiocommunications Act 1992: spectrum licences, apparatus licences and class licences. The existing licensing schemes are complex and quite rigid. This creates difficulty obtaining, transferring and trading licences.

The proposed Radiocommunications Bill 2017 would introduce a single licensing system that is flexible and simple. The new licensing scheme will encompass core conditions,

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including the relevant part of the spectrum, geographic information and payment of any applicable charges (including taxes). The proposed Radiocommunications Bill 2017 will integrate broadcasting spectrum into the general spectrum management framework.

A secondary market for spectrum will be encouraged, and assignment, sharing and subdivision will be allowed (subject to any licence restrictions). However, current class licences will not be incorporated into the new licensing system, meaning it may take time for a market to develop as old licences expire. The new licences will be issued for up to 20 years (current licences are limited to 15 years).

Under the new regime, the ACMA will retain legislative power to set licence conditions, subject to a broader set of guiding objectives, so that licences can be tailored to the needs of individual licence holders, accommodate new technologies and be repurposed when they are transferred. To encourage spectrum sharing, the ACMA will be permitted to issue licences or make spectrum authorisations within parts of spectrum that have already been licensed or are subject to an authorisation (provided arrangements are in place to manage interference). Licensees will also be able to authorise third parties to operate devices under their licences.

One of the purposes of this simplified licence regime is to encourage spectrum users to view spectrum rights as a form of property that is able to be regularly traded or leased. The Spectrum Review Report found that encouraging a market for spectrum rights ensures that spectrum is allocated efficiently, and may be applied to a variety of uses as demand requires. It also reduces the costs of regulatory intervention.

iii Broadband and next-generation mobile spectrum use

In October 2017, the government released a 5G directions paper, which outlined the immediate actions for government to take in order to support the timely rollout of 5G in Australia, and focused on:

a making spectrum available for 5G in a timely manner;
b actively engaging in international spectrum harmonisation activities;
c streamlining arrangements to allow mobile carriers to deploy infrastructure more quickly; and
d reviewing existing telecommunications regulatory arrangements to ensure they are fit for purpose.

Separately, the ACMA has identified meeting unprecedented growth in demand for mobile broadband and next-generation services as a priority for the next decade.

The ACMA confirmed in its latest five-year spectrum outlook for 2018 to 2022 that its Mobile Broadband Strategy (released in February 2016) remains the basis for the ACMA’s response to address the growth in demand for mobile broadband capacity, a key part of which is the articulation of a spectrum management process for the release of additional spectrum for mobile broadband. The latest five-year spectrum outlook also included an updated mobile broadband work programme, which sets out the various mobile broadband spectrum planning projects being conducted by the ACMA.

The ACMA has also continued to undertake a number of other initiatives to progress spectrum management for 5G. In particular, in October 2016, the ACMA released the Future Use of the 1.5GHz and 3.6GHz bands Discussion Paper, which was designed to seek industry feedback on the increasing demand for mobile broadband services in those bands,
largely in anticipation of the future introduction of 5G mobile technology. In August 2017, the ACMA also held a further consultation process on the 3.6GHz band on the basis that it has been identified to be the most favoured spectrum band for 5G mobile broadband.

Separately, in September 2016, the ACCC commenced a market study on the communications sector that will consider existing or emerging competition and consumer issues (Communications Sector Market Study). The Communications Sector Market Study states that the ACCC expects the three major MNOs (Telstra, Optus and Vodafone) to begin to roll out 5G services by around 2020, and noted that 5G networks will likely use higher frequency spectrum than 4G (i.e., in the 3.4GHz to 3.7GHz band).

In April 2018, the ACCC released its Communications Sector Market Study Final Report, detailing a number of recommendations on a wide range of competition and consumer issues in the communications market, including broadband and voice services, aggregation and transmission services, data centres and content delivery networks, and the IoT.

On 23 August 2018, the Departments of Home Affairs and Communications and the Arts issued a joint statement that effectively banned Huawei and ZTE from supplying equipment for 5G networks in Australia due to national security concerns inherent in the architecture of 5G. While not specifically listing either company in the statement, the departments stated that:

> the government considers that the involvement of vendors who are likely to be subject to extrajudicial directions from a foreign government that conflict with Australian law, may risk failure by the carrier to adequately protect a 5G network from unauthorised access or interference [in accordance with their obligations introduced by the Telecommunications and Other Legislation Amendment Act 2017].

### iv Spectrum auctions and fees

Currently, the ACMA issues spectrum licences through auction, tender or price negotiation processes. The next spectrum auction will be for the 3.6GHz band, which is expected to commence in November 2018. In July 2018, the government announced allocation limits for participants in this auction. Those limits cap the total amount of spectrum that an auction participant will be able to purchase in the 3.6GHz spectrum and are calculated inclusive of any spectrum in the 3.4GHz to 3.7GHz bands that an auction participant already holds. As a result of these limits, carriers with significant holdings in the 3.4GHz to 3.7GHz bands, such as nbn and Optus, are largely precluded from participating in the auction. Separately, Vodafone and TPG have announced, in connection with their proposed merger, that they have formed a joint venture entity with the intention of acquiring 5G spectrum at the auction.

The ACMA maintains on its website a list of spectrum licences that are due to expire in the next 18 months, with details about whether they will be eligible for reissue. In 2012, the then-Minister for Broadband, Communications and the Digital Economy made a class of services determination that it is in the public interest to reissue licences to incumbent

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licenses operating mobile voice and data communications services, wireless broadband services and satellite services in certain bands. If these licensees can prove that they have used the spectrum to provide a relevant service, the ACMA will offer the licence for reissue without offering the spectrum at auction.

The Spectrum Review Report expresses concern that under the current model, spectrum prices may not always reflect the true value of spectrum or the way that value changes over time. The Spectrum Review Report notes that if the legislative changes it recommended were to be introduced, the prices for spectrum would need to be transparently reviewed to ensure they remained appropriate, and suggested that the ACMA might consider opportunity cost pricing or other forms of administered-incentive pricing.

The Spectrum Review Report also recommends that pricing and taxation arrangements for licences should be consolidated under the new single licence system. Currently, different licences are subject to different charges, taxes and fees. For instance, class licences are not associated with any fees, while apparatus licences incur a cost recovery charge plus a licence fee that differs depending on whether it is a receiver or a transmitter licence. The recommendations of the Spectrum Review Report have since been implemented within the proposed Radiocommunications Bill 2017.

V MEDIA

i Restrictions on the provision of service

The ACMA is responsible for administering the Australian Content Standard and Television Program Standard 23 – Australian Content in Advertising, which applies to commercial free-to-air television licence holders. These standards do not apply to cable television providers or online content distributors like VOD platforms.

The Australian Content Standard provides that 55 per cent of broadcast transmission between 6am and midnight must be Australian programming, with sub-quotas for drama, documentaries and children's programmes. The Australian Content in Advertising standard requires that at least 80 per cent of advertising time be used for Australian-produced advertisements.

For radio, under the Commercial Radio Code of Practice and Guidelines 2017, a minimum amount of Australian music content (between 5 to 25 per cent depending on the type of content) is required to be broadcast by commercial radio licensees between 6am and midnight each day. Certain formats of service, such as open-line, news, talk and sport content, are excluded from this requirement. Additionally, radio broadcasters must disclose commercial or other arrangements, such as sponsorships, that could affect reporting of current affairs under the Broadcasting Services (Commercial Radio Current Affairs Disclosure) Standard 2012.

The ACMA also administers the new rules introduced by the Broadcasting Legislation Amendment (Broadcasting Reform) Act 2017, which increased the minimum requirements for broadcasting material of local significance applying to commercial television networks covering more than 75 per cent of Australia's population. These new requirements commenced on 17 April 2018. For networks not subject to these requirements, the Broadcasting Services (Additional Television Licence Condition) Notice 2014 continues to apply.

Finally, the ACMA also administers the Classification (Publications, Films and Computer Games) Act 1995, and sets the Guidelines for Classification of Films and Computer Games that are used by the Classification Board to classify content. Content is
assessed based on six classifiable elements and assigned a rating to reflect its likely impact on different viewers. Although technically some online content is considered classifiable, historically classification obligations are not enforced against online providers.

An amendment to the Classification (Publications, Films and Computer Games) Act 1995 was enacted in September 2014 that allowed classification bodies to authorise the use of automated classification tools for certain content. This makes obtaining a classification significantly cheaper and easier. When this amendment was being considered, legislators expressed the hope that this would lead to increased classification rates for apps and online content.

An amendment to the Copyright Act 1976 was introduced in 2015 to allow a party to apply to the Federal Court to grant an injunction to require a carriage service provider to take reasonable steps to disable access to a website where the primary purpose of that website is to infringe, or to facilitate the infringement of, copyright. There has been continued action by content owners requiring ISPs to block websites in Australia that host content infringing on copyrights since the introduction of these provisions in 2015. According to the Site Blocking Efficacy: Australia Report released in February 2018, site blocking laws in Australia have resulted in a 53.4 per cent reduction in usage of blocked sites since the blocking regime began. In February 2018, the Department for Communications and the Arts announced its review of the Copyright Amendment (Online Infringement) Act 2015, including the effectiveness and efficiency of the mechanisms and processes of the site blocking laws.19

Advertising restrictions are enforced by both the ACMA and the Advertising Standards Bureau. The Advertising Standards Bureau administers several industry and target audience-specific codes of practice (such as the Commercial Radio Code of Practice and Guidelines 2017 and the Commercial Television Industry Code of Practice 2015), including advertising codes applicable to children, food and beverages and environmental claims. The ACMA also administers a number of codes of practice applying to commercial free-to-air TV, radio, pay-TV and online services that prohibit gambling advertisements during the broadcast of live sports between 5am and 8:30pm and otherwise restrict gambling advertising during the broadcast of live sports at other times of day. These codes of conduct came into effect on 30 March 2018, except for the code of conduct applying to online services, which came into effect on 28 September 2018.

### ii Internet-delivered video content

In the past few years, traditional broadcasters have been launching online services including catch-up television and VOD offerings. These services complement rather than replace free-to-air broadcasts, so there is minimal disadvantage to consumers without internet access.

A communications sector market study issues paper released in September 2016 identified the popularity of streamed video content as a significant driver of demand for data services, and flags this as a factor for consideration when assessing the need and incentive for investment to improve data availability. The issues paper noted that video accounted for around 69 per cent of all internet traffic in Australia in 2015, and is expected to increase to 82 per cent by 2020. New and emerging applications, including ultra high-definition video

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19 See Department of Communications and the Arts, Review of the Copyright Online Infringement Amendment, https://www.communications.gov.au/have-your-say/review-copyright-online-infringement-amendment.
(4K and 8K), 360 video or augmented or virtual reality games, are also expected to increase in popularity in Australia, placing further constraints on data. Although it is expected that advanced video compression techniques may provide some relief.

Online content is subject to regulation under Schedules 5 and 7 of the Broadcasting Services Act 1992 (Online Content Scheme). This is a light-touch regime compared with the content and classification restrictions imposed on traditional broadcasters discussed above. Responsibility for administering the Online Content Scheme switched from the ACMA to the eSafety Commissioner on 1 July 2015. The remit of the Office of the Children’s eSafety Commission was expanded in June 2017 with the Enhancing Online Safety for Children Amendment Act 2017, which transformed the Children’s eSafety Commissioner into the eSafety Commissioner. The Commissioner has the power to investigate complaints about online content and order that prohibited content be taken down if it is hosted in Australia. Content is determined to be prohibited if it would be refused classification or classified as X18+ under Australia’s content classification regime. The eSafety Commissioner’s responsibilities were expanded in June 2017, including assuming responsibility for the administration of the takedown notice scheme under the Enhancing Online Safety (Non-Consensual Sharing of Intimate Images) Act 2018. In June 2018, civil penalties were introduced in respect of non-consensual sharing of intimate images, with individuals and corporations facing civil and criminal penalties for failing to remove an image when requested to do so by the eSafety Commissioner.

As noted earlier, there is no net neutrality regulation in Australia, meaning that ISPs are able to reach arrangements that allow them to control, and be compensated for, content transmitted over their networks.

VI THE YEAR IN REVIEW
i nbn™ network

The rollout of the nbn™ network continued in 2017 and 2018 and is on track for a 2020 completion, with half of the network rollout completed by June 2018. The number of premises considered ready to connect increased from 5.4 million in June 2017 to 7 million in June 2018. Similarly, the number of premises with active nbn services increased from 2.4 million in June 2017 to 4 million in June 2018. The rollout continues to make use of the optimised multi-technology mix initially set out in the Minister of Communication’s statement of expectations to nbn of April 2014, and the updated statement of expectations to nbn on 24 August 2016. The multi-technology mix currently involves the use of FTTN, FTTB, hybrid fibre coaxial (HFC) and FTTC technologies alongside the initial FTTP, fixed wireless and satellite technologies envisaged in the original design of the nbn™ network.

21 Letter from Malcolm Turnbull (Minister of Communications) and Mathias Cormann (Minister of Finance) to Dr Ziggy Switkowski (Executive Chairman of NBN Co), government expectations, 8 April 2014, www.nbnco.com.au/content/dam/nbnco2/documents/soe-shareholder-minister-letter.pdf.
The multi-technology mix continues to develop, with nbn introducing FTTC technology on 29 March 2018. In October 2017, nbn announced that it intends to use G.fast technology to provide access to faster speeds on the FTTC and FTTB networks. nbn’s trials of G.fast technology to date have achieved speeds of between 500Mbps and 1Gbps in trials. In addition, nbn has announced that it is introducing DOCSIS 3.1 on its HFC network.

While nbn has continued to scale its network rollout, an increased focus on improving customer experience resulted in it pausing the rollout of HFC between 27 November 2017 and 27 April 2018, introducing new wholesale pricing bundle discounts and further investment in fixed wireless capacity. nbn’s revenue profile has been impacted by these customer experience initiatives (primarily the HFC pause and pricing bundle discounts), which delayed a portion of nbn’s revenue growth and resulted in a downward forecast of A$3.9 billion for FY20 (compared to the previous FY20 forecast of A$4.9 billion).24

During 2018, nbn has also focused on expanding its services to the competitive enterprise markets, primarily through the proposed introduction of nbn™ Enterprise Ethernet. nbn™ Enterprise Ethernet will be available within nbn’s fixed line footprint and will be supplied using end-to-end fibre network links, which will be built on demand.

On 27 May 2016, nbn submitted a proposed variation to its Special Access Undertaking (SAU) to the ACCC. The SAU, accepted by the ACCC on 13 December 2013, applies to wholesale access to the nbn™ network until 2040. The proposed SAU variation sought to give effect to the addition of FTTN, FTTB and HFC technologies to the nbn™ network. After a consultation on the proposed variation, the ACCC released its initial decision to reject the variation on 28 March 2017. On 22 June 2017, nbn lodged a revised SAU variation that sought to address the ACCC’s initial concerns. In October 2017, the ACCC announced that it will delay its decision on the SAU variation until further progress has been made by nbn in relation to its consultation with customers on its pricing model.

ii 5G spectrum auction

As discussed in Section IV.iv, the ACMA is preparing to auction 125MHz of available spectrum in the 3.6MHz band in late November 2018. In preparation for the auction, the Minister for Communications and the Arts has directed the ACMA to impose allocation limits of 60MHz in metropolitan areas and 80MHz in regional areas, limiting the amount of new spectrum that carriers with significant spectrum holding can bid for.

iii Regulatory activity by the ACCC

There has been an increase in regulatory action by the ACCC during 2017 and 2018 with several important regulatory instruments and several regulatory inquiries commenced during the course of the past year:

a On 26 May 2017, the ACCC issued its final access determination regarding the terms of access to superfast broadband access services (SBAS) built before 2011. nbn, as well

23 Data over cable service interface specifications.
as non-nbn operators of superfast broadband networks built or extended after 2011, are already subject to access obligations and are therefore not covered by the scope of the ACCC’s SBAS final access determination;

b on 21 August 2017, the ACCC published guidance for retail service providers on how to advertise speeds for fixed-line broadband services, following extensive consultation with network providers, retailers and consumer representatives;

c on 23 October 2017, the ACCC released its final decision to not declare a wholesale domestic mobile roaming service. This would have allowed MNOs to provide retail services (through roaming) in areas of Australia where they do not have their own network facilities;

d in November 2017, the ACCC announced a public inquiry into nbn’s wholesale service standards;

e on 29 March 2018, the ACCC released the first results from its broadband speed testing programme, which found the busy hour speeds on the nbn™ network marginally below typical speeds at other times;

f on 5 April 2018, the ACCC released its Communications Sector Market Study Final Report detailing the ACCC’s recommendations, actions and finding in relation to a broad range of communications services;

g on 11 September 2018, the ACCC accepted a court-enforceable undertaking from nbn to make changes to its wholesale service level commitments. This follows concerns raised by the ACCC and customers throughout the (ongoing) inquiry into nbn’s wholesale service standards;

h on 17 September 2018 the ACCC put telecommunications companies on notice to ensure their advertising is clear and transparent, following the use of the term ‘unlimited’ to promote mobile data plans; and

i on 31 August 2018, the ACCC announced an inquiry into existing declarations (due to expire in June 2019) in respect of unconditioned local loop services, line sharing services, wholesale line rentals, PSTN OA and PSTN TA.

iv Mergers and acquisitions

Following the introduction of the Broadcasting Legislation Amendment (Broadcasting Reform) Act 2017, Fairfax Media and Nine announced Australia’s largest media merger, valued at A$4 billion, creating a new media giant under the Nine brand that will create broadcast content across television, radio and online. Nine shareholders will retain 51.1 per cent of the combined entity, with Fairfax shareholders owning the remaining 48.9 per cent. Nine CEO Hugh Marks will lead the new company. The merger is subject to regulatory approval from the ACCC, which commenced an informal review on 16 August 2018. The ACCC is expected to announce its decision on 8 November 2018.

In August 2017, US-based broadcaster CBS agreed to purchase Ten Network (including core channel Ten, digital channel One and digital platform Tenplay) after it was placed into voluntary receivership in June 2017. The purchase was approved by the creditors 25


of Ten Network on 19 September 2017. The acquisition was completed in November 2017, following the Supreme Court of New South Wales’ approval of the share transfer in November 2017 and approval by the Foreign Investment Review Board in October 2017.

In August 2018, TPG and Vodafone Australia announced they had entered into a scheme implementation deed for a proposed merger. The A$15 billion merger will combine as TPG Telecom Limited and is subject to approval by the ACCC.

VII CONCLUSIONS AND OUTLOOK

The rollout of the nbn™ network using a multi-technology mix is expected to be completed at the end of 2020, with 99 per cent of the network footprint now in the design or construction stages or completed. FY19 is projected to be the biggest year in terms of nbn’s construction of the network, with more than 80 per cent of Australian homes and businesses forecast to be ready to connect over the nbn™ network by the end of 2019.

In December 2014, the government released its formal response to the recommendations of the Vertigan Panel, which was appointed to review the regulatory arrangements for the nbn™ network.27 At the time, the government envisaged a three-stage regulatory reform process for the telecommunications sector to enhance competition, particularly in respect of high-speed broadband networks.

The first stage involved certain transitional measures implemented in 2015 and 2016, such as requiring the functional separation of the wholesale and retail arms of carriers owning superfast fixed-line broadband networks.

The second stage envisaged the establishment of a new telecommunications regulatory framework (intended to have applied from 1 January 2017), which would, among other things, require structural separation between the wholesale and retail businesses of new superfast fixed-line broadband networks and create competitively neutral arrangements for funding nbn’s non-commercial fixed wireless and satellite services. The proposed TRP, described in Section III, seeks to address this stage.

The third stage of the government’s response to the Vertigan Panel’s report involved the lead up to the privatisation of nbn™ network once the network is rolled out and fully operational, and a Productivity Commission review into privatisation has been completed and examined by the government.

Several changes to the regulatory environment for TMT are expected to take place in the short to medium term, including new policy and regulatory interventions in relation to digital platforms, data and privacy. This follows several inquiries into the availability and use of data and digital platforms, including the Productivity Commission’s Inquiry into Data Availability and Use, the ACCC’s Inquiry into Digital Platforms, and the announcement by the Commonwealth Treasury of a consumer data right. While the Productivity Commissioner released its Final Report into Data Availability and Use in 2017, with the government accepting the recommendations, the ACCC is yet to finalise its inquiry into digital platforms.

The government released the draft exposure Treasury Laws Amendment (Consumer Data Right) Bill 2018 on 15 August 2018. The Bill creates a consumer data right (CDR) framework to enable consumers to effectively use data relating to them for their own purposes,

including the ability to direct data holders to provide their data to other accredited entities. While the CDR will initially be implemented in the banking sector, the government has indicated that the telecommunications and energy sectors will also be subject to the CDR.

As discussed in Section III, the government is in the process of introducing the Telecommunications and Other Legislation Amendment (Assistance and Access) Bill 2018, which seeks to provide law enforcement and national security agencies with powers to compel technology companies to provide assistance to access encrypted communications. The Bill has been referred to the Parliamentary Joint Committee on Intelligence and Security for review, with a final hearing set for 30 November 2018.

The IoT is also expected to develop further in Australia, with likely implications for a range of areas of regulation, including spectrum use, equipment standards, cybersecurity, and privacy and data protection. Regulatory frameworks and policy have not explicitly focused on IoT issues to date, but this is expected to be an area of future development in line with global trends. Programmes such as Adelaide’s smart city initiative announced in 2017, will likely be the testbed for many of these IoT uses in Australia.

The TMT sector may also experience changes to the regulatory environment in the medium to longer term as the result of the Australian federal election due to take place by the end of May 2019.
Chapter 2

BELARUS

Kirill Laptev

I OVERVIEW

Building an information society is one of the priorities of the government of the Republic of Belarus. This approach is reflected in the Decision on the Strategy for Collaboration of the CIS States Parties in the Construction and Development of the Information Society for the Period up to 2025 and the Action Plan on its Implementation, adopted on 28 October 2016 in Minsk (CIS Decision). One of the tasks of CIS member states’ cooperation in the construction and development of the information society is the provision of services to citizens and organisations using modern information and telecommunication technologies.

The growth in ICT development approach is a result of the adoption of the State Development Programme of the Digital Economy and Information Society for 2016–2020 (State Programme). The goal of the State Programme is to improve the conditions of transformation of human activities under the influence of ICT, including the formation of the digital economy, the development of the information society and the improvement of e-government.

One of the major innovative developments in Belarus took place on 21 December 2017 when the President signed Decree No. 8 ‘On the Development of the Digital Economy’ fixing progressive and unique regulation in the IT sphere on a global scale, as well as developing a regime for High Tech Park (HTP) residents. HTP has been successfully operating for more than a decade, providing a beneficial taxation system to residents specialising in the IT sector.

The Decree also devotes special attention to the development of blockchain technologies and cryptocurrency payments.

Tokens are recognised as a legitimate object of legal relations. Tax privileges are introduced to operations with tokens, including trade in cryptocurrencies and initial coin offerings. Until 2023 individual revenues from mining and operations with tokens are not subject to declaration and taxation depending on the categories of the subject: a resident of the Belarus HTP, an individual, or another entity.

Additionally, the special statuses of cryptographic platform operator and cryptocurrency exchange have been introduced. The Decree sets for them a minimum security value to be stored at Belarusian banks of not less than the equivalent of US$500,000 and US$100,000, respectively.

Among other privileges and benefits, HTP residents use simplified rules of company document control and a simplified system for foreign founders and employees, which
additionally boosts the development of the ICT sector. Foreign employees and founders of HTP resident companies are entitled to visa-free entry to Belarus for the duration of their temporary stay of 180 days.

The main legislative acts regulating the TMT sector in Belarus are the following:

a. Law of the Republic of Belarus of 19 July 2005 No. 45-Z ‘On Telecommunications’ (Telecom Law);

b. Law of the Republic of Belarus of 15 December 2003 No. 258-Z ‘On Postal Communication’ (Post Law); and


Also, the President of the Republic of Belarus has adopted a number of decrees regulating the TMT sector. In practice, they all have greater legal force than laws, due to the fact that in accordance with the Law of the Republic of Belarus of 10 January 2000 No. 361-Z ‘On Regulatory Acts of the Republic of Belarus’, in the event of divergence of presidential edict or decree with the law, the law has primacy only when the authority to issue an edict or decree has been granted by law.

Thus, the main regulatory presidential acts in the TMT sector are:

a. Edict of the President of the Republic of Belarus of 18 April 2006 No. 240 ‘On payment for the use of the radio-frequency spectrum’;

b. Edict of the President of the Republic of Belarus of 1 September 2010 No. 450 ‘On licensing of certain types of activities’ (Licensing Law);

c. Edict of the President of the Republic of Belarus of 1 February 2010 No. 60 ‘On measures to improve the use of the national segment of the Internet’ (Edict No. 60);

d. Edict of the President of the Republic of Belarus of 30 September 2010 No. 515 ‘On certain measures for the development of the data transmission network in the Republic of Belarus’ (Edict No. 515);

e. Edict of the President of the Republic of Belarus of 15 April 2013 No. 192 ‘On the allocation, use of the radio-frequency spectrum and introduction of changes and additions to Presidential Decree of 31 July 2006 No. 473’;

f. Edict of the President of the Republic of Belarus of 23 January 2014 No. 46 ‘On the use of telecommunication technologies by state bodies and other state organisations’; and

g. Edict of the President of the Republic of Belarus of 15 March 2016 No. 98 ‘On the improvement of the procedure for the transmission of telecommunications messages’.


The State Security Committee of the Republic of Belarus and the Ministry of Internal Affairs of the Republic of Belarus, having consistently formed the legal framework for ensuring the safety of critical facilities in Belarus, adopted Joint Resolution No. 24/268, which approved the Regulations on Preventive, Regime and Organisational Measures to prevent terrorist activities and minimisation of their consequences at critical objects of the Republic of Belarus.
As part of the work carried out in this field in the Republic of Belarus, on 25 October 2011 Edict of the President of the Republic of Belarus No. 486 ‘On some measures to ensure the safety of critical information facilities’ was signed, which approves the Regulation on the assignment of information objects to critical and security critical objects of informatisation.

The Regulation defines the notion of a ‘critically important object of informatisation’, and establishes the procedure for classifying objects of informatisation as critically important and ensuring the security of critical information objects.

II REGULATION

i The regulators

The central management body that is responsible for state regulation, coordination of work and development of the telecommunications sector is the Ministry of Communications and Informatisation of the Republic of Belarus (MinCom).

The MinCom carries out:

a development and implementation of telecommunication development programmes;
b coordination of activities in the field of creation and development of telecommunication networks;
c the long-term planning of the use of the RF spectrum by civil electronic radio facilities;
d establishment of a unified procedure for the interaction of telecommunication networks through the public telecommunication network, as well as monitoring and centralised management of the public telecommunication network;
e the definition of requirements for the construction, numbering, organisational and technical support for the operation of telecommunication networks, their management, to ensure the protection of telecommunication networks from unauthorised access to them and messages transmitted thereon, the use of the RF spectrum, the order of traffic transmission, and the provision of telecommunication services;
f regulation of the activities of telecommunication operators;
g international cooperation in the field of telecommunications, including interaction with international organisations and telecommunications administrations of other states, ensuring the fulfilment of obligations under international treaties of the Republic of Belarus; and
h development and adoption of regulatory legal acts.

The Republican Unitary Enterprise for Telecommunications Supervision ‘BelGIE’ (BelGIE RUE) is a state agency that falls under the auspices of the MinCom. Among others, BelGIE RUE has the following main objectives:

a ensuring the protection of the RF spectrum and its effective use;
b assignment of RFs or RF channels;
c RF monitoring; and

state supervision of telecommunications, etc.

In accordance with Edict No. 515, an Operational Analytical Centre under the President of the Republic of Belarus (OAC) was designated as an independent regulator in the field of ICT. The OAC, in the role of an independent regulator, focuses on ensuring the successful operation of the unified republican data transmission network, which is expected
Belarus

to be designed by the year 2020 (URDTN\textsuperscript{2}) and the ICT market in the field of data transmission. It also promotes attraction of investments in the ICT sector and development of the telecommunication services market in terms of providing data and telephony services via IP-protocol and monitors the market for data transmission services and analysis of its condition.

The State Commission on Radio Frequencies under the Security Council of the Republic of Belarus implements a unified state policy in the area of distribution and use of the RF spectrum.

The leading operator of the Republic in the telecommunication services segment is Beltelecom RUE.

ii Regulated activities

Communications

The TMT sector is strictly regulated by numerous state authorities. In this context, according to the Licensing Law the provision of main TMT services is subject to obtaining a licence. Such licensed activities include:

\begin{itemize}
  \item public telecommunication services:
    \begin{itemize}
      \item international telephone communication;
      \item long-distance (inter-city) telephone communication; and
      \item local telephone communication;
    \end{itemize}
  \item data transfer service;
  \item VoIP;
  \item IPTV;
  \item mobile telecommunication service (except cellular communication);
  \item TV transmission;
  \item wireless sound programme broadcasting;
  \item fixed and mobile satellite TCM services; and
  \item cellular communication.
\end{itemize}

The Licensing Law also outlines the following public postage services:

\begin{itemize}
  \item mail transfer; and
  \item receipt of a subscription to a printed mass media and printed media delivery.
\end{itemize}

The Licensing Law expressly outlines the activities that may be conducted without a licence:

\begin{itemize}
  \item rendering telematic services (except for VoIP and IPTV services);
  \item receipt of a subscription to a printed mass media carried out directly by a legal entity entrusted with the functions of the editorial office of the given mass media; and
  \item certain provision of data transmission services via the internet at points of shared use of internet services (e.g., computer clubs, internet cafes, etc.).
\end{itemize}

\textsuperscript{2} URDTN construction will allow for the centralised management of data transmission networks in Belarus, and create conditions for accelerated economic growth in the field of communications by eliminating administrative barriers. It is also planned that the business sector will be able to use the services of the URDTN.
The general licence requirements and conditions for the licensee are:

- compliance with the requirements and conditions established by the Post Law and Telecom Law;
- the presence of not less than one specialist in the staff who has duly confirmed professional training and qualifications corresponding to the profile of the services provided;
- the permission of the authorised organisation for the right to use the RF spectrum when providing public telecommunication services using the RF spectrum;
- observance of the terms of the commencement of the provision of services specified in the licence; and
- provision of public telecommunication services using the licensee’s telecommunication networks with the permit to connect them to the public telecommunication network and to the unified republican data transmission network (URDTN).

The licence for communication services may be granted after an application has been made or as a result of tender proceedings (e.g., for RF spectrum usage). In any case, the licence is issued by the MinCom for an unlimited period.

**Media**

There are certain additional authorisations needed to carry out activities in the media sector.

According to the Mass Media Law, the mass media (e.g., printed mass media, TV or radio programmes and channels) is subject to a state registration procedure. It may be distributed from the date of its inclusion in the State Register of Mass Media.

TV and radio broadcasting in Belarus is additionally subject to obtaining a licence, which may be obtained by the editor of the mass media or by a foreign organisation.

A broadcasting licence is required for mass media editors and foreign companies broadcasting a TV channel or a radio channel in Belarus. The licence is not required if the TV and radio broadcasting is carried out by a telecommunications operator without changing the form and content thereof:

- on the basis of a permit to distribute the products of a foreign mass media;
- under a contract with a legal entity entrusted with the functions of the editor of the mass media; or
- if the foreign organisation has a licence in the field of broadcasting.

**iii Ownership and market access restrictions**

Belarusian law establishes certain ownership restrictions within the ICT sector.

In the ICT sector certain restrictions apply in the foreign participation and investments area. A mass media editor cannot register its mass media if a foreign state, entity, individual, international entity or individual without citizenship owns 20 per cent or more of its shares. Therefore as spectrum is considered a rare resource, its management and use is reserved to the state. It is particularly reflected in the application of a tender procedure for obtaining a licence.

According to the Decision of the Operational and Analytical Center under the President of the Republic of Belarus, the Ministry of Communications and Informatisation of the Republic of Belarus of 10 February 2014 No. 1/2 ‘On approval of the list of
telecommunication operators entitled to pass inter-network traffic’ only three state-owned entities are authorised for internetwork traffic transmission. Two of them are additionally authorised for international traffic transmission.

iv  Transfers of control and assignments

As a general rule, communication licences may not be transferred or assigned to third parties. TMT licences may only be granted to legal entities of Belarus.

Mergers and acquisitions of ICT entities are subject to general antitrust legislation requirements.

III  TELECOMMUNICATIONS AND INTERNET ACCESS

i  Internet and internet protocol regulation

The internet and internet protocol is a developing sphere of Belarusian law. As a result, Belarusian law is structured as technology-neutral and does not provide specific legislation for internet and internet protocol services. Such services are mainly regulated by the general TMT legislation.

ii  Universal service

In accordance with the Decree of the President of the Republic of Belarus No. 130 of 19 March 2015 ‘On the State Non-Budgetary Fund’, Belarus has set up a state target budgetary universal service fund. All telecoms operators operating in Belarus transfer 1.5 per cent of their revenues to the State Non-Budgetary Fund. The fund's manager is the MinCom, which is responsible for using this fund to compensate for the capital construction of infrastructure for the provision of universal telecommunication services. Universal telecom services include access services to the fixed telecommunication network using the terminal subscriber unit and the internet at points of shared use.

In accordance with the Order of the MinCom dated 19 October 2006 No. 297, the functions of compulsory provision of universal postal services throughout the territory of Belarus are assigned to the Republican Unitary Enterprise Postal Communication Belpochta (Belpochta RUE).

iii  Restrictions on the provision of service

Although telecoms operators are generally free to establish the prices for their services, Belarusian law establishes certain price limits charged to end users. The Ministry of Antimonopoly Regulation and Trade (MART) is the main regulatory authority for the specification of such thresholds. It carries out state price regulation for telecommunication services and postal communication of public service according to the list determined by the Resolution of the Council of Ministers of 17 January 2014 No. 35 ‘On approval of lists of socially significant goods (services), prices (tariffs) which are regulated by state bodies, and the recognition of certain decisions of the Council of Ministers of the Republic of Belarus as invalid’ (Price Regulation List). The Price Regulation List has a tendency to liberalisation through the exclusion of the telecom services state pricing regulation applies for. The granting of access to the internet at points of shared use was the last exclusion made in 2017 from the Price Regulation List.
As a general rule, telecoms operators are obliged to provide their services to everyone who applies for them, and may not prefer one person to another in relation to the conclusion of a contract for the provision of the services. Refusal to conclude a contract with an opportunity to provide services at hand is prohibited.

Restrictions on access to information resources (their components) located on the internet shall be made if:

- owners of the resource during the year were issued two or more written warnings from the Ministry of Information (MinInfo);
- it contains information messages or materials, or both, aimed at drug trafficking, other information that is prohibited or restricted from distribution in accordance with the legislative acts of the Republic of Belarus, as well as legally enforceable court decisions (hereinafter, ‘information that is prohibited from distribution’); or
- the owners of the resource did not comply with the lawful demand of the state body to eliminate violations of the legislation of the Republic of Belarus on the mass media.

After the MinInfo decides to restrict access it submits it to the BelGIE RUE. Subsequently, BelGIE RUE forms the list of restricted access, which is the ground document to be followed by ISPs in further direct restriction of access procedure.

### Security

The basic confidentiality concept is contained in Article 28 of the Constitution of the Republic of Belarus (Constitution). It provides that everyone has the right to protection from unlawful interference in their private life, including interference with correspondence, telephone and other communications, and protection of their honour and dignity.

Lawful interference is mainly regulated for national security purposes by the Communication Law, the Information Law, the Law of the Republic of Belarus of 15 July 2015 No. 307-Z ‘On Investigative and Search Activity’, the Code of Criminal Procedure and other legislative acts. According to the mentioned legislation, lawful interference covers a broad scope of measures, including reception, transformation and recording of data and messages received, transmitted, processed, stored in telecommunication networks as well as identification of service receivers.

The Communication Law prescribes network operators’ obligations when carrying out investigative and search activity, *inter alia*:

- to provide information on users of telecom services and on the telecom services rendered to them, as well as other information necessary to fulfil the tasks assigned to investigative bodies;
- to assist in carrying out investigative and search activities and to provide an opportunity to conduct them on TMT networks, to take measures to protect information about organisational and tactical methods for carrying out these activities; and
- to provide access to databases, automated systems, etc.

Additional security requirements are imposed on ‘internet resource owners’ by the amendments to the Mass Media Law, which come into force on 1 December 2018. The amendments provide for a number of duties for internet resource owners, including social network owners, which involve the introduction of additional measures for analysing and monitoring information on such internet resources. For more details, see Section VI.
IV SPECTRUM POLICY

i Development

Regulation of the use of the RF spectrum is the exclusive right of the state. Edict of the President of the Republic of Belarus of 31 July 2006 No. 473 ‘On the State Commission for Radio Frequencies under the Security Council of the Republic of Belarus’ regulates the use of the RF spectrum in Belarus to the State Commission on Radio Frequencies under the Security Council (Commission). The Commission decides on the allocation of RF bands, RF channels and RFs, and organises work on the conversion of the RF spectrum.

Owing to the wide development of modern radio technologies and new RF bands, the government of Belarus amended the procedure for determining the amount of annual, one-time fees and fees for allocating the RF spectrum. The Council of Ministers adopted Resolution No. 853 of 16 November 2017, according to which amendments were made to the amounts of the annual, one-time payments and fees for allocation of the RF spectrum.

The indexes of the commercial value of the K1 RF spectrum, used in calculating the amount of spectrum charges, have been adjusted to create conditions for the successful development of the LTE cellular telecom network in the 2.6GHz band and to encourage the development of the LTE Advanced networks in Belarus.

So the cost index for the spectrum of 2.4835GHz–2.7GHz, where mobile operators operate, has been reduced almost five times – from 5 to 1.1.

ii Flexible spectrum use

Belarusian law does not provide for much flexibility owing to the lack of free space in almost the entire RF range. Hence it is quite heavily regulated.

iii Broadband and next-generation mobile spectrum use

One of the significant steps in liberalisation of RF spectrum usage was made in 2016. The MinCom, on 29 August 2016, adopted Resolution No. 13, which entered into force on 21 September 2016. With the entry into force of the Resolution, it is possible to use, without registration and permits for the operation of broadband radio access equipment of the IEEE 802.11 group of standards (Wi-Fi technology) both inside buildings and structures and in vehicles, as well as a wide range of low-power devices of GSM, UMTS and LTE technologies, radio stations of seagoing ships that have the right to sail under the Belarus national flag. It is possible to use certain types of satellite subscriber terminals without the need to obtain permits for their operation.

According to the Minister of the MinCom, until the end of 2020 LTE technology will come to the areas with a population of 50,000 people. In 2018–2019, there are plans to install approximately 630 base stations, which will allow access to the unified LTE network for more than 76 per cent of the population of Belarus. Additionally, the Minister of MinCom noted that tests of the 5G technology will be conducted in 2019.

iv Spectrum auctions and fees

Belarusian law imposes spectrum usage fees on broadcasters, mobile phone carriers and other businesses that use the RF spectrum. The President of Belarus may stipulate cases when the issuance of licences for the provision of certain components of the licensed services is carried out following the results of a tender for a licence. Pursuant to this, Resolution of the
Council of Ministers of the Republic of Belarus No. 1259 of 30 September 2009 establishes the Regulation on the procedure for conducting a tender (competition) for the use of the RF spectrum.

The legislative acts establish both a one-off fee and an annual fee for the use of the RF spectrum.

V MEDIA

i Restrictions on the provision of service

While the Mass Media Law guarantees freedom of opinion, belief and expression to everyone in Belarus, it also establishes certain restrictions on information that may be disseminated through mass media. Among others, the following information is prohibited:

a the calling for the consumption of narcotic drugs, psychotropic substances, their analogues, toxic and other intoxicating substances, and dissemination of information on the methods of its development, production and consumption;

b the calling for and promotion of war, extremist activities, pornography or violence; and

c information, disseminated by the entity without due state registration, if any needed; etc.

ii Internet-delivered video content

Internet services are available in Belarus, including IPTV channels with programming provided by programme providers. Current legislation does not provide for internet delivered video content (OTT) regulation.

The need for OTT services regulation was discussed during a roundtable in Minsk by representatives of the MinInfo, interested departments, television channels, cable operators and the Telecommunications Industry Union. The chairman of the Telecommunications Industry Union outlined that owing to the absence of regulation, telecommunication operators working in the lawful field faced unfair competition from OTT services. They lead away subscribers – the annual outflow of subscribers is at least 10 per cent. In most cases, OTT services do not pay taxes, they are not registered in the register of distributors, that is, they provide TV programmes without contracts with rights holders, do not pay for related rights, do not make contributions to the National Centre of Intellectual Property, and do not distribute mandatory programmes of the public package.

OTT services are planned to be regulated by government rules and regulations in the future.

VI THE YEAR IN REVIEW

Looking ahead, Belarus is targeting the implementation of infrastructure to broadcast the Second European Games 2019 in Minsk in HD format and provide a high-quality internet connection.

In June 2018 the deputies of the House of Representatives adopted in the final reading the draft law ‘On Amendments and Additions to Some Laws of Belarus’ (Draft Law). It comes into force on 1 December 2018.

The Draft Law contains a number of innovations in the field of internet regulation, defines measures to protect the national information space in the media sphere, improves
approaches to state registration, media re-registration and issuance of permits for distribution of foreign media products, determines the status of internet resource owners and other innovations.

The Draft Law clarifies the scope of the Mass Media Law regarding foreign internet resources. It is expected that its operation will cover foreign media also regarding the distribution of their products in the territory of Belarus, for example, information messages or materials on the internet. National regulation can be applied to foreign internet resources available in Belarus.

It is proposed by the Draft Law to add to the Mass Media Law the definition of ‘internet resource owner’. These can include both legal entities and individual entrepreneurs, as well as individuals exercising civil rights in relation to the internet resource. The Draft Law also defines 'network edition'; in the event such network edition follows the registration procedure (including voluntary), it allows internet resources to be considered as mass media.

The amendments provide for a number of duties for internet resource owners, which involve the introduction of additional measures for analysing and monitoring information on such an internet resource.

After the adoption of amendments to the Mass Media Law the internet resource owner is entrusted with a duty to prevent the posting of messages and materials by users without their prior identification. The introduction of user authentication may be required when leaving a message in a comments section or on a forum. At the same time, the identification procedure is now unclear and should be further developed by the Council of Ministers of the Republic of Belarus.

VII CONCLUSIONS AND OUTLOOK

The development of ICT in Belarus in increasing frequency comes with a lack of relevant legislation. During the process of post factum regulation the government is trying to steer a middle course between national interests for TMT infrastructure control and development of the TMT sector by private investors. Depending on the particular approach in different ICT spheres, development of both legislation and the ICT sector itself affects national economy indexes as well as development of the information society.

The 2018 government approach towards formation of law is subject to particular world ICT trends. The Data Protection, Mass Media and other ICT related regulations are the primary focus. The business community expects a boost in the development of TMT legislation because of the world technology progress and certain politically sensitive events expected to occur in 2019.
Chapter 3

BELGIUM

Flip Petillion, Jan Janssen, Diégo Noesen and Alexander Heirwegh

I OVERVIEW

Electronic communications (telecom) services and networks are regulated in Belgium based on the principle of technological neutrality. A single federal regulatory authority, the Belgian Institute for Postal services and telecommunications (BIPT) is charged with regulating and monitoring the electronic communications sector. In addition to telecommunications, radio and postal services, BIPT is also responsible for the regulation of the audiovisual media sector in the bilingual Brussels Capital Region. In Flanders, Wallonia and the German-speaking community, audiovisual media is regulated on a community level.

There is a growing trend of convergence and consolidation in the Belgian TMT markets. Network operators and content providers aim to achieve economies of scale and scope in addition to other strategic advantages through mergers, acquisitions or partnerships. In the past few years, Telenet (Liberty Global) acquired both the Belgian MNO Base (KPN) and broadcasting company De Vijver Media NV. This resulted in Telenet evolving from an ISP, telephone operator and television distributor to a telecom and broadcasting company controlling almost all levels of the TMT supply chain.

The fact that more than 60 per cent of Belgian families opt for bundled telecom and broadcasting services with the same service provider demonstrates further convergence.

On 31 July 2017, a new Act pertaining to various provisions regarding electronic communications was introduced. The Act amended several provisions on electronic communications. It clarified the competences of BIPT and introduced the possibility for BIPT to take preliminary measures. Additionally, the Electronic Communications Act was amended to implement EU Directive 2014/61/EU and to amend provisions on, inter alia, frequency licence obligations, network security, consumer rights, subscription payments and number blocking.

II REGULATION

i The regulators

Sources of law

The Act of 13 June 2005 on electronic communications (Electronic Communications Act) is the principal law applicable to the telecoms, wireless, satellite, internet and broadband industries. It regulates the operation of ECNs and the provision of ECSs on a federal level.

1 Flip Petillion is the founder of and managing partner, Jan Janssen and Diégo Noesen are senior dispute resolution lawyers and Alexander Heirwegh is an associate at Petillion.
The Electronic Communications Act supersedes the Act of 21 March 1991 on the reform of some economic public companies, replacing most of its provisions. The Electronic Communications Act implements the directives that underpin the European electronic communications regulatory framework.

Additionally, the internet industry is also regulated through Book XII of the Belgian Code of Economic Law (CEL), which covers the electronic economy.

Book XII of the CEL is mainly the result of the implementation of the Directive on electronic commerce.\(^2\) It also covers domain name registration, electronic identification and trust services.

As opposed to the telecoms and internet industry, the broadcasting and media industry is not regulated on a federal level in Belgium. As the provision of audiovisual media services implies matters related to language and culture, regulation falls under the competences of the different communities, being the Dutch-speaking community of Flanders, the French-speaking community of Wallonia and the German-speaking community. Each community has enacted a general decree for the regulation of media and content. In Flanders, the Decree of 27 March 2009 on radio and television broadcasting regulates the provision of audiovisual media services. In Wallonia, this is regulated by the Decree of 26 March 2009 on audiovisual media services. In the German-speaking community, the Decree of 27 June 2005 on radio broadcasting and film screenings is in place. These decrees have been subsequently amended, mainly to implement the provisions of the Audiovisual Media Services Directive.\(^3\) The new federal Act of 5 May 2017 on audiovisual media services in the bilingual Brussels-Capital Region regulates the provision of media services in the Brussels-Capital Region.

**Regulation**

The TMT industries are coordinated, regulated and monitored by different public entities, both on a federal level regarding electronic communications and on a community level regarding audiovisual media.

The telecommunications sector is regulated on a federal level pursuant to legislation adopted by the federal legislator. The competent regulatory authority for electronic communications is BIPT, which functions independently under its own statute. BIPT regulates the market by adopting decisions, opinions and studies, by monitoring compliance and imposing administrative sanctions, and by acting as an ombudsman in disputes between users and electronic communication companies. With the new Act of 31 July 2017, BIPT was given the authority to make binding administrative decisions in disputes between electronic communications operators.

BIPT is also charged with the administration and allocation of scarce resources such as the electromagnetic spectrum, RFs and numbers. It also serves as the audiovisual media regulator for the bilingual Brussels-Capital Region.

The Belgian Data Protection Authority (previously the Commission for the Protection of Privacy) monitors compliance with privacy and data protection regulations such as the EU General Data Protection Regulation (GDPR), and presents draft legislation regarding privacy and data protection in the electronic communications sector.

The audiovisual media sector is regulated on a community level pursuant to legislation adopted by the community legislators of Flanders, Wallonia and the German-speaking

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\(^2\) Directive 2000/31/EC.

\(^3\) Directive 2010/13/EU.
Belgium

community. However, media distribution and content are regulated on a federal level in the bilingual Brussels-Capital Region. In each community, a competent regulator is charged with coordinating, regulating and monitoring the audiovisual media sector. In Flanders, this is the Flemish Regulator for the Media (VRM), in Wallonia, this is the Council for the Media (CSA), and in the German-speaking community, this is the Council for the Media (Medienrat). BIPT regulates the audiovisual media industry of the Brussels-Capital Region.

In 2006, the Conference of Regulators for the electronic communications sector (CRC) was established. This overarching body brings together BIPT and the audiovisual media community regulators (VRM, CSA and Medienrat) to adopt decisions in matters of coinciding competences, such as the transmission of broadcasting signals.

The Belgian Competition Authority deals with all matters related to competition law in the TMT industries, such as cartels, abuses of dominance, mergers and state aid.

ii Regulated activities

BIPT assigns user rights for RF spectrum partly or entirely used for public ECSs. Article 30 of the Electronic Communications Act provides that the allocation of frequencies may be subject to the payment of fees to ensure the optimal use of spectrum. Several royal decrees establish the terms for obtaining and exploiting spectrum licences in the respective frequency bands for different applications. This includes the amount and the timing of the payment of fees.

Broadcasting and media

Broadcasting and media are regulated at the level of the Dutch-speaking, French-speaking and German-speaking communities, save for the bilingual Brussels-Capital Region where the federal institutions remain competent.

In the Dutch-speaking community, a distinction is made between national, regional, local, network and other broadcasting organisations. All private linear radio broadcasters require authorisation from the government to use blocks of frequency or frequency channels, and a broadcasting licence from VRM. For television, the Dutch-speaking community makes a distinction between private broadcasters and regional broadcasters. Private broadcasters must simply notify VRM, whereas regional broadcasters require an actual licence from VRM. Television broadcasters will negotiate the transmission of television signals with service providers having a broadcasting licence or operating a cable network. Applications for frequency blocks and channels must be in Dutch, and must be submitted by registered letter within a set deadline. Applications are put to a comparative test. Broadcasters must pay a yearly fee for their frequency licence. Spectrum licences (and the corresponding broadcasting licences) for a specific frequency band are granted for a 15-year term, renewable once.

In the French-speaking community, radio broadcasting licences and spectrum are allocated in a tender process following periodical public requests for proposals. Licences are granted by the competent division of CSA within the three months following the final submission date for proposals. Specific provisions apply to broadcasters of school radio, digital radio and radio with a permanent cultural or education purpose, which may be offered free of charge if certain conditions are met. As for non-public television broadcasters, the French-speaking community distinguishes between private television broadcasters and local television broadcasters offering a public service. Private television broadcasters must submit a declaration form to CSA, providing, inter alia, background information on their ownership structure, a financial plan, and a description of the television service and the
method of transmission. Private television broadcasters must contribute to the production of audiovisual works. Local television broadcasters must obtain a licence from the government of the French-speaking community.

In the Brussels-Capital Region, since June 2017 a licence is no longer required for the provision of audiovisual media services. There is merely a duty to notify BIPT.

In the German-speaking community, private radio and television broadcasters must provide a notification to Medienrat. A licence is only needed for transmission via the frequency spectrum. Specific rules apply to network radio, local radio broadcasters, school radio and events radio. Spectrum licences are granted for a nine-year term.

**Electronic communications**

Access to the electronic communications market in Belgium is free. The provision of ECSs or the operation of ECNs does not require an individual licence or authorisation by the regulatory authority or the government.

A newcomer on the market can start its activities when he or she complies with the general conditions imposed by the Electronic Communications Act, which implements the provisions of the Authorisation Directive. The general conditions relate, *inter alia*, to the interoperability of services and the interconnection of networks, financial contributions for funding the universal service, must-carry obligations, data protection, number portability and user rights.

A precondition for commencing electronic communications activities is, however, a notification to BIPT. The provision or resale on own behalf or for own use of ECSs or ECNs can only start after this notification to BIPT, which is subject to the payment of a filing fee (€703). Notifications take effect from the day they are sent to BIPT and result in an obligation for ECS providers to pay a yearly administrative fee that varies significantly in relation to their yearly revenue (between €657 and €193,005). Newcomers are then granted operator status.

The right to use scarce electronic communications resources, such as RF spectrum and numbers, requires the granting of an individual licence by and the payment of fees to BIPT.

**Mobile and wireless telecoms**

No licence is required for the provision of mobile and wireless telecom services. Providers must, however, notify BIPT, setting out the services they intend to offer prior to the start of their activities. MNOs need a licence from BIPT to use RF bands for the provision of wireless services. Spectrum licences are generally allocated on the basis of an auction, which is usually the case for mobile communication services, or on the basis of general selection criteria. Applicants must first pay a filing fee, which serves to cover the costs of the examination of the file. Apart from this one-off licence fee, licensees must pay an annual fee for the allocation of the frequencies. This annual fee is split up into an annual management fee and an annual allocation fee.

**iii Ownership and market access restrictions**

Since its liberalisation on 1 January 1998, the telecommunications sector in Belgium is fully open to competition: no limits on participation are in place. Electronic communications
operators are only subject to general authorisation conditions and a notification duty to BIPT, based on the payment of an administrative fee. However, an operator still needs an individual licence for the use of electromagnetic spectrum, RFs and numbers.

Market entrants are generally able to enter the market without the need to significantly invest in their own network infrastructure through wholesale access and interconnection regulation.

With regard to television broadcasting, several cable network operators enjoyed a monopoly position in the respective regions of their infrastructure. In 2011, a decision by the CRC required Telenet, Brutélé, Tecteo and Numericable to open up their cable networks to competitors. After more than three years of legal proceedings, the Brussels Court of Appeal confirmed the decision by the CRC to liberalise the market by providing wholesale access to the cable networks. This allowed Orange (previously Mobistar) to start offering cable television and internet services. On 29 June 2018, the CRC maintained this access obligation after its evaluation determined that there still exists a lack of competition on the Belgian broadband and broadcasting market.

There are no restrictions on foreign ownership or investment in the TMT industries. Electronic communications operators meeting the notification and general authorisation requirements are allowed to provide their services in Belgium.

Mergers, acquisitions and joint ventures between broadcasting, media and other TMT companies are subject to the approval of the Belgian or European competition authorities.

iv Transfers of control and assignments

RF spectrum licences for public e-communication services may be transferred or leased as a whole or in part, subject to BIPT’s approval. BIPT may refuse its approval if the transfer or lease were to distort competition (which may, for instance, be the case when the original licence holder acquired rights to use the spectrum free of charge), or impedes the effective and efficient use of the RF spectrum.

In the case of a transfer, the acquirer must continue to fulfil the original licence conditions. When leasing wireless licences, lessors remain responsible for compliance with the licence conditions. A prospective licensor or lessor must notify BIPT. The notification must include a copy of the transfer or lease agreement and be accompanied by an administrative fee to cover BIPT’s costs for examining the request. BIPT may request additional information on the transaction within six weeks. A BIPT decision to approve or deny a transfer or lease must be given within three months following the notification or following the receipt of additional information. The termination of a temporary transfer or lease must also be notified to BIPT. Transfers, leases and their termination will be made public on BIPT’s website.

A change of control of the licence holder also requires prior notification. A licence may be revoked if the change of control seriously compromises the conditions under which the licence was issued.

Regarding broadcasting, in the Dutch-speaking community, spectrum licences and the corresponding broadcasting licences are personal. They can only be transferred to a third party upon written approval from VRM. In the French-speaking community, radio broadcasting licences are non-transferable. However, CSA may authorise the merger of radio broadcasters or the exchange of RFs between broadcasters having licences in the same zone. In the German-speaking community, broadcasting licences are non-transferable.
III  TELECOMMUNICATIONS AND INTERNET ACCESS

i  Internet and internet protocol regulation

Internet and IP-based services have generally been regulated in the same manner as traditional ECSs. Just as for ECNs (telephony), interconnection and access regulatory conditions are applied to IP-based networks.

However, the Electronic Communications Act imposes certain obligations on ISPs in relation to net neutrality. For example, an ISP is required to inform subscribers about traffic management procedures, download speed and volume, and legally permitted limitations to access or use of the internet access service. Apart from these transparency obligations, net neutrality requirements in Belgium are governed by the Net Neutrality Regulation. This Regulation, which came into force on 30 April 2016, ensures that all traffic data on the internet is treated equally, without discrimination as to its source, destination, device or application. This means that, subject to specific exceptions, ISPs cannot block, slow down, alter, restrict, interfere with, degrade or discriminate between specific content, applications or services.

The regional governments of Flanders, Wallonia and Brussels are competent to enact legislation regarding internet or broadband network infrastructure and infrastructure licensing in their respective regions without pre-emption. The three regional media regulators (VRM, CSA and Medienrat) also have a shared competence with the federal BIPT in relation to the supervision of net neutrality compliance.

ii  Universal service

The Electronic Communications Act prescribes USOs. The universal telecommunications service is composed of a geographic and social component and aims to provide a minimal set of ECSs to all end users at an affordable price.

In 2015 the Minister of the Digital Agenda, Telecom and Post introduced the Digital Belgium action plan, which establishes five long-term priorities (infrastructure, safety, government, economy and employment) for digital development in Belgium. Regarding infrastructure, a plan for ultrafast internet in Belgium has been presented that aims to achieve internet speeds of up to 1Gbps for at least half of the national connections by 2020 to facilitate the early establishment of mobile broadband technologies and to introduce a proactive 5G framework.

iii  Restrictions on the provision of service

Prices

The European regulatory principle for the electronic communications sector provides that ‘a retail market should only be subject to direct regulation if it is not effectively competitive despite the presence of appropriate wholesale regulation on each of the related upstream market(s)’. Following this principle, BIPT does not impose regulated retail tariffs on electronic communications operators.

Operators with significant market power (SMP) are subject to price regulation. At a wholesale level, mobile termination rates are regulated on the basis of a bottom-up LRIC. The same maximum tariffs apply to MNOs, full MVNOs and OTT-VoIP operators.

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5 EU Regulation 2015/2120.
At a retail level, maximum tariffs apply for porting a number and for the provision of paid services via e-communication networks. In addition, operators with a turnover of more than €50 million are obliged to offer social tariffs to low income households, elderly people with a low taxable income, categories of handicapped people, etcetera.

The Net Neutrality Regulation required operators to abolish retail roaming tariffs within the European Union as of 21 June 2017. Electronic communications operators are therefore no longer allowed to charge extra roaming costs next to national tariffs for the use of mobile services within the EU. The rules are, however, subject to exceptions to prevent abuse.

Access

Regarding network-to-network interconnection, all network operators are required to negotiate interconnection agreements with every requesting operator in good faith. Good faith negotiations are evaluated on a case-by-case basis, and must at least include a response to the request by the network operator and an exchange of propositions that meet certain minimal technical and financial conditions. If the parties fail to negotiate an interconnection agreement in good faith, they can request BIPT to mediate in a voluntary conciliation procedure. BIPT will attempt to reconcile the parties within one month.

More importantly, BIPT can intervene in both access and interconnection negotiations to assure adequate access or interoperability, to promote sustainable competition and user interests, and to contribute to the development of an electronic communications single market. BIPT may also, following the market analysis procedure of Article 55 Electronic Communications Act, impose ex ante regulatory obligations regarding access and interconnection on operators found to have SMP status in a specific market.

Content

Net neutrality and freedom of expression are core principles. ISPs cannot block, slow down, alter, restrict, interfere with, degrade or discriminate between specific content, applications or services. However, specific content limitations apply to broadcasting and advertising (see Section V.i).

Unsolicited communications

Article VI.110-VI.115 CEL regulates the provision of unsolicited communications in accordance with the ePrivacy Directive. The use of automatic calling systems without human intervention or faxing with the intention of direct marketing are prohibited without the prior free, specific and informed consent of the recipient of the communications. Recipients have the right to withdraw their consent at all times, without justification and at no cost. However, unsolicited communications for direct marketing purposes that use other means are allowed in the absence of clear opposition by recipients. The undertaking responsible for the unsolicited communications is, however, obligated to identify itself.

iv Security

Interception

Several provisions in different legislative instruments permit judiciary and administrative authorities to intercept or obtain the disclosure of private communications.

6 Directive 2002/58/EC.
The Belgian Code of Criminal Procedure (CCP) makes it possible to impose measures for the interception of communications for investigation purposes, as well as to obtain the disclosure of communications data. Interception measures are regarded as special investigation measures for which an examining magistrate needs to issue a warrant (Article 90 ter to 90 decies CCP). Warrants are subject to strict formal and justification requirements. The period for which interception measures are in place cannot exceed one month from the date of issuance of a warrant.

Electronic communications operators are obliged to cooperate with the judicial authorities in relation to investigative measures. This legal cooperation duty is laid down in the Royal Decree of 9 January 2003. It also includes the obligation for each electronic communication operator to establish a coordination unit consisting of one or more assigned persons who are permanently available to meet the cooperation obligations.

The Intelligence and Safety Services Act of 30 November 1998 gives national intelligence and safety services the authority to take interception measures and request the disclosure of certain private communications. The Act considers interception measures as exceptional measures for the collection of data, which are only possible after a specific authorisation by the Director-General of the intelligence or security services, subject to the positive advice of the supervisory administrative commission for specific and exceptional measures of investigation by intelligence and safety services.

Personal data – privacy
On 28 July 2016, the new Act of 29 May 2016 on the collection and storage of data in the electronic communications sector (Data Retention Act) came into force. The Act amended the previous version of Article 126 of the Electronic Communications Directive and added a new Article 126/1. It determines which data providers should retain, when the starting point of retention is and how long the retention is necessary. Although the new Act does not alter the data retention period of 12 months, it does provide for more guarantees for the protection of privacy and data.

Electronic communications operators are required to retain customer identification data, access and location data of devices, and communications data, with the exclusion of content data. The Data Retention Act limits the number of competent authorities that can request access to the data in a limitative way. Unrestricted access to data must be provided expeditiously and upon mere request of the listed authorities. However, access is only allowed in relation to specifically defined underlying purposes and circumstances. Electronic communications operators are required to keep the stored data confidential in all other circumstances.

Additionally, operators and service providers in the TMT sector are subject to the general principles and obligations of the General Data Protection Regulation (GDPR)\(^7\) that came into force on 25 May 2018. The GDPR sets out important obligations for businesses and organisations when processing personal data of natural persons, regarding, \textit{inter alia}, transparency, data retention, transfers and data breaches. In June 2018, a data leak under the major Belgian telecom provider Orange caused the loss of almost 15,000 Belgian customers’

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\(^7\) EU Regulation 2016/679.
personal data. Orange followed the data breach procedure laid down by the GDPR by notifying both the Belgian Data Protection Authority and BIPT within 72 hours, and the Belgian Data Protection Authority and BIPT have started an investigation.

IV SPECTRUM POLICY

i Development
The government attached coverage obligations to the allocation of spectrum below 1GHz. In 2016, Belgium reached an average 4G coverage among operators of 95 per cent.

In 2017, BIPT granted extensions to existing spectrum licences, coupled with capacity requirements. These capacity requirements aimed at strengthening the national broadband strategy and at deploying 5G networks. The operator in question recently relinquished its licence rights. In any event, the government has expressed its intention to support 5G initiatives and to increase mobile coverage further. 5G deployment is expected to take place in the spring of 2019.

ii Flexible spectrum use
Belgium’s frequency plan sets out the allocation of spectrum to specific services and uses. Although different frequency bands are reserved for specific applications, the principle of technological neutrality in Belgium allows for spectrum sharing and flexible spectrum use. For instance, new data transmission technologies, such as LTE and 4G, were introduced in the frequency bands allocated to mobile telephony. Additionally, several frequency bands are shared between both civil and military uses.

iii Broadband and next-generation mobile spectrum use
As previously mentioned, the Digital Belgium action plan establishes infrastructure, safety, government, economy and employment as priorities for digital development in Belgium.

Regarding infrastructure, a plan for ultrafast internet in Belgium aims to achieve internet speeds of up to 1Gbps for at least half of the national connections by 2020, to facilitate the early establishment of mobile broadband technologies and introduce a proactive 5G framework. The auction procedure to allocate spectrum for 5G mobile broadband is planned to take place in the spring of 2019. This procedure also aims to introduce an additional fourth MNO on the Belgian mobile telephony market. These milestones are to be achieved by implementing 17 specific measures in four areas of action. The plan pursues broadband coverage for all citizens and businesses through collaboration between operators and authorities prior to the network rollout by utilising European financing instruments, stimulating Wi-Fi rollout and imposing additional licensing conditions for the allocation of mobile frequencies to stimulate mobile broadband coverage.

Measures will also be adopted to reduce the costs of building ultrafast networks. These measures include the coordination of roadworks and distribution of costs between the different network operators involved, the use of existing infrastructure, facilitating the assignment of licences and assuring the fibre readiness of new building projects.

iv Spectrum auctions and fees
The assignment of spectrum varies depending on the frequency and its intended use. The conditions for obtaining spectrum licences, as well as its permitted use, are laid down in
royal decrees. For mobile services, BIPT generally assigns spectrum using both auctions and comparative selection processes. Auctions have been favoured for the assignment of spectrum for more recent mobile applications. For example, an auction was used in 2001 and 2011 for the assignment of spectrum for the provision of 3G services, and in 2010, 2011, 2013 and 2015 for the assignment of spectrum destined for 4G services. New spectrum auctions are expected in the spring of 2019 for the development of a 5G network framework in Belgium.

V MEDIA

i Restrictions on the provision of service

While freedom of expression is a core principle, specific limitations apply to broadcasting and advertising. These limitations only apply to content providers and not to network operators, who are regulated according to the principles of net neutrality. However, this is expected to change, as the EU Directive pertaining to audiovisual media services is currently under review and amendments are expected in the near future.

Broadcasting content limitations are set by the different language communities. The communities have similar rules to protect minors, banning the linear broadcasting of content that could seriously affect the physical, mental or moral development of minors. Television programmes including pornographic scenes or gratuitous violence may be distributed via non-linear services only, provided that adequate measures are in place (such as technical measures or the timing of broadcasting) to prevent access by minors.

Public television broadcasters and private linear television broadcasters (with the exception of regional and teleshopping broadcasters) must strive to reserve the majority of their transmission time that is not dedicated to news, sports, game shows, advertising, teletext or teleshopping to European productions. A considerable portion must be used for productions in the local language of the community in question.

Both federal and community rules apply to advertising. Federal legislation prohibits the advertising of tobacco products, regulates the advertising of alcohol, medicines and medical treatments, and online advertising, and prohibits unfair commercial practices. Similar limits apply to advertising and product placement across the different language communities.

ii Internet-delivered video content

An increasing number of consumers are shifting from linear audiovisual media services to on-demand content, resulting in traditional broadcasters and content providers losing considerable market shares to new OTT internet-based providers, such as Netflix. OTT (on demand) audiovisual content providers have no licensing requirements and are free to deliver their services over the internet without restriction. In accordance with the principles of net neutrality, ISPs cannot block, slow down, alter, restrict, interfere with, degrade or discriminate between specific content, applications or services delivered over their networks. As a result, ISPs are not compensated for the transmission of audiovisual content over their networks.

Under the current framework, on-demand audiovisual content providers only have to comply with general obligations related to transparency, public policy and health, the protection of minors, sponsorship and product placement, and the promotion of European works. They are not required to comply with the more stringent obligations applicable to television broadcasters.
Future regulation of OTT services is still uncertain. The proposed European Electronic Communications Code (ECC) will bring OTT communication services (such as Whatsapp) under the electronic communications regulatory framework. By amending the definition of ECSs to include interpersonal communications services, the scope of the electronic communications framework will be extended to functionally equivalent services. The same is expected to happen for OTT audiovisual content providers, whose regulatory obligations will be more aligned with traditional broadcasters to guarantee a more level playing field.

VI THE YEAR IN REVIEW

i Policy and decisions

2018 did not bring any major legislative changes in the Belgian TMT sector. With regard to technology, the government has launched consultations and initiatives with regard to important innovations such as artificial intelligence and blockchain.

With regard to telecommunications, the Minister of the Digital Agenda, Telecom and Post recently launched a consultation regarding the allocation of frequency spectrum licences for MNOs. Part of existing frequencies in the 2G and 3G frequency bands will be automatically assigned to existing operators, while the remaining part will be auctioned. The auction procedure also aims to assign spectrum in the new 700MHz and the 3,400–3,800MHz frequency bands, which will be used to establish 5G mobile broadband on the Belgian territory. This auction procedure will take place in the spring of 2019. Most importantly, the Minister plans to seize this opportunity to introduce a fourth MNO on the Belgian market. By expanding the number of MNOs from three to four, he aims to ensure additional investments, stronger price competition and lower prices for consumers.

After an extensive evaluation of the Belgian broadband and broadcasting markets, the CRC decided on 29 June 2018 to adopt a series of measures to further encourage competition. These measures include maintaining wholesale access obligations for the cable networks of Proximus, Telenet, Brutéle and Nethys (including optical fibre), the decrease of wholesale tariffs and incentivising investment in underpopulated areas.

ii Consolidation

On 4 February 2016, the European Commission decided to clear the previously announced acquisition of BASE Company by Telenet (Liberty Global). The acquisition was subject to several conditions, one of which was the establishment of a new MVNO, Medialaan, which was already active as a broadcaster in Belgium. In February 2018, the acquisition became final as Telenet paid the remainder of the takeover sum. In 2015, Telenet was allowed to acquire a stake in broadcaster De Vijver Media NV. The acquisition was subject to conditions, such as the conclusion of carriage agreements. In March 2018, Liberty Global reached an agreement with the remaining shareholders to acquire the full ownership of De Vijver Media NV. However, this acquisition is still subject to the authorisation of the competent competition authorities. Similarly, in June 2018, Liberty Global further expressed its desire for expansion by presenting a non-binding offer to acquire the Brussels’ cable operator Brutéle. This further indicates the tendency for consolidation under the major players in the Belgian TMT market.
VII CONCLUSIONS AND OUTLOOK

The growing trend of consolidation and convergence has prompted Belgian regulators and competition authorities to introduce or maintain measures to ensure competition on the electronic communications and broadcasting market. Especially on a wholesale level, access obligations and other measures are likely to remain in place to ensure competition. For the Belgian mobile telephony market, the introduction of a fourth MNO in 2019 will result in consumer choice and positive retail price changes.

The increased use of OTT services has led BIPT to support the imposition of a more level playing field by extending the scope of application of the electronic communications regulatory framework to OTT service providers. With the introduction of the ECC in the near future, the European legislator will adjust the current regulatory framework to the digital paradigm shift by including interpersonal communications services under the definition of ECSs. This trend of extending the scope of the regulatory framework to functionally equivalent services can also be expected for on-demand audiovisual services. Changes in Belgian legislation are expected because of the implementation of the ECC and the amended Audiovisual Media Services Directive. As the government has been in place since 11 October 2014, we do not expect major legislative changes to happen in Belgium before the elections of 2019.
Chapter 4

BRAZIL

Raphael de Cunto and Beatriz Landi Laterza Figueiredo

I OVERVIEW

This chapter describes the most relevant issues involving the TMT legal framework in Brazil, and recent and ongoing changes in TMT policies, mainly driven by the challenges posed by technological innovation, new emergent business models, continuously growing demand for infrastructure and the need for digital social inclusion across the country.

Although the TMT sector has experienced great progress in recent years, the regulatory landscape still needs remodelling to become a more simple, less regulated and less expensive environment for service providers in order to incentivise private investments and achieve digital social inclusion targets.

II REGULATION

i The regulators

The offer of telecom services in Brazil is supervised by the National Telecommunications Agency (Anatel), a regulatory agency reporting to the Ministry of Science, Technology, Innovations and Communications (Ministry of Communications). Anatel's authority involves, inter alia:

a granting and forfeiture of licences to offer telecom services;

b supervision and control of use of spectrum and the use of orbital slots;

c issuance of guidelines to regulate the relationship among telecom service providers, such as interconnection and unbundling and sharing of infrastructure, and ensuring compatibility and integrated network operations;

d supervision and control of consumers’ rights related to telecom services;

e homologation of telecom equipment to ensure electronic compatibility;

f quality and safety requirements; and

g supervision and control of net neutrality rules.

Telecom services in Brazil are regulated by a number of laws, decrees and other regulations specific to each type of service. The General Telecommunications Law (LGT) is the main law related thereto. A bill of law introducing a deep reform to the LGT had been approved by the Brazilian Congress at the end of 2016 under a controversial voting procedure, but its presidential sanction was stayed by an interim order issued by the Supreme Federal Court

1 Raphael de Cunto is a partner and Beatriz Landi Laterza Figueiredo is an associate at Pinheiro Neto Advogados.
(STF) when the opposition filed a writ of *mandamus* requesting the bill to be put up for a floor vote. In October 2017, the STF determined the President of the Senate must review the appeals filed by the opposition, and the matter has not evolved since. Whether or when it will be approved is uncertain. Anatel and the Ministry of Communications have endorsed the bill.

As regards television, there are two separate legislative frameworks for free-to-air television and pay-TV services. Pay-TV is considered a telecom service subject to the LGT and under the authority of Anatel. Free-to-air broadcasting is not subject to the LGT and is mostly regulated by laws dating from the 1960s. The broadcasting sector (including radio) is still subject to the direct authority of the Ministry of Communications.

The cinema and audiovisual industries are also subject to regulation by the National Film Agency (ANCINE), a regulatory agency reporting to the Ministry of Culture. The Provisional Measure that created ANCINE also established the National Cinema Policy and set guidelines for the industry. In 2011, the SeAC Law\(^2\) created a new telecom service to embrace all types of pay-TV technologies. A subscription-based access service (SeAc) is defined as a telecom service rendered by private initiative in the community’s interest, access to which is conditioned on paid subscription by subscribers and which is intended for distribution of audiovisual content through packages, programming channels in the channel-on-demand modes, and compulsory channels, by means of any technologies, processes, electronic media and communication protocols whatsoever.

The SeAC services were a convergence of (and replaced) all types of pay-TV services then existing under Anatel’s regulations, which were separately regulated according to the technology used, and which were subject to different licences required for their provision.\(^3\)

The activities encompassed by the SeAC Law are the distribution, production, programming and packaging of audiovisual content. Except for the distribution of content, which is an activity under the scope of Anatel’s regulation, the other three activities fall within the regulatory authority of ANCINE.

Free-to-air broadcasting (TV and radio) was not included in the scope of the SeAC Law, except for a few provisions related to cross-ownership between broadcasters, and telecom and production and programming companies.

ii  **Regulated activities**

As a general rule, the provision of telecom services requires a licence to be obtained beforehand from Anatel. Licences are issued for specific services (i.e., no one licence covers several or all types of telecom services). Anatel is responsible for defining the types of service, considering primarily their purpose for users, and the requirements for obtaining each licence vary depending on the type of service.

The main telecom services addressed by the current regulation are:

\(a\) the fixed telephony service (STFC);

\(b\) the mobile telephony service (SMP, SME, MVNO);

\(c\) the multimedia communication service (SCM); and

\(d\) pay-TV (SeAc).

\(^2\) Law 12,485.

\(^3\) The then-existing pay-TV services were the CATV service, MMDS, DTH and a special subscription TV service.
In an effort to simplify the regulatory landscape and incentivise broadband expansion and small service providers in the industry, in 2017 Anatel exempted from licensing small broadband providers that meet certain criteria and that do not use spectrum. In the opposite direction, there are discussions and more than one bill of laws under debate in Congress proposing a change of the SCM (broadband) service’s status to become a service offered under the public regime in certain situations.

The LGT classifies services according to their regime: public or private. In the public regime, services are rendered under concessions whose rules are driven by universalisation and continuity principles. Concessions for public services may be granted for up to 20 years, and may be extended only once for the same period. The only service currently provided under the public regime is the STFC.4 Under the private regime, services are provided under authorisations, which are typically valid for an indefinite term and less regulated.

The timing, procedures and documents required for an application for a telecom licence vary according to the type of service and licence. Generally, the documents required aim at providing Anatel with evidence that the applicant fulfils the required legal, economic–financial and technical qualifications, and is in good standing as regards its tax obligations. Authorisations to provide telecom services under private regimes in general are not auctioned and usually take from two to six months once all documents are submitted to the agency.

If services require the use of spectrum, a separate application must be made to Anatel. The timing and process for the granting of this authorisation will depend on the particular RF to be used and whether it must be auctioned.

Licences to provide free-to-air broadcasting services (TV and radio) are granted by the Ministry of Communications and the President, as concessions, and are preceded by auctions. A concession is valid for 15 years, renewable for equal and successive periods. Broadcasting licences refer to a limited geographical area (typically, a municipality). At the beginning of 2017, some rules involving free-to-air broadcasting were amended in an attempt to reduce regulation. Changes to licensees’ corporate purposes and partners that before were subject to the Ministry’s prior approval now only need to be informed to the Ministry. The process and requirements for concession renovation were also simplified.

The use of the RFs needed to execute broadcasting services is licensed separately by Anatel.

iii Ownership and market access restrictions

A licence to provide any type of telecom service in Brazil will only be granted to companies headquartered and incorporated under the laws of Brazil. In addition, licences for the provision of collective interest services (services offered to the public in general) can only be granted to companies that have the majority of their corporate capital held by a Brazilian individual or a company established in Brazil. Although direct foreign control of collective interest services providers is prohibited, a foreign company may indirectly own and control a Brazilian telecom subsidiary by means of a local holding.

Broadcasting business is also restricted to companies incorporated under the laws of Brazil with head offices in the country. In addition, at least 70 per cent of the voting capital of

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4 The current STFC concessions will expire on 31 December 2025.
broadcasting companies must be held, directly and indirectly, by Brazilian citizens, individuals who have held Brazilian citizenship for more than 10 years, or companies incorporated under Brazilian laws and with headquarters in Brazil.

Restrictions also apply to the intellectual guidance of broadcasting companies (including editorial responsibility, and the selection and direction of programming and content), which must be held, directly and indirectly, by native Brazilians or individuals who have held Brazilian citizenship for more than 10 years.

News companies are also subject to restrictions on foreign capital and foreign intellectual guidance (including editorial responsibility, and the selection and direction of programming and content). The extension of these restrictions has been subject to debate in the past, especially with regard to companies that carry out journalism-related activities through the internet. There are also cross-ownership restrictions among broadcasters, content producers and programmers on one side, and telecom carriers on the other: broadcasters, content producers and programmers cannot own, directly or indirectly, more than 50 per cent of telecom carriers, and ownership of broadcasting companies, content producers and programmers by telecom carriers is limited to 30 per cent (directly and indirectly).

A broadcasting company cannot hold more than 10 concessions in the national territory or more than two concessions per state. These restrictions also apply to the shareholders and managers of broadcasting companies (i.e., an individual cannot be manager or shareholder of more than one broadcasting company in a manner that exceeds these limitations).

iv Transfers of control and assignments
Changes of control of telecom service providers require prior approval by Anatel.5 Under Anatel’s broad concept, control is the power to directly or indirectly, internally or externally, in practice or legally, individually or by agreement, manage the operation or corporate activities of a company. Powers to appoint management, veto rights, rights to preclude completion of qualified quorum for installation or deliberation of any matters, for instance, are considered controlling powers by Anatel.

Anatel’s approval for a change of control will generally consider whether a transaction will harm competition or affect the provision of services or obligations undertaken by a provider towards Anatel, whether the telecom provider is in compliance with its regulatory obligations, and the effect of the transaction in the telecom market from a regulatory perspective (e.g., overlap of licences and RFs, consumer rights).

Direct transfer of telecom licences may only take place if the service is being provided for at least three years and the service provider is in compliance with all its regulatory obligations; the assignee meets the requirements to be a telecom licensee, including with regard to the legal, economic, financial, technical qualification and tax good-standing requirements; and the transfer does not harm competition, or affect the provision of services or obligations undertaken by the provider towards Anatel.

While the transfer of broadcasting licences depends on the prior approval of the Ministry of Communications and the President, the transfer of control of broadcasting

5 There are a few exceptions concerning specific services and transactions. For example, if the involved telecom provider only holds a licence to provide SCM and the transaction is not subject to an antitrust filing, Anatel’s prior approval is not required.
companies must only be notified to the Ministry of Communications within 60 days. No transfer is allowed during the period for installation of the related transmission stations, or in the five years thereafter.

Review and approval of direct transfers of licences (either related to telecom services or free-to-air broadcasting) are not subject to a time limit, and the timing varies depending on the status of the company, the complexity of the transaction and the general workload of the governmental authority involved.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

Internet services went largely unregulated in Brazil until 2014, when the Internet Act was enacted. It establishes basic principles, guarantees, rights and obligations for the use of the internet, and deals with protection of privacy, record-keeping to assist law enforcement, liability for third-party content and net neutrality.

The coordination and integration of internet services in Brazil are performed by the Brazilian Internet Steering Committee (CGI.br). CGI.br is not a regulatory body, but an organisation created by presidential decree composed of members from the government, corporate sector, third sector and academic community. Although CGI.br does not have the authority to issue binding regulations, it was given the role of proposing policies and procedures, recommending technical standards, establishing strategic directives and promoting studies.

While the provision of internet access is considered a telecom service regulated by Anatel, businesses built OTT of telecom operators’ networks, such as messaging applications, VOD and VoIP, are viewed as value-added services that avail themselves of a telecom platform. No licence is required to provide OTT services, and there are no requirements that must be complied with by OTTs or restrictions on ownership unless the activity to be carried out through the internet is itself regulated.

Currently, no regulatory agency has authority over OTTs. The scenario where OTTs grew to compete with traditional telecom and media services but were subject to a far simpler legal landscape, and at the same time continuously caused an increase of data flooding the networks, came to the attention of government authorities from two perspectives: the need to establish fairness in competition and the need to incentivise network expansion. In this context, government initiatives have been twofold: on one side, government authorities have been demonstrating a willingness to reduce (to some extent) regulation over traditional services, and on the other, they have been debating whether and how to regulate OTTs. ANCINE, for instance, has made efforts towards regulating certain aspects of audiovisual streaming, VOD services and online video advertisements. After promoting public debates, it is now discussing with Congress having a law enacted that will give it authority over the industry. The debate around creating a level playing field for OTT and traditional regulated services, however, has been around for a long time with few practical changes so far.

ii Universal service

The expansion of broadband access has occupied an important part of the agendas of Anatel and the Ministry of Communications since 2010, when the National Broadband Programme (PNBL) was approved with the purpose of driving the expansion of broadband access throughout the country.
The PNBL’s implementation was lengthy and faced several obstacles. A new phase of the PNBL, the Intelligent Brazil Programme, was launched in 2016, covering new milestones for subsequent years, including the construction of undersea cables, the setting up of a fund to promote investments in infrastructure by small carriers and incentives to public–private partnerships. At the end of 2017, the Ministry of Communications sponsored a public debate about the National Connectivity Plan, which should replace the PNBL. At the beginning of 2018, the Ministry announced the new Plan was ready, but it has not been enacted or released so far.

One result of the PNBL – a bill of law proposing that the SCM becomes subject to the public regime – is currently being debated in Congress. The immediate consequences, if the bill is approved, include tariff controls, heavier regulatory obligations aimed at the service’s universalisation and continuity, and the possibility to use resources from the Telecommunication Universalisation Fund (which was created as part of the aim to universalise services provided under the public regime) to finance broadband expansion initiatives. The rationale behind it is to acknowledge the essential nature of these services. This bill, however, is contrary to a general market call for less regulation and to Anatel’s latest efforts to simplify the regulatory environment to spur market growth.

The universalisation of broadband services was also addressed in the above-mentioned LGT reform bill, which provides that the government’s rights over certain assets held by incumbents under fixed-line concessions (reversible assets, which are supposed to revert to the federal government’s ownership upon termination of the concessions) would be waived in exchange for commitments from these companies to invest in broadband expansion.

A similar approach was adopted by Anatel in relation to the interest and fines arising from debts owed by incumbents to Anatel (other than tax debts). Anatel has discussed with Congress in the past about having a bill of law approved allowing incumbents to convert that interest and those fines into investments consistent with Anatel’s priorities for the sector (which would likely cover broadband infrastructure), but these discussions have not turned into any actual rules or actions.

Although broadband expansion remains a topic of major importance in the regulators’ speeches and agendas, in practice there were few effective actions during 2018 to spur it on, probably as a consequence of Brazil’s long-term financial crisis and political turmoil.

### Restrictions on the provision of service

The Internet Act defines access to the internet as essential for the exercise of citizenship, and establishes that one of the purposes of regulating the internet is to promote the universal access right. Other users’ rights expressly acknowledged by the law include the maintenance of connection quality and a prohibition on suspending internet access except in the event of payment default.

Based on these provisions, and in some other scattered provisions in the telecom regulation, some have defended the position that carriers may not discontinue connection after a data cap is achieved (i.e., they should only implement business models that limit and charge for speed, but not for data flow). Data caps are contemplated in existing mobile broadband agreements, and Anatel has already indicated its view that the law does not prohibit the practice.

As regards fixed broadband, carriers’ ability to impose data caps has been subject to intense debate in the past few years as some have argued it would be contrary to universal access targets. In 2016, Anatel issued a temporary order staying and prohibiting the practice
until a regulation is enacted, and since then, Anatel and Congress have promoted debates on the matter. Anatel undertook a wide public consultation to collect technical subsidies to ground its decision, and is conducting a study to issue a final decision and regulation. Although the Ministry of Communications has determined that Anatel's future regulation regarding the matter (if any) must ensure the offer of at least one broadband plan with unlimited data allowance by carriers, the current Minister of Communications has also asserted that data caps are a reasonable and inevitable market practice to be implemented in the short term. Meanwhile, a bill of law is being debated in Congress that will, if approved, prohibit data caps in fixed broadband. Data cap business models are also contained in the net neutrality discussions.

Under the net neutrality rules, all data packages must be treated equally, and without distinction of content, origin and destination, service, terminal or application. Traffic discrimination or degradation is only permitted to satisfy technical requirements or when emergency services need priority, and as long as reasonableness, fair treatment and transparency principles are abided by, no injury to users is caused and no anticompetitive practices are undertaken. The only technical requirements acknowledged by law that may justify traffic discrimination are the handling of security and safety issues, and of extraordinary network congestion situations. Traffic management based on international standards is also permitted, provided that Anatel and CGI.br guidelines are adhered to. It is not clear under the Brazilian net neutrality rules whether certain business models such as zero rating would be acceptable or considered a net neutrality violation. The Administrative Council for Economic Defence recently shelved investigations involving zero rating practices on the grounds that they do not harm competition.

Network operators are not allowed to block, monitor, filter or analyse the content of data packages, and cannot keep records of users’ logs on internet applications.

Anatel has the authority to investigate offences against net neutrality following the guidelines of CGI.br. Agreements between carriers and internet applications are prohibited if they prioritise data packages under commercial arrangements; favour applications offered by the carriers themselves; or jeopardise the public and unrestricted access to the internet or the dictates, principles and objectives governing the use of the internet in Brazil.

iv Security

Brazil has passed a General Data Protection Act (GDPA), which was published in the Federal Official Gazette on 15 August 2018 and will take effect after 18 months (i.e., in February 2020). The GDPA brings about deep changes in the conditions for the processing of personal data, laying down a set of rules to be observed in personal data processing activities. The enactment of the GDPA took place along with a presidential veto on the creation of a Data Protection Authority (DPA), which was contemplated as a government entity in charge of monitoring compliance with the GDPA and imposing sanctions for non-compliance. The articles establishing the DPA were vetoed by the President on constitutional grounds in the law-making process. The provisions on the creation of a DPA are expected to be reintroduced by the President by means of another bill of law or a provisional measure.

Privacy has been always protected by the Federal Constitution and several other statutory rules, which have since served as a guidepost to define the practices that are permissible for companies as regards people's data, but the GDPA has now set out detailed rules, rights and obligations for these practices. The GDPA applies to any data processing operation performed by individuals or by private or public entities, regardless of the country where

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they are headquartered or where data is hosted, as long as the processing operation takes place within the Brazilian territory, the processing activity is intended to offer or supply goods or services or to process data of individuals located in the Brazilian territory, or the personal data being processed has been collected within the Brazilian territory. The application of the GDPA is not restricted to data processing activities performed through digital media or on the internet. It also regulates data processing activities in all industry sectors.

The GDPA establishes the lawful basis for data processing activities (similar to those provided under the European General Data Protection Regulation), and sets out more stringent requirements for the processing of sensitive data and of personal data of minors, and for cross-border transfers of data. It affords, however, a lower level of protection to anonymised data and to data made manifestly public by the data subject.

It does not contain detailed parameters for the implementation of security measures, and defers to the DPA to do so in the future. For now, the GDPA only determines, vaguely, that controllers and processors must implement appropriate technical and organisational measures to ensure the security of the data processed, and that data breaches that may result in a material risk or damage to data subjects must be communicated to both the DPA and the respective data subjects within a reasonable time frame. In addition, governance rules under the GDPA are not mandatory, but a choice for both controllers and processors (although their implementation might be considered as a parameter for the application of penalties).

Under Decree 8,771/2016, which regulates the Internet Act (applicable only for data processing in the context of internet services and applications), internet application service providers must follow the security standards below in their storing, recording and processing activities:

- stringent data access controls;
- authentication mechanisms for access to logs and records;
- detailed histories of access to application and connection logs comprising the time, duration and identification of the accessing employee or designee and accessed files; and
- adequate solutions to ensure the inviolability of data (such as encryption).

Data protection is an issue that increasingly attracts attention from law enforcement authorities. Brazilian citizens, however, are still quite casual about their data, and data privacy is not an issue frequently debated in court, except for litigation involving the identification of internet users and criminal and civil liability for content posted online.

With regard to content liability, the Brazilian legal system in general, and specifically the Internet Act, protect freedom of speech, balanced with other constitutional principles such as privacy and dignity. If content or an action on the internet is considered illegal, it is possible to obtain a court decision or order for its removal. As a general rule, internet application providers are not responsible for third-party content on their websites, except if after receiving a specific court order they do not take action to make unavailable infringing content. Exceptions apply to nudity and sexual content, which content is subject to notice-and-take-down obligations, and to copyright infringements, which were left to be dealt with by future law (however, no such law has been enacted to date).

Internet application providers that perform their business in a professional, economic and organised manner are also required to guarantee law enforcement by keeping records of application access logs (date and time of use of a specific internet application from a certain
IP address) for six months. Likewise, network operators must keep connection logs (date and time of an internet connection, its duration and IP address) stored for one year. Record keeping must be made in a confidential, secured and controlled environment.

A court order may also determine that application access logs are stored for a longer period provided that they relate to specific facts within a determined time frame. Administrative authorities may also request certain data (without a court order) in specific circumstances provided in law.

The secrecy of communications is protected by the Federal Constitution and by the Internet Act, and content can only be disclosed under a court order by those who hold the records in the context of a criminal investigation or for the gathering of evidence for criminal procedures. Real-time interception is further regulated by the Wire-Tapping Law, which establishes that a court order for interception may only be rendered if there are reasonable signs of the commission of a crime, if the evidence cannot be produced through other means or if the investigated fact does not constitute a misdemeanour subject, at the most, to a penalty of detention.

The law does not determine that providers must have the capability to comply with an interception or communication content delivery order, but unless they provide evidence of technical impossibility (i.e., because the communication is encrypted and the provider involved does not hold the keys), failure to comply with a court order would be considered a felony and therefore exposes providers to penalties.

IV SPECTRUM POLICY

i Development
RF spectrum is defined under the LGT as a limited resource in the public interest administered by Anatel. It is part of Anatel’s duties to devise plans for the allocation, distribution and destination of RFs in relation to the various existing services and technologies and for pursuing efficiency. The use of spectrum, whether on an exclusive basis or not, is generally conditioned upon Anatel’s prior authorisation, which is granted directly related to a licence for the rendering of a certain telecom service. Rights to use spectrum are currently granted for a definite period, and are in general renewable only once.

The main regulation on the use of spectrum currently in force dates back to 2001, and its revision is part of the scope of the Broadband Expansion Plan and of the telecom regulatory framework general review currently being debated in Congress and by Anatel.

The spectrum policy review aims mainly at increasing efficiency on spectrum management. Changes under discussion involve, for example, harmonising the spectrum policy with technologies’ convergence trends, RF refarmings and the implementation of spectrum systems for the management of the temporary use of frequencies. Although discussions have been ongoing for quite a while, actual material changes in the legislation have been minimal to date.

The LGT reform bill of law also introduces changes to spectrum policies by allowing the successive renewal of spectrum authorisations (currently renewable only once), permitting the conversion of the spectrum renewal fee into investment obligations and allowing the transfer or resale of spectrum authorisations (which is currently prohibited), subject to Anatel’s prior approval. The bill of law also provides that Anatel may impose conditions to approve a spectrum transfer in order to protect competition, such as a limitation on the number of RFs transferred (to the same company).
ii  Flexible spectrum use
Mobile carriers have introduced radio access network (RAN)-sharing deals in recent years, following a trend initiated by tower sale and leaseback transactions.

RAN-sharing agreements depend on Anatel’s prior approval. Anatel has indicated that sharing is a basic principle to be pursued in spectrum management aimed at guaranteeing the efficient, rational and adequate use of this scarce resource, as long as it is technically viable.

The creation of a secondary market for spectrum is an old industry request and, as mentioned above, is addressed in the LGT reform bill.

iii  Broadband and next-generation mobile spectrum use
Anatel has been alert to the rapidly growing demand for broadband and next-generation mobile services in Brazil. In 2007, Anatel auctioned the 1.9GHz and 2.1GHz bands for 3G technology broadband services, and in 2012, the 2.5GHz and 450MHz bands for 4G services. In 2014, another auction was carried out with the intention of expanding 4G services in Brazil by using the 700MHz spectrum. Although the 700MHz band was successfully licensed to telecom carriers, it is currently used for analogue TV in many parts of the country, and its refarming depends on the conclusion of a TV digitalisation plan that is being implemented. Later in 2014, Anatel carried out a ‘leftover’ multi-band spectrum auction, also aimed at expanding 4G services and fixed broadband, which comprised frequencies in the 1.8GHz, 1.9GHz and 2.5GHz bands that had not been sold in previous auctions. Switching off the 2G network is also being discussed, which would free the 900MHz and the 1.8GHz bands for 4G technology.

The 2014 leftover spectrum auction offered several municipal lots with low minimum average prices and special payment conditions in an attempt to encourage small and medium-sized ISPs to bid. Anatel has announced that giving incentives to small broadband providers to increase their market share is part of a strategy to disseminate the broadband offer.

In all the spectrum auctions, Anatel imposed coverage and quality requirements with targets for carriers to achieve.

Some material issues remain unaddressed to date and have been raised by carriers as being essential to encourage private investment in broadband expansion, such as the termination of spectrum caps for carriers, and the simplification of the regulations regarding towers, especially those involving zoning and permitting restrictions and land-use restrictions.

iv  Spectrum auctions and fees
Although some RF bands are still available (left over from previous auctions), no future auction has been scheduled by Anatel to date. For the next rounds, Anatel has announced it is also considering making more spectrum available, such as the 2.3GHz and the 3.5GHz bands, the latter depending on conclusive studies regarding interference with the C Band.

Regarding the next auctions to be scheduled, the former Minister of Communications announced an intention not to prioritise Anatel’s revenues so that carriers may focus on enlarging infrastructure. Anatel has also announced that it intends to simplify the rules of future auctions in a further attempt to encourage small and medium-sized carriers to participate.
V MEDIA

i Restrictions on the provision of service

Media content is offered in Brazil through three main telecom services – SeAC, free-to-air broadcasting and internet broadband – which are regulated by the telecom rules and regulatory bodies mentioned earlier in the chapter. Provision of content that does not involve a network operation (but that, rather, relies on a third party’s service to have its signal transmitted) is not a regulated telecom activity.

As mentioned above, content broadcasting is considered a service of national interest regulated directly by the Ministry of Communications, and has to serve educational and cultural purposes. At least 5 per cent of daily programming must be devoted to news services, and five hours per week must be used for transmission of educational programmes. Advertising is capped at 25 per cent of daily programming. Broadcasting companies are also required to transmit official programmes and announcements of public authorities. Other than the above, broadcasting companies are free to organise their programming, which may include programmes produced by it directly and programmes licensed or purchased from third parties.

Under Anatel’s rules, SeAc providers are required to make a basic package of channels available to all subscribers. Requirements on the types of channels to be carried by SeAc providers and their content were established by the SeAc Law and complemented by regulations issued by ANCINE. There are requirements in respect to minimum Brazilian content and minimum content produced by Brazilian independent producers to be included during peak viewing hours on certain channels. These obligations mainly lie with the channels’ programmers, although it is incumbent on the SeAc provider or, if applicable, the respective packaging company, to verify compliance with this obligation. As in broadcasting, advertising in pay-TV channels is capped at 25 per cent of the daily programming.

ii Internet-delivered video content

Internet video distribution is considered a value-added service currently outwith the scope of the existing telecom regulation. ANCINE’s rules do not apply, either.

In the past, ANCINE promoted a public debate involving VOD regulation. ANCINE’s proposed rules originally included obligations similar to those currently applicable to pay-TV, such as obligations to register companies and content with the Agency, employ Brazilian nationals with editorial responsibilities and give prominent position to Brazilian content in their catalogues.

However, given the complexity of implementing rules that would consistently apply to the different existing industry business models, the Superior Cinema Council recently narrowed the scope of the regulation under debate, in the short term, to comprise only tax and industry incentives, and the government and industry players have been discussing draft rules during the entirety of 2018.

Although internet-delivered content has increased at a rapid pace in the capitals and more developed cities in the country, there is still limited access to this service in less-developed areas in the country, especially considering the overall Brazilian population’s economic capacity and the broadband infrastructure.

Because internet-delivered content faces significant restrictions in penetrating the general population, free-to-air broadcast and pay-TV are still important distribution channels.
in Brazil. Free-to-air TV broadcast has traditionally played a significant role in low-income regions, and the pay-TV market has increased its penetration among the middle classes as its affordability increases.

VI THE YEAR IN REVIEW

Brazil is still struggling to recover from the worst financial recession in its history. Together with the financial crisis, the country is facing a severe and long-term political crisis marked by various corruption scandals, the impeachment of President Dilma Rousseff in 2016 and, in 2018, after 14 years of a left-wing Workers Party’s government, the country’s most polarised general election to date. All of this has contributed to a lack of political leadership in the country that continues affecting Brazil’s legislative and political agendas. Although several initiatives in the TMT industry were debated during the past few years, most have remained on paper, and few effective actions have in fact been implemented.

In the context of a high turnover in the government, the past few years have also been marked by a lack of a uniform and cohesive position among regulators and lawmakers. As a consequence, the industry has witnessed different draft rules pointing in opposite directions and several overlapping public consultations sponsored by different authorities, resulting in a high level of uncertainty about what is coming next in the industry’s regulatory landscape.

VII CONCLUSIONS AND OUTLOOK

The regulatory landscape faces significant challenges.

Incumbents face problems related to their legacy landline concessions, such as their scheduled termination in 2025, decreasing voice revenues, competition from OTTs and mandatory investments that do not provide an attractive return. Oi’s bankruptcy in 2017 has highlighted incumbents’ financial and management woes. Mobile companies also have problems.

Anatel itself is not free from criticism. Even though services are provided under a private regime, which theoretically means that freedom is the rule, Anatel throughout the years has been a heavy-handed regulator. As such, while consumer advocacy groups claim that it has been lenient with the quality of services offered by telecom companies, the companies themselves condemn its harshness when imposing disproportionate and unreasonable fines. Anatel has only recently been empowered to settle fines out of court. At the same time, it has been under the scrutiny of the Federal Budget Oversight Board, an accountability federal court, and may soon also need to look into whether more consolidation is an answer to companies’ problems.

Political turmoil in 2015, 2016, 2017 and 2018 has contributed to a lack of political leadership that could steer the much-needed adjustments to the 20-year-old LGT. One of the most pressing questions is whether the incumbents will be allowed to free up their fixed assets that are currently tied to concessions and redirect funds owed to the federal government for broadband investments. One final, not-unimportant aspect that has an impact on the industry is the heavy taxation currently imposed on telecom companies, which are the largest taxpayers in Brazil. However, with Brazil’s continuing fiscal problems, this may be the last thing to be changed.
Chapter 5

CHINA

Jihong Chen

I OVERVIEW

In terms of matters relating to TMT, the government has always taken an affirmative position with the intention of constantly harmonising different sets of sector-specific laws and regulations with the rapid development of the TMT industry. Meanwhile, various incentive measures and preferential policies have been designed to ensure the protection and conditions for the expansion of fair competition and the development of a healthy market.

TMT regulation in China divides all telecommunications into two categories: basic telecommunications services (BTS) and value-added telecommunications services (VATS). BTS essentially refers to the provision of infrastructure facilities and basic voice and data transmissions, both domestically and internationally, while VATS refers to the provision of specialised services via the basic infrastructure facilities. China adopts a strict licensing system for the telecoms industry, and telecoms operators are required to obtain a licence to engage in either BTS or VATS. To fulfil its commitments to the World Trade Organization, China is gradually opening up its telecoms industry to foreign investment.

Among all the VATS, internet content services and e-commerce have grown at a rapid pace in recent years. Following the prosperity of the internet industry, online IP infringement, unfair competition and anti-counterfeiting and cybersecurity risks are issues that are starting to become of greater concern to telecoms operators.

II REGULATION

The regulators

TMT is one of the broader sectors in China, touching upon a number of different fields of business. The Ministry of Industry and Information Technology (MIIT) is the primary regulatory body in charge of licensing for and administration of BTS and VATS, including internet content or service provision (ICP, ISP and SP) and internet access tariffs and charges. Due to its complex nature, the TMT sector is also governed by other regulatory authorities, including but not limited to:

a the Ministry of Commerce (e-commerce policy, foreign investment in the TMT sector);
b the Ministry of Culture (online gaming, internet cultural activities, online music, etc.);
c the National Development and Reform Commission (IT industry planning and policy);

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the State Administration for Industry and Commerce and its local branches (consumer rights protection, online advertising, fair competition, registration of entities);
the Ministry of Public Security (internet security);
the State Council Internet Information Office (coordinating and supervising online content management and handling administrative approval of businesses related to online news reporting);
National Radio and Television Administration (news, publications, TV, radio, film, import and export of films, books, music, etc.);
State Intellectual Property Office (patent, trademark and geographical indication);
The Office of State Commercial Cryptography Administration;
Cyberspace Administration of China (cybersecurity); and
the National Information Security Standardization Technical Committee (issuing standards related to cybersecurity).

Main sources of law
The main sources of legislation and regulations governing the TMT sector in China are as follows:
Decision of the National People’s Congress Standing Committee to Strengthen Internet Information Protection;

- Counterterrorism Law of the People’s Republic of China;
- Electronic Signatures Law;
- Copyright Law;
- Contract Law;
- Advertising Law;
- Cryptography Law (draft for comments);
- State Security Law of China;
- Cyber Security Law of China;
- Law of the People's Republic of China on the Protection of Consumer Rights and Interests; and
- the Standardization Law;

- Regulations for the Management of Telecommunications;
- Regulations for the Management of Sales of Commercial Cryptographic Products;
- Regulations for the Management of Commercial Cryptographic;
- Regulations for the Management of Online Publishing Services;
- Regulations for the Management of Radio and Television;
- Regulations for the Protection of the Right of Communication through Information Networks;
- Regulations for the Protection and Administration of Computer Information Networks;
- Regulations for the Protection of Computer Software;
- Regulations for the Protection of Security of Critical Information Infrastructure (draft for comments); and
- Provisional Regulations for the Administration of Internet Culture;
the following measures:

- Measures for the Administration of Pilot Operation of Value-added Telecommunications Business by Foreign Investors in China (Shanghai) Pilot Free Trade Zone;
- Measures for the Administration of Telecommunications Construction;
- Measures for the Administration of the Connection of Telecommunications Equipment to Networks;
- Measures for the Administration of Telecommunications Service Operating Permits;
- Measures for the Handling of Disputes Regarding Interconnections between Telecommunications Networks;
- Measures for the Administration of International Communications Gateways;
- Measures for the Administration of Internet Information Services;
- Measures for the Administration of the Transmission of Audiovisual Programmes over Information Networks such as the Internet;
- Measures for the Administration of Electronic Certification Services;
- Measures for the Administration of Internet Domain Names;
- Measures for the Administration on Use and Maintenance of Internet Information Security Management System;
- Measures for the Administration of Commercial Franchise Procedures;
- Measures for the Registration of Copyright in Computer Software;
- Measures for the Security Assessment of Export of Personal Information and Important Data (draft for comments);
- Interim Measures for the Administration of Internet Advertising;
- Interim Measures for the Administration of Online Car Hailing Services;
- Interim Measures for the Administration of Internet-based Goods and Service Transactions; and
- Interim Measures for Network Product and Service Security Inspection;

the following provisions:

- Provisions for the Administration of Online Publishing Services;
- Provisions for the Administration of Mobile Internet Applications Information Service;
- Provisions for the Administration of Internet Information Search Services;
- Provisions for the Administration of the Construction of International Communications Facilities;
- Provisions for the Administration of Internet Audio and Video Programming Services;
- Provisions for the Administration of Internet News Information Services; and
- Provisions for Technical Measures of Internet Security Protection;

the following catalogues and lists:

- Catalogue of Telecommunications Services by Category (2015);
- Catalogue of Network (Cyber) Critical Equipment and Cybersecurity-Specific Products (Batch 1);
- Catalogue of Guide of Foreign Investment (2017); and
- Negative List of Access of Foreign Investment (2018);
the following rules:

• Rules for the Administration of Foreign-Invested Telecommunications Enterprises;
• Rules for the Administration of the Interconnection of Public Telecommunications Network;
• Rules for the Administration of the Establishment of Satellite Communications Networks and Installation and Use of Earth Stations;
• Rules for the Protection of Personal Information of Telecommunication and Internet Users;
• Rules for the Allocation of Radio Frequency Band;
• Rules for the Registration of Real Names of Phone Users; and
• Procedural Rules for the Resolution of Domain Name Disputes by China Internet Network Information Center;

the following national standards:

• Information Security Technology – Security Capability Requirements for Big Data Services;
• Information Security Technology – Baseline for the Multi-Level Protection on Information System Security;
• Information Security Technology – Guide of Rating of the Multi-Level Protection on Cybersecurity;
• Information Security Technology – Guide of Assessment for Data Cross-Border Transfer Security (draft for comments);
• Information Security Technology – Guide of Personal Information Protection in Public and Commercial Services Information System;
• Information Security Technology – Guide of Personal Information Security Specification; and
• Information Security Technology – Guide of Assessment for Personal Information Security Impact;

Notice of the Administration of Mobile Game Publishing Services, issued by the National Radio and Television Administration;

Opinions on Further Opening up Value-added Telecommunication Business to Foreign Investments in the China (Shanghai) Pilot Free Trade Zone, jointly issued by MIIT and the Shanghai municipal government; and

Circular for Removing Restriction on Foreign Shareholding in Holder of Online Data Processing and Transaction Processing in China (Shanghai) Pilot Free Trade Zone, issued by MIIT.

Generally, the Catalogue of Telecommunications Services by Category and the Catalogue of Guide of Foreign Investment regulate what types of activities require licences. A foreign enterprise shall first inquire regarding the related laws and regulations to clarify whether a business it wishes to engage in requires a license. If the business requires a licence, such enterprise shall apply to the relevant agencies for that licence.
iii Ownership and market access restrictions

The government has formulated relevant laws and administrative regulations, as well as various policy strategies, to facilitate the growth of the sector for the purposes of the following:

a satisfying demands to open up China’s TMT industry;
b promoting the development of all TMT-related services; and
c enhancing business activities aiding the path of technological advancement, and the rapid increase in internet penetration rates and the expansion of mobile broadband networks.

In general, to fulfil China’s commitments to the World Trade Organization, the TMT field in China will be opened up to foreign investment participation, with foreign investors being subject to certain restrictions and strict government approval procedures. Foreign-funded telecoms enterprises are allowed to engage in telecoms businesses within the territory of China subject to government approval, as well as through abidance by the provisions of the Telecommunications Regulation and other applicable laws and administrative regulations. Foreign investment by way of a Sino-foreign equity joint venture may be engaged in both BTS and VATS. The ultimate proportion of contribution and registered capital required are follows:

<table>
<thead>
<tr>
<th>Business classifications</th>
<th>Geographical areas</th>
<th>Registered capital</th>
<th>Proportion of contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTS business</td>
<td>Nationwide, or beyond a single province, autonomous region or municipality directly under the central government</td>
<td>Not less than 1 billion yuan</td>
<td>Foreign investors: no more than 49% (except radio paging services and the construction and operation of power grid systems)</td>
</tr>
<tr>
<td></td>
<td>Within a province, autonomous region or municipality directly under the central government</td>
<td>Not less than 100 million yuan</td>
<td></td>
</tr>
<tr>
<td>VATS business</td>
<td>Nationwide, or beyond a single province, autonomous region or municipality directly under the central government</td>
<td>Not less than 10 million yuan</td>
<td>Foreign investors: no more than 50% (including radio paging business in basic telecoms services), except in the online data processing and transaction processing business (the foreign proportion of contribution can be 100%)</td>
</tr>
<tr>
<td></td>
<td>Within a province, autonomous region or municipality directly under the central government</td>
<td>Not less than 1 million yuan</td>
<td></td>
</tr>
</tbody>
</table>

The major foreign investor of a foreign-invested telecommunications enterprise providing BTS shall meet the following conditions:

a being qualified as an legal person or enterprise;
b having obtained a licence for providing BTS from the registration country or region;
c having the funds and professionals commensurate with its business operation; and
d having a good performance record and experience in providing BTS.

The major foreign investor in a foreign-invested telecommunications enterprise providing VATS must have a good performance record and experience in providing VATS.

To establish a foreign-invested telecommunications enterprise providing BTS or VATS, the major Chinese investor shall submit the required application documents for approval to MIIT. For a foreign-funded telecom enterprise engaging in value-added telecom businesses within a province, autonomous region or municipality directly under the central government, MIIT shall complete its examination within 30 days of the date of receipt of application documents establishing a foreign-invested telecommunications enterprise, and either approve or reject the application. For foreign-funded telecom enterprises engaging in
a basic telecom businesses, the examination shall last 180 days; for foreign-funded telecom enterprises engaging in value-added telecom businesses within an area of more than one province, autonomous region or municipality directly under the central government, the examination period would last 90 days.

If approved, the Examination Opinions on Foreign Investment in Telecommunications Services Provision shall be issued; if not, the applicant shall be notified in writing with the reasons therefor stated. Following opinions from MIIT, the major Chinese investor shall submit the contract and articles of association of the enterprise to be established to the Ministry of Commerce, which shall complete its examination within 90 days of the date of receipt, and either approve or reject the application.

To provide trans-border telecommunications services, the foreign-invested telecommunications enterprise must obtain approval from MIIT and provide its services through the international entry and exit gateway agency, the establishment of which has been approved by MIIT.

iv Transfers of control and assignments
An ownership change or transfer of equity of a foreign-invested telecommunications enterprise shall comply with China’s laws and regulations on investor qualifications and industrial policy requirements. First, the ownership change or transfer of equity of a foreign-invested telecommunications enterprise shall not violate the Catalogue of Guide of Foreign Investment (2017) and the Negative List of Access of Foreign Investment (2018) issued by the Ministry of Commerce. In addition, in TMT industries, MIIT and its branches and the Administrative, Industrial and Commerce authorities may review such transactions.

The enterprise shall, within 30 days of the date on which the examination and approval authority approves the change or the transfer, go through the formalities regarding that examination and approval authority. If the Chinese investor in a joint venture will obtain the entire equity, it shall, within 30 days of the date of approval by the examination and approval authority, cancel the certificate of the foreign-invested enterprise to the examination and approval authority. The enterprise shall, within 30 days of the date of change or cancellation of the foreign-invested enterprise approval certificate, apply to the registration authority for registration of change.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation
With regard to the government institutions that have been restructured in 2018, generally, internet and IP-based services are regulated by the following authorities:

a internet services and cybersecurity issues: MIIT, the Cyberspace Administration of China and the Ministry of Public Security; and

b IP-based services: the National Radio and Television Administration (news, publications, TV, radio, film, import and export of films, books, music, etc.), the Copyright Protection Centre of China (copyright registration issues) and the State Intellectual Property Office (patent, trademark and geographical indication).

ii Universal service
Under the current telecoms legal system of China, basic telecommunications operators are required to perform their corresponding obligations to make telecommunications services
universally available, in accordance with relevant state regulations. MIIT may determine which telecommunications operators shall assume specific obligations in respect of the universal availability of telecommunications services by designating such operators or by inviting tenders.

The State Administration for Market Regulation and the State Council’s department in charge of pricing are responsible for formulating the procedures for the administration of compensation for the costs of making telecommunications services universally available.

In addition, telecommunications operators engaging in domestic telephone business and mobile phone business are required to provide their subscribers with free telecommunications services of a public welfare nature, such as phone numbers for reporting fire-related accidents, bandit-related incidents, medical emergencies and traffic accidents, and the availability of telephone lines shall be guaranteed.

iii Restrictions on the provision of service

Products and equipment subject to a network access permit

Telecoms terminal equipment, wireless communication equipment and equipment used in network interconnection that is connected to public telecommunications networks must adhere to the national standards set by the state, and a network access permit must be obtained.

Telecommunications terminal equipment is equipment that is connected to the end of a public telecommunications network and that provides subscribers with functions to transmit and receive information. This includes fixed telephone terminals, cordless telephone terminals, private branch exchange, faxes, modems (with cards), private automated branch exchange, mobile user terminals, pagers, ISDN terminals, data terminals (with cards), multimedia terminals and other telecommunications terminal equipment (12 product categories in total).

Wireless communications equipment is equipment that is connected to a public telecommunications network via radio as a means for wireless communication. It includes wireless base stations (such as fixed, mobile, paging and repeater stations), microwave communications equipment and satellite earth stations (three categories in total).

Network interconnection equipment is equipment that permits interconnection and mutual communication between networks of different telecommunications carriers or between networks that provide different telecommunications services. It includes optical transmission equipment, digital program-controlled switching systems (fixed and mobile), VII (China No. 7 Common Channel Signaling System), intelligent network equipment, synchronisation equipment, access network equipment, frame relay switches, asynchronous transfer mode switches, ISDN switches, routing devices, IP gateways in the gatekeeper, data communication equipment (including multiplexing equipment, access to the server, cross-connect devices) and call centre equipment (13 categories in total).

In addition, in accordance with the Cybersecurity Law and the Interim Measures for Network Product and Service Security Inspection, products and equipment subject to a network access shall be reviewed under the Cybersecurity Review Regime to minimise cybersecurity risks. The Catalogue of Network (Cyber) Critical Equipment and Cybersecurity-Specific Products (Batch 1) includes what it defines as equipment (e.g., routers, switches, and programmable logic controllers) and products (e.g., firewalls and intrusion detection systems). All items on the list cannot be sold in the China market without first getting certification.
Requirements for manufacturers and operators

Under the network access permit system, the following requirements shall be met by telecommunications equipment manufacturers:

a. telecommunications equipment is allowed to be sold and used within the territory of China only after the relevant network access permit has been secured;

b. enterprises, once having obtained a network access permit, shall promptly report such for the record to the telecommunications authorities in the various provinces, autonomous regions and municipalities, and accept the supervision and management of such departments;

c. if there is any modification relating to technology and appearance, such changes shall be tested, and a new application for a new network access permit shall be submitted;

d. manufacturers must ensure that the quality of the equipment for which they have obtained a network access permit is stable and reliable, and they may not lower the quality or performance of their products; and

e. they should affix a sticker presenting the network access permit logo and the network access certificate stating the certificate number, applicant, name of manufacture, device name, device type and the effective date of the certificate.

The following requirements shall be met by telecommunications operators:

a. they shall obtain network access approval prior to using telecommunications equipment;

b. they shall consider that users have the right to choose the telecommunications terminal equipment to be used, and no carrier shall prevent subscribers from connecting their own telecommunications terminal equipment for which the network connection permit has been obtained;

c. they shall assist the authorities to review the certified equipment connected to their networks;

d. major incidents caused by the telecommunications equipment shall be truthfully reported in a brief written report by the telecommunications operators; and

e. they shall not monitor and control the content, applications and services accessed by their network users under the regulations on personal information protection.

iv Security

Information security

According to the Regulations for the Management on Telecommunications, each telecommunications service operator is asked mandatorily to establish and implement a sound system to protect the security and confidentiality of the transmitted information. Such internal security protection system shall be reported to the regional public security bureau. If, during the course of providing public information services, a telecommunications operator discovers information transmitted on its telecommunications network that clearly falls within the scope of illegal content specified by laws and regulations, it shall immediately stop the transmission thereof, keep the relevant records and make a report thereon to the relevant authority.

To safeguard a safe environment and services for internet transactions, e-commerce platform service providers are obliged not only to provide adequate technological methods for protection, but also to take necessary management measures for the smooth operation of the internet transaction platform.
Under current practice, the public security bureau may ask certification authorities to disclose private keys for criminal investigation or national security purposes. According to the Electronic Signature Law and Measures for the Administration on Electronic Certification Services, certification authorities are responsible for preserving the information relating to electronic signatures safely.

**Personal information protection**

To protect personal information better, Information Security Technology – Guide of Assessment for Personal Information Security Impact introduces the concept of “assessment of impact of personal information security”. It regulates that personal information controllers shall conduct personal information security impact assessments on processing activities of personal information (especially under the scenarios of entrusted processing, external sharing, transfer or public disclosure of personal information, etc.) on a regular basis (at least once a year). In the assessment, it shall analyze the impact on personal interests, possibility of security risks and other potential risks. It also lists scenarios in which enterprises can develop new or updated personal information security impact assessment procedures.

**Cybersecurity**

Cybersecurity is an important and growing factor in the economic and legal environment in China for any business involved in information and communication technology. As the Cybersecurity Law was effective in 2017, there are many cybersecurity standards working as supporting rules. The entire legal system of cybersecurity may comprise several categories:

- network products and service security review: focuses on ensuring that providers of such network products or services observe the regulations to safeguard cybersecurity and a safe internet environment;
- multilevel protection scheme (MLPS): a higher MLPS ranking, especially a sensitive ranking such as Level 4 or Level 5, means that enterprises would be subject to enhanced monitoring under the systems of the Ministry of Public Security;
- critical information infrastructure (CII) cybersecurity protection: CII operators must only use network products and services that have undergone the national security review process, store certain data within mainland China and undergo security procedures such as spot testing and regular assessments;
- cross-border data transfer: data produced by CII operators will need to be stored within mainland China, and data deemed personal or important must undergo a security assessment before outbound transfer. Companies must conduct self assessments that may trigger reporting obligations to the Cyberspace Administration of China or sector-specific regulators to determine if the transfer can proceed; and
- personal data and important data protection: the Cybersecurity Law and the Personal Information Security Specification give rules for user consent and what enterprises must do when collecting, storing, processing and transferring personal data. Such rules have the purpose of protecting citizens from fraud or misappropriation by companies or criminals.

The government may provide more clarity on a clear set of processes that foreign firms should follow to avoid arbitrary auditing, which would be a positive development.
IV SPECTRUM POLICY

In terms of telecommunications resources, the central government is attempting to carry out uniform planning, centralised administration and reasonable allocation, and to implement a system of use with compensation. Telecommunications resources are resources that have telecommunications functions, and are limited in amount, including, inter alia, RFs, satellite orbit locations and telecommunications network codes.

A telecommunications operator that occupies or uses telecommunications resources shall pay telecommunications resource fees. MIIT is the major government body responsible for formulating specific measures for fee collection for use of telecommunications resources. When MIIT allocates telecommunications resources, it needs to consider factors including telecommunications resource planning, usage and expected service capability. The allocation of telecommunications resources may be made either by designation or by auction. To date, no auctions have been conducted.

Without the approval of MIIT, an operator may not unilaterally use, transfer or lease out telecommunications resources or change the use of telecommunications resources. After a user of telecommunications resources obtains a telecommunications network code, the major telecommunications operators or other relevant parties shall be obligated to take the necessary technical measures to cooperate with such user of telecommunications resources to allow it to achieve the functionality of its telecommunications network code resources.

V MEDIA

i Restrictions on the provision of service

China has systematic restrictions on TV and radio content provision and transmission.

Radio or television stations shall be established by the administrative departments for radio and television under the people's governments, and educational television stations may be established by the administrative departments for education under the people's governments at or above the level of a city divided into districts or counties. No other entity or individual may establish radio or television stations.

An entity that intends to establish a cable television station shall obtain the preliminary consent of the competent department of radio and television of the province and apply for the approval of the National Radio and Television Administration. Upon approval, a permit to establish a cable television station shall be issued by the National Radio and Television Administration to the applying entity. An entity that intends to establish a small cable television station shall obtain the preliminary consent of the competent department of radio and television of the county, and apply for the approval of the competent department of radio and television of the province. Upon approval, a permit to establish a small cable television station shall be issued by the competent department of radio and television of the province to the applying entity.

An entity or individual that intends to set up master antenna television shall report to the department of radio and television of the district or county for its records.

An entity that intends to utilise its existing ground satellite receiving facilities or install special ground satellite receiving facilities to receive television programmes transmitted via foreign satellites shall apply in writing to the competent department at or above the provincial level. If consent is granted thereto upon examination, the applying entity shall proceed to submit the application for examination and approval to the department (or bureau) of radio and television of the province, autonomous region or municipality directly under the central
government where the applying entity is located. Upon this approval, a permit to receive television programmes transmitted via foreign satellites shall be issued to the applying entity, and the case shall be reported by the examining and approving authorities to MIIT, the National Radio and Television Administration, the Ministry of Public Security and the Ministry of State Security for their records.

ii  Internet-delivered video content

An entity that intends to provide internet audio and video programme-related services shall obtain a permit for audio and video programmes transmitted through an information network issued by the competent radio and television authority, or go through the formalities for registration in accordance with the provisions of these regulations.

No entity or individual that has not obtained a permit issued by the competent radio and television authority, or that has not gone through the formalities and legal steps for registration in accordance with the relevant laws and regulations, may provide internet audio and video programme-related services.

As internet access is very common in China and because of technology development, ICPs pay great attention to the protection of their contents’ copyright. ICPs may include large platforms providing audio and video content to consumers, or personal media. ICPs take technical measures to prevent copyright infringement. More and more lawsuits related to the right of communication through the information network (a subclass of copyright under the Copyright Law of China) are being filed to fight against the unauthorised use, reproduction or transmission of internet contents. The amount of compensation being awarded in these types of cases is getting higher, especially in judgments of the intellectual property courts in Beijing, Shanghai and Guangzhou that focus on the protection of copyright ownership of internet content.

VI  THE YEAR IN REVIEW

i  Further promotion of the application and development of big data and cloud computing

China's cloud computing, big data, IoT, mobile internet, and other new generations of information and communication technology and new commercial formats, have achieved rapid development in recent years, and are driving the consumption of information and China's economic growth. Especially under its Internet + policy, China has vigorously fostered an information economy.

China has issued many policies focusing on the application and development of information technology, including:

a  Made in China 2025;
b  the Opinion of the State Council on the Promotion of Cloud Computing Innovation and Development of New Formats of the Information Industry;
c  the Guide of the State Council on Actively Promoting the ‘Internet +’ Policy; and
d  the Opinion of the General Office of the State Council on Use of Big Data to Strengthen the Services and Supervision of Market Entities.

These policies will have far-reaching influences on the big data industry and the continued healthy development of the internet industry in the country.
On 7 January 2016, the Development and Reform Commission issued the Notice on Organising and Implementing Major Projects for Promoting the Development of Big Data to promote the development of big data through reliance on the major national construction project libraries. This policy clearly expresses four major development directions for big data projects to support:

- big data demonstration applications;
- big data sharing development;
- the overall development of infrastructure; and
- the flow of data elements.

In 2017, MIIT issued the Project Plan of Development of Cloud Computing (2017–2019). This policy will promote the rapid and healthy development of cloud computing from the aspects of improving technology levels, enhancing industrial capabilities, promoting industry applications, ensuring network security and creating an industrial environment.

Finally, in July 2018, MIIT issued the Guide on Promotion of the Cloud Computing of Enterprises. This policy also encourages enterprises to develop cloud computing abilities and big data usage.

### Cyberspace administration issues the new Cyber Security Law

On 7 November 2016, the Standing Committee of the National People's Congress voted to pass the Cybersecurity Law, which constitutes the basic law of cyberspace security management in China. It became effective on 1 June 2017. The Cybersecurity Law adopts the principle of limited extraterritorial jurisdiction. In response to growing global cybersecurity threats, the legal responsibility of overseas subjects engaged in intrusions, attacks or other activities that are harmful to critical information infrastructure within the territory of China that cause serious consequences shall be investigated according to the law, and China's law enforcement agencies have rights to implement punitive measures, including assets freezes.

The legal system concerning cybersecurity management in China is constituted by the Cybersecurity Law and some other laws and regulations, including, *inter alia*, the following:

- the National Security Law;
- the Counterterrorism Law;
- the Criminal Law;
- the Cryptography Law;
- the Public Security Administration Punishments Law;
- the Decision of the Standing Committee of the National People's Congress on Strengthening Information Protection of Networks;
- the Decision of the Standing Committee of the National People's Congress on Preserving Computer Network Security;
- the Regulations of the People's Republic of China on Protecting the Safety of Computer Information Systems; and
- the Administrative Measures for Internet Information Services.

Considering that the Cybersecurity Law is a framework law, some supporting laws and regulations (including national standards) are published, and some will be formulated and implemented in the future. In the next few years, cybersecurity will remain a key point both in terms of legislation and law enforcement.
iii Further opening up of the market to foreign capital

The Negative List of Access of Foreign Investment (2018) issued by the Ministry of Commerce was drafted based on the Foreign Investment Industrial Guidance Catalogue (2017), and is the first negative list regarding foreign investment in China. This policy greatly relaxes market access for foreign investment, as it expands and enhances the scope and extent of China’s multi-industry openness to foreign investment. These new opening measures will further deepen China’s investment cooperation with other countries and regions, and enable the carrying out of broader investment, technology, management and talent exchanges, thus achieving a wider scope of mutual benefits and a win-win situation.

VII CONCLUSIONS AND OUTLOOK

To fulfil China’s commitments to the World Trade Organization, we believe that the VATS market will be gradually opened up to foreign investors. Although internet content services (including blogs, instant messenger, TV, radio, online games, online music and internet news) have some restrictions on foreign investment, it can be seen that the government has plans to allow foreign investment in these areas, such as cancelling the restriction on foreign investment in internet cafes.

From the recent policies and regulations issued by the central government on free trade zones, we can see that the government is more willing to open more sectors and shareholdings of telecoms services to foreign investors; which is good news for foreign IT and telecoms enterprises aiming to enter the Chinese market.

China’s regulation of the TMT sector remains quite complex and is rapidly changing; therefore, when an entity enters into this market, it is advisable to seek legal advice from professional TMT lawyers.
Chapter 6

ESTONIA

Mihkel Miidla and Liisa Maria Kuuskmaa

I OVERVIEW

Estonia is a strong advocate of technological advancement, and the ICT sector is of major importance to the government. Estonia has become a model for free and open internet access. It is also the EU Member State with the most digital public services, with a high level of access and online citizen participation.

Estonia sees ICT as a key to sustained economic growth. The Ministry of Economic Affairs and Communications adopted the Digital Agenda 2020, which focuses on creating an environment that facilitates the use of ICT and the development of smart solutions in Estonia in general. The main goals of the Agenda are, among others:

a. the completion of the next-generation broadband network, with the aim of that all residents of Estonia will have access to fast (30Mbit/s or faster) internet by 2020 and that at least 60 per cent of households will be using ultrafast (100Mbit/s or faster) internet daily;

b. the continuing development of state information systems and public e-services to ensure up-to-date and citizen-friendly solutions; and

c. to continue promoting Estonia as a hub for innovation and the development of the information society, and to establish a global information society think tank in Estonia.

The number of internet and mobile telephone users in Estonia has grown rapidly in the past 20 years. The availability of mobile broadband is very good while fixed broadband is less widespread, below the European average, which is mainly because of limited connectivity in sparsely populated rural areas. For this reason, a non-profit organisation, the Estonian Broadband Development Foundation (ELA SA), was founded in 2009 by the government and major Estonian communication undertakings to develop Estonia’s broadband network and build and operate the EstWin high-speed base network. The project is financed mostly from public sources. In 2018, the Foundation started its 12th and last tender to procure the designing and building of approximately 400km of base network. The Foundation has set its goals to finalise the project in 2019 by bringing broadband no further than 1.5km from 98 per cent of households.

1 Mihkel Miidla is a partner and Liisa Maria Kuuskmaa is a legal assistant at Sorainen.
5 https://www.elasa.ee/estwin-baasvorgu-rajamine-lopusirgel/.
Separate from the base network project is the government’s last mile project. Until 2018, all local municipalities were responsible for mapping out the white areas in their jurisdiction where there is a need for developing the last mile of a high-speed internet network. This approach did not prove to be successful, and in 2018 the Ministry of Economic Affairs and Communications, along with the Estonian Technical Regulatory Authority, initiated the national last mile project, a public competition to find a suitable network builder to bring high-speed internet access to areas where there is no internet access or where the connection is of poor quality and where communications companies would not invest in the next five years (the white area). One service provider will be awarded a subsidy with the obligation to extend broadband access to the largest possible number of households who still lack high-speed internet, with the hope of ensuring nationwide broadband access with high transmission rates. At the time of writing, the application period had just ended.6

The fast-developing ICT sector presents some challenges for policymakers, but generally the regulatory landscape in the ICT sector is in quite good shape. As previously mentioned, the ICT sector is of major importance to the state. Estonia experienced several political changes during the past year, but these are unlikely to heavily impact e-governance or other internet use. The government continues with its strategy to market Estonia as an e-state throughout the world.

II REGULATION

i The regulators

ECSs are regulated by the Electronic Communications Act (ECA),7 in force from 1 January 2005 (as amended), which transposes in Estonia the EU’s regulatory framework for electronic communications. On basis of the ECA, numerous regulations of the government have been adopted to regulate certain more technical or detailed issues of the framework. Under the ECA, an ECS means a service that consists wholly or mainly in the transmission or conveyance of signals over the ECN under agreed conditions. Network services are also ECSs.8

The ECA provides requirements for public ECNs and publicly available ECSs regarding the use of electronic contact details for direct marketing, the conduct of radiocommunications, and the management of RFs, numbering and apparatus, as well as state supervision over the compliance with these requirements and liability for the violation of these requirements. A publicly available ECS is defined as a service provided by a communications undertaking on the respective communications services market pursuant to the general procedure to all persons, and the persons need not meet any conditions differentiating them from other similar persons. A service is publicly available particularly if provision of the service is continuous and consistent and it is provided essentially under uniform conditions.9 There appear to be no definite (official) criteria available that would help to determine whether a particular service is considered to be publicly available, as there are no official guidelines or case law. However, under a conservative approach from the viewpoint of notification obligations, it

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8 Clause 2 6) of the ECA.
9 Clause 2 68) of the ECA.
does not matter whether the services are offered either on a wholesale level or on a retail level to end users to be considered as publicly available, but rather if the service is open to a particular group of (similar) customers.

The ECA is not applicable to information society services to the extent these are regulated by the Information Society Services Act (ISSA),\textsuperscript{10} which implements Directive 2000/31/EC into Estonian law. Information society services are services provided in the form of economic or professional activities at the direct request of a recipient of the services, without the parties being simultaneously present at the same location, and such services involve the processing, storage or transmission of information by electronic means intended for the digital processing and storage of data. Information society services must be entirely transmitted, conveyed and received by electronic means of communication.\textsuperscript{11}

Media services are regulated by the Media Services Act (MSA),\textsuperscript{12} in force from 16 January 2011 (as amended). The MSA provides for:

- the procedure and principles for the provision of audiovisual media services and radio services and the requirements for providers of media services;
- the procedure for the issue of activity licences for the provision of television and radio services to legal persons under private law and the procedure for registration of the provision of on-demand audiovisual media services; and
- the principles of protection of a person who has provided information to a person processing information for journalistic purposes.\textsuperscript{13}

Estonian Public Broadcasting is excluded from the scope of the MSA and is regulated by the Estonian Public Broadcasting Act.\textsuperscript{14}

The electronic communications and media area is supervised by an independent regulatory authority, the Estonian Technical Regulatory Authority (ETRA), which is sometimes also referred to as the Technical Surveillance Authority.\textsuperscript{15} ETRA supervises the fields of electronic communications, industrial safety and transport. In the field of communications services, the ETRA is tasked with ensuring a sufficient and timely resource of RFs and telephone numbers for the provision of communications services and performing national surveillance of the field of communications.\textsuperscript{16}

Other regulatory bodies that may exercise supervision over ECS providers pursuant to their competence include (not exhaustively) the Consumer Protection Board, the Data Protection Inspectorate, the Competition Authority and the Information System Authority. Note that sector-specific regulation of the competitive situation on the markets for communications services is carried out mainly by the ETRA, while the Competition Authority has general authority (e.g., in merger proceedings).

\textsuperscript{10} Available in English at: https://www.riigiteataja.ee/en/eli/ee/513012015001/consolide/current
\textsuperscript{11} Clause 2 1) of the ISSA.
\textsuperscript{12} Available in English at: https://www.riigiteataja.ee/en/eli/ee/511052015002/consolide/current
\textsuperscript{13} Section 1 of the MSA.
\textsuperscript{14} Available in English at: https://www.riigiteataja.ee/en/eli/ee/527062014005/consolide/current
\textsuperscript{15} Website: https://www.tja.ee/en.
ii Regulated activities

Under the ECA, each person has the right to commence the provision of communications services. The provision of communications services is subject to a one-off notification obligation. A notice of economic activities for the provision of communications services must, among other required information, set out a description of the provided communications service and the geographical area of activity. Such notice must be filed via the state portal (www.eesti.ee) or via a notary.17 If publicly available communications services are provided by an entity from another EU Member State (cross-border service) on a permanent basis in Estonia, then such entity must also file the notice of economic activities to the ETRA. The current position of the ETRA is that foreign operators also need to establish a branch or subsidiary in Estonia.

For the provision of certain communications services, it is necessary for service providers to apply for licences. Namely, use of radio spectrum and numbering is subject to an RF authorisation and a numbering authorisation respectively. Activity licences are required for the provision of television and radio services. All licences and authorisations are subject to relevant state fees, the amount of which varies according to the type of the licence or authorisation in question. All the relevant licences and authorisations mentioned above are issued by the ETRA.

Frequency authorisations for the use of spectrum are allocated according to the Estonian Radio Frequency Allocation Plan,18 which determines the manner, regime and purpose of using RFs. To receive an authorisation, a standard format application19 to the ETRA must be submitted with the relevant information about the applicant (name, residence or seat, date of birth or personal identification code or registry code, contact details) and the frequency itself (which frequency is being applied for, what is its purpose, conditions of use, area of use, etc.). The ETRA has six weeks from the receipt of a complete application to issue a licence if the use of spectrum does not need international coordination, and eight months if it does. If the use of spectrum is being allocated by way of a public competition or auction, the relevant procedural rules and deadlines are determined by the Minister of Economic Affairs and Infrastructure. The ETRA has the right to refuse an application on certain grounds, for example if the applicant’s activities may be hazardous, there is no free spectrum, the use of spectrum is not in line with the Estonian Radio Frequency Allocation Plan or national or international legislation, or if the use of spectrum is ineffective or may cause radio interference.20 The frequency authorisation establishes the conditions and requirements for the use of spectrum. Under certain conditions, the conditions may be amended. If the ETRA has issued a frequency authorisation, the authorisation can be extended by submitting an application not later than one month before the expiry of the authorisation and by paying the relevant state fee.21

Upon grant of spectrum licences by way of public competition, the Minister of Economic Affairs and Infrastructure may determine a one-off authorisation charge of up to €1.597 million, a deposit for participation in the competition, or both. The one-off

17 Sections 3–4 of the ECA.
20 Sections 11–14 of the ECA.
21 Sections 11, 15-16 of the ECA.
authorisation charge shall be determined as a fixed charge or, in the case of an auction, as a starting price. The deposit must be equal to all participants and must not exceed the one-off authorisation charge. The deposit will be returned after the winner is ascertained.22

Authorisations for the use of numbering are allocated according to the Estonian numbering plan,23 which determines the location of numbers, short numbers, identification codes and access codes in the numbering space, the requirements for the length, use and dialling procedure of numbers, the conditions of use and the services for the provision of which they may be used. A numbering authorisation can be obtained by submitting a standard format application24 to the ETRA, containing the information on the applicant (name, residence or seat, date of birth or personal identification code or registry code, contact details), the planned use of the number, etcetera. The ETRA will issue a numbering authorisation within 10 working days after receipt of a complete application if there are no grounds for refusal. The numbering authorisation sets out the conditions of use of the allocated number. A numbering authorisation is issued for up to one year and can be extended by up to one year at a time. Numbering authorisations can also be granted by way of an auction on certain conditions.25

Activity licences for television and radio services are provided on the basis of the MSA. All private broadcasters are required to have an activity licence. Estonian Public Broadcasting, which is a legal person in public law, is not required to apply for an activity licence. Different licences are issued for the provision of free access television services, conditional access television services, satellite television services and radio services. Free access television and radio service licences are issued through a public competition. All the other licences are issued on the basis of an application. For the obtaining of licences, the MSA prescribes necessary requirements on programmes, sustainability of a service and the coverage area of the service, among other conditions. A licence for free access television services is issued for up to 10 years, and the rest of the above-mentioned licences for up to five years.26

iii Ownership and market access restrictions

Currently there are no foreign ownership restrictions in the communications sector.

Under the MSA, a television or radio service provider will not be given an activity licence if it holds a dominant influence over the management to the undertaking that has been issued an activity licence for the provision of television and radio service, and the issue of the activity licence may substantially damage competition in the media services market, particularly through the creation or reinforcement of the dominant position in the market.27 Similarly, aggregate holdings of certain types of spectrum may constitute a dominant position, which would trigger the heightened attention of the ETRA and the Estonian Competition Authority. When it comes to trading spectrum, the ETRA has a right to refuse the transfer or grant of right to use RFs if this distorts competition, and it may, if necessary, coordinate the

22 Subsections 9(22)-9(24) of the ECA.
25 Sections 33–39 of the ECA.
26 Sections 32–40 of the MSA.
27 Clause 32 3) of the MSA.
transfer or grant of frequencies with the Estonian Competition Authority. These rules apply in addition to the general merger control regime under Estonian and European competition law.

In general, Estonian law does not limit market access, except for the limitations specified above.

iv Transfers of control and assignments

Mergers and acquisitions are reviewed by the Estonian Competition Authority. The procedure of merger reviews is regulated by Chapter 5 (Control of Concentrations) of the Competition Act. Council Regulation (EC) No. 139/2004 on the control of concentrations between undertakings applies in cases of mergers with an EU dimension, but the national merger control is very similar to that of the EU. Estonia has a mandatory filing requirement for qualifying transactions. For a transaction to be qualifying, the relevant turnover thresholds must be exceeded. A merger is notifiable if the total annual turnover in Estonia of all companies concerned is more than €6 million and the total annual turnover in Estonia of each of at least two of the companies concerned is more than €2 million. The companies concerned include those directly involved in the merger, any other associated companies within the same control group and joint ventures. There is a two phase merger review process, and clearance is required before closing. The length of proceedings is 30 days for a simplified procedure, and will last for four additional months when further investigation is needed. Simplified procedures may end with an approval or a decision to conduct further investigation in Phase II. The latter may conclude with a clearance, a refusal or a conditional clearance.

While the Competition Authority has general authority over merger proceedings, the sector-specific regulation of ECSs markets is conducted by the ETRA. The Competition Authority used to have wider competences in the communications sector, but now only postal services have remained fully under its regulatory authority. The ETRA and the Competition Authority are under a legal obligation to cooperate in the area of market regulation and exercise supervision in the communications sector, and, if necessary, exchange appropriate information. This means that when it comes to mergers in the communications sector, the Competition Authority may involve the ETRA in the merger proceedings. In practice, merely holding a dominant position through an allocated frequency authorisation can be decisive on the outcome of transactions.

As described in subsection iii above, licence transfers may also be subject to competition law concerns. In general, RFs are transferrable or can be granted for use to another person if the Estonian Radio Frequency Allocation Plan allows it, with the RFs for broadcasting being an exception. It is thus necessary to verify the transferability or the permissibility of granting the frequency to the use of another person on a case-by-case basis, based on the Radio Frequency Allocation Plan. The transfer or grant of use must be approved by the ETRA, who may coordinate with the Competition Authority. The ETRA has the right to refuse the transfer or grant of the right to use RFs if it distorts competition.

28 Subsection 17(8) of the ECA.
30 Section 21 of the Competition Act.
31 Section 27 of the Competition Act.
32 Subsections 40(4) and 144(1) of the ECA.
33 Section 17 of the ECA.
III  TELECOMMUNICATIONS AND INTERNET ACCESS

i  Internet and internet protocol regulation

IP-based services are regulated by the ISSA. ECSs and information society services are mutually exclusive; therefore, information society services are excluded from the scope of the ECA. However, state supervision over compliance with the requirements provided for in the ISSA is exercised by the ETRA.

Contrary to the ECA, the ISSA does not contain any registration, authorisation or notification obligations for the service providers. The primary obligation of service providers is to render directly and permanently accessible to recipients of services at least the following information:

- the name of the service provider, its registry code and the name of the corresponding register, the service provider’s address and other contact details, including the electronic mail address;
- its registration number if, for operation in the corresponding field of activity, registration in the register of economic activities is required by law, or its activity licence number; and
- if reference is made to the fee charged for the service, information on whether the fee includes taxes and delivery charges.

Information society service providers generally have less obligations compared to communications service providers. An information society service provider is generally not liable for the information transmitted upon mere transmission of information and provision of access to public data communications networks, upon temporary storage of information in cache memory and upon provision of information storage services. There are exceptions to this general rule.\(^{34}\) Additionally, information society service providers are not obligated to monitor information upon the mere transmission thereof or provision of access thereto, temporary storage thereof in cache memory or storage thereof at the request of the recipient of the service; nor is the service provider obligated to actively seek facts or circumstances indicating illegal activity. However, in certain circumstances information society service providers are obliged to provide information about alleged illegal activities undertaken or information provided by recipients of their services, and to communicate to the competent authorities information enabling the identification of recipients of their service.\(^{35}\)

ii  Universal service

Under the ECA, it is possible to designate universal service providers by way of a public competition, or public procurement if the payable charges exceed the relevant thresholds. When designating universal service providers, it must be taken into account that the end goal is to ensure provision of the service in a cost-effective manner that does not prejudice competition, at an affordable price, and in accordance with the objectives of state organisation in the electronic communications sector, which is to promote competition in the provision of ECSs. A universal service provider may be designated separately for each specified service within a specified territory.\(^{36}\)

\(^{34}\) Sections 8–10 of the ISSA.
\(^{35}\) Section 11 of the ISSA.
\(^{36}\) Section 73 of the ECA.
The following services can be designated as universal services:

- a connection to a communications network in a fixed location enabling telephone services (which enables the making and receiving of calls, the sending and receiving of faxes and the use of data communication services at data rates sufficient to permit functional internet access, taking into account the hardware and software used by most end users);
- b public payphone services or other publicly accessible communications services enabling calls; and
- c the availability of a universal electronic public number directory and directory enquiry services.\(^37\)

The USO is based on a universal service contract between the communication undertaking and the state, which sets out, *inter alia*, the obligations, term, charges payable by end users and the territory.\(^38\) The costs related to the performance of the USO are compensated for out of the universal service charge payable by communications undertakings whose turnover for communications services exceeds €383,500 per year. The rate of the universal service charge, established each year by the government, is 0.01 to 1 per cent of the turnover of a communications undertaking with the financing obligation in the preceding financial year. A communications undertaking with the USO is entitled to compensation for the unreasonably burdensome costs related to the performance of the obligation.\(^39\)

Despite the detailed regulation of universal service providers, the competition situation in the markets for communications services is in good shape, all the services that can be designated as universal services are available on the market and no communication undertakings have currently been designated as universal service providers.

### iii Restrictions on the provision of service

**Obligation to provide access to communications networks and general terms and conditions obligations**

The EU directives that require communications undertakings to provide access to their networks have been transposed in national law by the ECA. Generally, communications undertakings are required to enter into a subscription contract with any person who submits an application to this effect. Entry into the contract may only be refused in specified cases, which include:

- a the technical impossibility in the requested area or manner to connect terminal equipment to the communications network;
- b failure by the applicant to provide information necessary for his or her identification or for communications with him or her, or the address of the location of the connection to the communications network allowing the provision of the requested communications service;
- c the provision of incorrect information upon submitting the application or upon entering into a requested subscription contract; or

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\(^{37}\) Section 69-70 of the ECA.

\(^{38}\) Subsections 72(3)–72(4) of the ECA.

\(^{39}\) Sections 75, 81–84 of the ECA.
an applicant has a debt of collectable arrears for the provided communications services or the applicant is subject to bankruptcy proceedings.

If none of these conditions is fulfilled, the communications service provider is obliged to enter into a subscription agreement with the end user and to create a possibility for the end user to commence the use of the ECS within 10 working days after entry into a subscription contract, provided that the end user has performed the obligations assumed by the subscription contract.40

A communications service contract entered into with the end user must contain certain mandatory provisions. There is also formalised process with a one month prior notice requirement for changes to general terms and conditions. The ECA establishes minimum information and mandatory terms that must be regulated in an ECS contract. These include, among others:

- a description of the communications service and possibilities to use other related services;
- charges for the services, including charges payable for maintenance, procedure for settlement of accounts as well as discounts and other price packages;
- quality requirements set for the communications service, including service quality parameters;
- the procedure and time limit for elimination of faults;
- the procedure and time limit for submission of complaints and claims, and the procedure for resolution of disputes;
- the term of the contract and conditions for cancellation and extension of the contract;
- the measures taken by the communications undertaking to ensure security and integrity of communications networks and services; and
- the terms and conditions of a product or communications service intended for end users with special needs.41

Some of the above contractual information (e.g., information on charges) and any standard terms used by the electronic communications undertaking must be made public on the website of the electronic communications undertaking or, in the absence thereof, in any other reasonable manner.42

Other than the mandatory provisions discussed above, the communications service provider and the end user are free to agree on contract terms.

Net neutrality

Regulation (EU) 2015/2120 laying down measures concerning open internet access is directly applicable in Estonia. Thus, all communications service providers in Estonia are under the obligation to treat all traffic equally, when providing internet access services, without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used.43 Estonia is a strong supporter of net neutrality, despite not having

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40 Sections 93–94 of the ECA.
41 Subsection 96(1) of the ECA. The full list of mandatory terms can also be found therein.
42 Subsection 96(3) of the ECA.
43 Articles 3 and 4 of Regulation (EU) 2015/2120.
adopted any national legal acts or guidelines on net neutrality. The freedom and democracy watchdog Freedom House assesses that there are very few restrictions on internet content and communications in Estonia. There are no indications of any increase of restrictions on content or of self-censorship, and online debate is very active and open. Estonians have access to a wide range of content online, and very few resources are blocked or filtered by the government. Following court rulings on intermediary liability for third-party comments, some Estonian media outlets have modified their policies regarding anonymous commenting on their portals.44

Unsolicited phone calls, faxes, emails and texts
Estonia has implemented the e-Privacy Directive45 with the ECA. The requirements regarding marketing communications are different for legal and natural persons. Under the ECA, the use of electronic contact details of a natural person for direct marketing is allowed only with the person’s prior consent (opt-in), while the use of electronic contact details of a legal person for direct marketing is allowed if, upon use of contact details, a clear and distinct opt-out opportunity is given to refuse such use of contact details free of charge and in an easy manner, and the person is allowed to exercise its opt-out right over an ECN.

Regardless of the above, if a communications service provider obtains the electronic contact details of a buyer, who is a natural or legal person, in connection with selling a product or providing a service, such contact details may still be used for direct marketing of its similar products to the buyer if the buyer is given, upon the initial collection of electronic contact details and each time when the buyer's electronic contact details are used for direct marketing, a clear and distinct opt-out opportunity free of charge and in an easy manner; and the buyer is allowed to exercise its right to refuse over an ECN.

It is important to note that the requirements described above do not apply to multiparty voice calls in real time, which have been excluded from the scope of the implementation of the e-Privacy Directive in Estonia. Multiparty voice calls in real time are instead regulated in the Law of Obligations Act.46 Real-time multiparty calls may be used for communicating an offer only if the consumer has not expressly forbidden the use thereof. Thus, real-time multiparty voice calls are subject to an opt-out possibility, while offers made to consumers by automated calling systems without human intervention, fax, telephone answering machine, electronic mail, SMS or other means are lawful only with the prior consent of the consumer.47

iv Security
Cybersecurity regulations
On 9 May 2018, the Estonian parliament passed a new legislative act, the Cybersecurity Act,48 which entered into force on 23 May 2018. The Cybersecurity Act transposes into Estonian law the Security of Network and Information Systems Directive.49 The Act

47 Section 60 of the Law of Obligations Act.
provides requirements for the maintenance of network and information systems essential for the functioning of society and state and local authorities’ network and information systems, liability and supervision as well as the bases for the prevention and resolution of cyber incidents. The Act is not applied to micro and small enterprises.50 The Act includes obligations, among others, for communications undertakings provided for in the ECA that provide cable distribution services consumed by at least 10,000 end users, and broadcasting network service providers upon providing cable distribution services or broadcasting network services. The Act also applies to Estonian Public Broadcasting and information society service providers within the meaning of the ISSA who offer online marketplaces, search engines or provide cloud computing services.51

The Cybersecurity Act requires the above-mentioned service providers to apply organisational, physical and information technological security measures for preventing and resolving cyber incidents, and preventing and mitigating any impact on the continuity of the service or the security of the system due to a cyber incident, or any possible impact on the continuity of another dependant service or the security of a system. Service providers are required, *inter alia*, to prepare a risk assessment and ensure its timeliness, ensure the monitoring of systems for detecting compromising actions and reduce the impact of cyber incidents. The Act also provides for an obligation to notify the Estonian Information System Authority (EISA) of cyber incidents. EISA is also responsible for the state and administrative supervision of compliance with the requirements of the Cybersecurity Act. Similarly, the ECA also includes a requirement to notify EISA immediately of all incidents endangering the security and integrity of the communications network and services that to a significant extent affect the functioning of the communications services or network, and of measures taken to eliminate such incidents.52

Under the ECA, a communications undertaking is required to take appropriate technical and organisational measures to manage the risks related to security and integrity of the communications services and network. The measures must be proportionate to the potential emergency situation, must ensure the minimum impact of incidents endangering the security and integrity of users of communications services and related networks, and must ensure continuity of the provided services.53 A communications undertaking must also guarantee the security of a communications network and prevent third persons from accessing (without legal grounds) the following data: information concerning specific details related to the use of communications services; the content and format of messages transmitted over the communications network; and information concerning the time and manner of transmission of messages.

If a specific hazard exists to a communications service or the security of the communications network, the communications undertaking must immediately inform subscribers of such hazard in a reasonable manner and, unless the hazard can be eliminated by measures taken by the undertaking, also of possible remedies and of any costs related thereto.54

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50 Subsections 1(1) and 1(3) of the Cybersecurity Act.
51 Clauses 3(1)5), 3(1)10) and Subsection 4(1) of the Cybersecurity Act.
52 Subsection 87(2) of the ECA.
53 Subsection 87(1) of the ECA.
54 Section 101 of the ECA.
In the summer of 2017, the new Emergency Act\textsuperscript{55} entered into force, which includes a list of emergencies that justify the interruption in vital services. Vital services include, among others, phone services, mobile phone services, data transmission services, and digital identification and digital signing.\textsuperscript{56} A provider of a vital service is required to, among other things:
\begin{itemize}
\item[a] prepare a continuity risk assessment and plan of the vital service provided thereby;
\item[b] implement measures that prevent interruptions of the vital service, including reducing the dependency on other vital services, essential contract partners, suppliers and information systems through duplicating technical systems, contracts, staff and other means important to the provision of the service, using alternative solutions, having and stocking necessary resources and other similar actions; and
\item[c] ensure the capability to guarantee the continuity and quick restoration of the service provided thereby during an emergency or another similar situation, including in the event of a technical failure or an interruption of the supply or another vital service.\textsuperscript{57}
\end{itemize}

**Privacy and personal data protection**

On 25 May 2018, the General Data Protection Regulation (GDPR)\textsuperscript{58} became applicable. This was of extreme importance in the communications sector, as the general rules set out in the GDPR are applicable in the communications sector. In addition to the GDPR, Estonia still has a Personal Data Protection Act\textsuperscript{59} in force from the pre-GDPR period, as the new draft Personal Data Protection Act, which was supposed to enter into force with the GDPR, was withdrawn from the parliament in the summer of 2018 owing to public criticism.\textsuperscript{60} The draft Act is now again pending, but at the time of writing there was no certainty as to when the Act will be passed. However, the rules of the GDPR are applicable in Estonia as in the entire EU, and in the event of discrepancy with the national legislation, the GDPR should be applied.

In addition to the GDPR and the Personal Data Protection Act, some data protection requirements are also set out in the ECA. Under the ECA, a communications undertaking is required to maintain the confidentiality of all information that becomes known thereto in the process of the provision of communications services, and that concerns subscribers as well as other persons who have not entered into a contract for the provision of communications services but who use communications services with the consent of a subscriber. Above all, it must maintain the confidentiality of information concerning specific details related to the use of communications services; the content and format of messages transmitted over the communications network; information concerning the time and manner of transmission of messages.\textsuperscript{61}

This information may be processed only if the undertaking notifies the subscriber, in a clear and unambiguous manner, of the purposes of processing the information and

\textsuperscript{56} Section 36 of the Emergency Act.
\textsuperscript{57} Subsection 38(3) of the Emergency Act.
\textsuperscript{58} Regulation (EU) 2016/679.
\textsuperscript{61} Subsection 102(1) of the ECA.
Estonia

gives the subscriber an opportunity to opt out. Irrespective of whether the subscriber refuses such processing, the undertaking still has the right to collect and process such personal data without the consent of the subscriber:

a that is necessary for the purposes of recording transactions made in the course of business and for other business-related exchange of information;
b if the sole purpose of the processing is the provision of services over the communications network;
c if it is necessary for the provision, upon the direct request of the subscriber, of information society services; or
d that is necessary for billing the subscriber, including for the determination and calculation of interconnection charges.

If the processing is done for publishing data on subscribers in number directories or through directory enquiry services, the processor must provide the subscribers with an opportunity to decide on whether and to what extent they wish such data to be published. Subscribers must also have an opportunity to verify and amend the data that concerns them, and to terminate the publication of such data.

The ECA also prescribes other requirements deriving from the e-Privacy Directive, as discussed above in subsection iii above.

**Lawful interception and data retention**

Under Section 113 of the ECA, a communications undertaking must grant a surveillance agency or security authority access to the communications network for the conduct of surveillance activities or for the restriction of the right to confidentiality of messages, respectively. A communications undertaking is required to preserve the confidentiality of information related to the conduct of surveillance activities, and activities that restrict the right to inviolability of private life or the right to the confidentiality of messages. The electronic communications undertaking may recover the costs it incurs in relation to the provision of access to the communications network under the rules of Section 114 of the ECA.

Under Clause 111 1(11)5) and Section 114 1 of the ECA, a communications undertaking must provide certain retained data at the request of a court within civil matters.

Obligations to retain data (as per the now-invalid Data Retention Directive) have been imposed under the ECA and have not been revoked despite the Digital Rights Ireland and the Tele2 Sverige rulings. Communications undertakings must retain for a period of one year an extensive amount of data under the ECA, and have an obligation to provide information to competent state authorities and courts.

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62 Section 102 and 104 of the ECA.
63 Sections 102–107 of the ECA.
64 Directive 2006/24/EC.
65 Judgement of the Court of Justice of the European Union (CJEU) of 8 April 2014 in case C-293/12.
66 Judgement of the CJEU of 21 December 2016 in joined cases C-203/15 and C-698/15.
67 Section 111 1 of the ECA.
**Protection of children online**

Estonia has adopted various laws that aim at protecting children online. For example, the Child Protection Act\(^68\) limits the permissibility of certain content to all children below the age of 18 years. It is prohibited to manufacture, show and disseminate to children content that promotes violence or cruelty, or contains pornographic content.\(^69\) The same is provided in the Act to Regulate Dissemination of Works which Contain Pornography or Promote Violence or Cruelty.\(^70\) This can be enforced in administrative proceedings by issuing a precept to terminate the violation and to restrict or take down the improper content. In the event of failure to comply with the precept, penalty payments can be imposed repeatedly until the precept is complied with. Parental consent cannot override the requirements set for content providers or limit their legal liability.

Note that under Estonian law, there are liability restrictions for information society service providers in the case of mere transmission, caching and storage. The latter is feasible if the service provider does not have actual knowledge of the contents of the information and, as regards claims for compensation for damage, is not aware of facts or circumstances from which the illegal activity or information is apparent. Additionally, the service provider must, upon obtaining knowledge or awareness of the facts specified above, act expeditiously to remove or to disable access to the information.\(^71\)

Sexual enticement of children below the age of 14 is criminalised and punishable under the Penal Code.\(^72\) Sexual enticement means, among others, handing over, displaying or otherwise knowingly making available pornographic works or reproductions to a person less than 14 years of age. This is punishable by a pecuniary punishment or up to three years' imprisonment for natural persons and by a pecuniary punishment of €4,000 to €16 million for legal persons. Showing sexual abuse of a person aged less than 14 years, or engaging in sexual intercourse in the presence of such person or knowingly sexually enticing such person in any other way, are punishable by the same sanctions. Handing over, displaying or knowingly making available of works or reproductions of works promoting cruelty in another manner to a person of less than 14 years of age, or showing the killing or torturing of an animal in the presence of such person without due cause or knowingly exhibiting of cruelty to him or her in another manner, are punishable by a pecuniary punishment the amount of which is up to €3,200 in the case of legal persons.\(^73\)

The MSA also includes provisions that are aimed at protecting children. Television and radio service providers may not transmit programmes that may cause substantial physical, mental or moral detriment to minors, in particular such programmes that include pornography or that propagate violence or cruelty for the purposes of the Act to Regulate Dissemination of Works which Contain Pornography or Promote Violence or Cruelty. On-demand audiovisual media services that may cause substantial damage to the physical, mental or moral development of a minor must be made accessible by the on-demand

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\(^{69}\) Section 25 of the Child Protection Act.


\(^{71}\) Sections 8–10 of the ISSA.


\(^{73}\) Sections 179–180 of the Penal Code.
audiovisual media service provider by means of personal identification codes or other relevant technical solutions only in a manner that is not accessible to minors under normal circumstances.74

The Advertising Act75 includes several requirements for advertising directed at persons less than 18 years of age. Advertising that targets groups that are primarily made up of children must take into account their unique physical and mental state resulting from their age. Children may not be a target group of advertising if it is prohibited to sell the advertised goods or provide the advertised services to children. Advertising that targets groups that are primarily made up of children may not:

- create the impression that the acquisition of certain goods or the use of certain services will give the child an advantage over other children or that the lack thereof will have the opposite effect;
- create feelings of inferiority in children;
- incite children to behave or act in a manner that has or may have the effect of bringing children into unsafe conditions;
- contain elements that frighten children;
- exploit the trust children place in their parents, teachers or other persons;
- include a direct or indirect appeal to children to demand the acquisition of the advertised goods or the use of the advertised services from other persons; or
- directly incite children to enter into transactions independently.76

These requirements also apply to any online advertising.

IV SPECTRUM POLICY

i Development

The Estonian spectrum policy is changing continuously. The demand for spectrum is increasing rapidly with the development of and increasing demand for new technologies and mobile communications services. Currently, the 5G mobile network is being developed. All this proves to be a challenge in conditions where frequency spectrum is a scarce resource.

To tackle this challenge, the Estonian Radio Frequency Allocation Plan is constantly changing to conform to new developments. The use of RFs in Estonia is harmonised with those of the EU, as Estonia takes account of the recommendations of the European Commission to the greatest extent possible.77 The ECA provides that the purpose of regulating the management of RFs is to ensure the purposeful, objective, transparent and proportionate management, and the effective and efficient use, of RFs for the needs of users of RFs and for the provision of communications services, the creation of possibilities for the development of new technologies and fast elimination of radio interference. The Radio Frequency Allocation Plan determines, among other things, the RF bands for the introduction of new technologies

74 Section 19 of the MSA.
76 Section 8 of the Advertising Act.
77 Subsections 6(3), 8(3) and 8(4) of the ECA.
together with restrictions on new and existing users. The ETRA reviews the allocation plan at least once a year and submits to the responsible minister proposals for amendments if the development of electronic communications technology requires it.  

ii Flexible spectrum use

As discussed above, the use of spectrum requires its prior allocation by the ETRA. Spectrum is allocated on the basis of the Radio Frequency Allocation Plan, which determines the manner, regime and purpose of using frequency bands. Upon granting a frequency authorisation to a communications undertaking, the ETRA establishes in the authorisation, among other things, the purpose, manner, conditions and area or location of the use of spectrum, as well as the requirements for the shared use of RFs. Therefore the authorisation may include in its conditions the possibility to share the use of spectrum, as well as the possibility to trade frequency or grant it for use on the basis of a contract. Accordingly, the use of spectrum is made more flexible by way of allowing such trading and shared use of spectrum.

In addition, the ETRA carries out spectrum auctions in previously unused frequency ranges and rearranges the use of spectrum, if need be, as discussed further below.

iii Broadband and next-generation mobile spectrum use

The ETRA is also constantly dealing with the need for new uses of mobile spectrum. For example, in 2015 it rearranged the frequency usage of mobile operators in the 900MHz band to enable the introduction of new technologies. In the course of the process, the frequency blocks of each operator were rearranged so that complete frequency ranges were allocated to each operator to create wider bandwidth and create conditions for introducing new 4G and 5G technologies.

If the ETRA finds that the number of available spectra is not sufficient for their allocation, it can hold a public competition in the form of a spectrum auction. The latest auction of mobile broadband spectrum ended in May 2017. The auction of frequencies in the ranges of 2,540–2,570MHz, 2,660–2,690MHz and 2,575–2,615MHz ended with the selling of three frequency division duplexes (FDD) and two time division duplexes (TDD) that provide the right to use 100MHz-worth of spectrum in Estonia. Two operators, Elisa Eesti AS and Telia Eesti AS, participated. FDD I and II were bought by Telia, bidding €1,601,234 and €3,605,535 respectively. FDD III, TDD I and II were bought by Elisa, bidding €2,608,789, €1,612,346 and €1,597,001 respectively. Accordingly, around €11 million was earned through the auction.

After the digital switchover occurred on 1 July 2010, the freed-up frequencies were allocated for 4G mobile communication services. It can be therefore said that more and more spectrum is becoming available for mobile services. More specifically, the latest and upcoming auctions are focused on 5G technologies. During the Estonian presidency of the Council of the EU from July to December 2017, a Ministerial Declaration was signed to make 5G a success for Europe. It was agreed that 5G is the vision for a fully connected European society and a path towards the European gigabit society. The crucial step in implementing this vision

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78 Subsection 9(2) and Clause 10(1)(1) of the ECA.
is to make more spectrum available in a timely and predictable manner. To realise this goal, it is necessary to release 5G spectrum bands. Currently, a new auction is being planned for a frequency range that would allow the use of 5G technologies in the 3,600MHz range.

iv Spectrum auctions and fees

The ETRA carries out auctions if it finds that the number of available spectra is not sufficient for their allocation.

Currently, the ETRA is planning to auction spectrum in the 3,600MHz frequency band. The ETRA and the Ministry of Economic Affairs and Communications have started preparations for the auction, and ran a public consultation until the end of April 2018. Allocating the 3,600MHz frequency band will improve access to mobile internet and will help to improve the quality of service in both major cities and rural areas. This frequency band is considered as the most important 5G frequency range in the European 5G Roadmap, which will allow the use of innovative technologies and devices (IoT). The ETRA has confirmed that the auction for this range will be announced at the beginning of 2019.

The next crucial auctions for developing 5G are likely to be for selling spectrum in the ranges of 700MHz and 24.25–27.5GHz. The ETRA is preparing to deploy these frequency ranges for 5G systems.

V MEDIA

i Restrictions on the provision of service

Media services are subject to the licensing obligations discussed above. In addition, there are restrictions on content that are one of the pre-requirements for obtaining licences.

For example, the MSA requires a television and radio service provider to reserve at least 5 per cent of the daily transmission time of the programme service on at least six days a week for transmitting self-produced new programmes, except on national holidays. At least 10 per cent of the monthly transmission time must be reserved for transmission of own productions, deducting the transmission time allocated for news, sporting events and games programmes as well as for advertising, teletext services and teleshopping. At least 50 per cent of the minimum capacity of own production must be shown during prime time between 7pm and 11pm. At least 51 per cent of the annual capacity of the television programme service must be reserved for transmission of audiovisual works of European origin, deducting the transmission time allocated for news, sporting events and games programmes, as well as for advertising, teleshopping and teletext services, and at least 10 per cent of such audiovisual works must have been created by producers that are independent of this television service provider. These requirements are subject to certain exceptions; for example, local channels are exempted from some of them.

85 This was confirmed to the authors by the officials of the ETRA. This is also in accordance with the 5G roadmap, available at https://www.mkm.ee/sites/default/files/8.a_b_aob_5g_roadmap_final.pdf.
86 Section 8 of the MSA.
The MSA also sets out some requirements for commercial communications, TV and radio advertising, sponsorship and product placements. In addition to the MSA, these are regulated by the Advertising Act.

ii Internet-delivered video content

Besides television services, on-demand audiovisual media services are becoming increasingly popular. On-demand audiovisual media services do not require a licence, but do require a notification of economic activities to be submitted through the state portal or to a notary, as discussed above.

Most of the biggest ISPs in Estonia have started their own video distribution services. However, this does not limit the accessibility of on-demand services of other service providers. Standalone services are also freely accessible. However, generally service providers measure the use of data without taking into account that part of the data that is used for VOD. Still, it must be noted that there are examples on the market of ISPs’ own on-demand video distribution services that do not use up mobile data if streamed via the service provider’s own networks. Thus, one the strategies used to attract customers to buy video distribution services is that ISPs do not charge for the data used on streaming via mobiles on their own VOD services equally with the data used for other VOD services.

VI THE YEAR IN REVIEW

The most important changes in the legislation concerning the ICT sector in 2017 and 2018 have been regarding the GDPR, the Cyber Security Act and the Emergency Act.

The GDPR became applicable on 25 May 2018, which required companies to adjust their data processing practices and gave people greater control over the use of their personal data.

The Cyber Security Act entered into force on 23 May 2018. The Act provides requirements regarding the maintenance of network and information systems, liability and supervision as well as the bases for the prevention and resolution of cyber incidents, and lays down numerous obligations for communications services and information society service providers to ensure cybersecurity.

The new Emergency Act87 was passed in February 2017 and entered into force in July 2017. Pursuant to the new procedure, the list of emergency situations will now also include extensive interruptions in vital services (electricity, liquid fuel, mobile and data communication, etc.) that may entail severe consequences for the public. The inclusion of interruptions in vital services in the list of emergencies will ensure the state’s greater focus on improving their continuity and obligate the authorities organising the services to better prepare for the resolution of crises.88

Significant recent transactions include the acquisition of Starman by Finnish telecommunications group Elisa, and the acquisition of the major TV channel TV3 by Providence Equity Partners.

In the spring of 2017, the Estonian Competition Authority cleared Elisa’s acquisition of the 100 per cent share of Starman from Polaris Invest and Com Holding. Starman was

the number one service provider in pay-TV services and number two for fixed broadband services in Estonia, accounting for 35 and 20 per cent of market shares, respectively. Elisa announced in mid-December 2016 that it had purchased full ownership of Starman from Polaris Invest and Com Holding for a cash consideration of €151 million.\textsuperscript{89} At the beginning of 2018, Elisa brought all Starman services under its own brand.\textsuperscript{90}

In March 2017, it was also announced that the Swedish media holding Modern Times Group had signed an agreement to sell its Baltic businesses to the US’ Providence Equity Partners. The value of the transaction was approximately €115 million. The transaction concerned the sale of three TV channels in Estonia (TV3, TV3+ and TV6), five TV channels in Latvia and three in Lithuania. The sold entities form the third-largest commercial television operator in the Baltic region, nationwide commercial radio stations, digital assets and an online advertising consultancy operating across the Baltic region. The Baltic TV-channel portfolio had a combined 48.6 per cent commercial share of viewing as of the final quarter of 2016 among the target audience of viewers of ages 15 to 49.\textsuperscript{91}

Most of the major mobile service providers have recently come out with their own VOD services, such as Elisa’s Elisa Elamus and Telia’s MINU.TV, which includes FOXplay and HBO. This marks a growing demand for VOD among viewers.

Meanwhile, in 2017, several television service providers that had been providing free access television switched to conditional access services. This was the result of growing compliance requirements for free access television service providers regarding advertising, programme selection, etcetera, which markedly raised the costs of said television service providers. As a result, two major previously free-to-air channels, Kanal2 and TV3, became subscription channels.

With VOD and mobile internet becoming increasingly in demand, the EU also saw the growing need for the lowering of roaming charges. Eventually, on 15 June 2017 Regulation (EU) 2017/920 became applicable, which significantly lowered roaming charges in the European Union. The Regulation allows consumers to choose a subscription service that allows them to use mobile services within the EEA on the same conditions as in Estonia.

With the above developments, there is also an increasing demand for spectrum on the market. In 2017, the ETRA held a public auction and sold spectrum in the 2,500MHz frequency band for approximately €11 million. An auction for spectrum in the 3,600MHz frequency range is being planned for the end of 2018 or beginning on 2019 to improve access to mobile internet and allow the use of 5G innovative technologies and devices.

\textbf{VII CONCLUSIONS AND OUTLOOK}

Looking ahead, some of the next important developments in the communications, technology and media sector are the following.

From 1 January 2019, the ETRA and the Consumer Protection Board will be joined into one single regulatory authority: the Consumer Protection and Technical Regulatory Authority. The new Authority will resume the obligations of the ETRA and the Consumer Protection Board.\textsuperscript{92}

\textsuperscript{89} https://news.err.ee/584494/estonian-regulating-authority-clears-elisa-for-starman-acquisition.
\textsuperscript{90} https://news.err.ee/654515/elisa-brings-starman-services-under-own-brand.
\textsuperscript{91} https://news.err.ee/584607/mtg-sells-baltic-media-businesses-to-us-company.
\textsuperscript{92} https://geenius.ee/uudis/tarbijakaitseamet-ja-tehnilise-jarelevalve-amet-liidetakse-uheks/.
The upcoming developments will likely include the passing of the new national Personal Data Protection Act and its Implementing Act, which will be in accordance with and will implement the requirements set out in the GDPR. To our knowledge, there are currently no other major legislative reforms or new acts planned that would have a significant effect in the ICT sector.

In November 2019, all the current radio service providers’ licences will expire. The ETRA and the Ministry of Culture are already preparing for the upcoming competition for radio licences for 2019 to 2024.93

The Estonian ICT sector is fast-developing and highly important to the legislators. The government’s goals include bringing ultrafast internet to more and more end users and to promote Estonia as the world’s capital of innovation regarding the communications and information society. However, there are still challenges for policymakers caused by convergence and ultra-fast developments in the sector.

Generally, Estonia follows European policies, and has successfully implemented the various pieces of EU legislation into national law. One shortcoming concerns the rules on data retention by communications service providers, which are based on an invalid directive and have not been revoked from national law.

Chapter 7

EU OVERVIEW

Marco D’Ostuni, Gianluca Faella and Manuela Becchimanzi

I OVERVIEW

Three years after its launch in 2015, the Digital Single Market (DSM) strategy has been largely put into action. The Commission has presented all of the planned legislative proposals. Among these, the Open Internet Regulation (ending roaming charges), the Regulation on portability of online content services, the Regulation on unjustified geo-blocking and the General Data Protection Regulation (GDPR) have already been adopted and became directly applicable across the Union in 2017 and 2018.

Various proposals tabled in 2016 and in 2017 are expected to be adopted by the end of 2018 or in 2019, such as the European Electronic Communications Code, the Regulation on the free flow of non-personal data, the Audiovisual Media Service Directive (AVMSD), the ePrivacy Regulation and the Directive on copyright.

In July 2018, the Commission also issued a long-awaited decision concerning Google’s alleged anticompetitive practices regarding Android mobile devices, which were sanctioned with the highest fine ever imposed under EU competition law (the runner up being the fine imposed on the same company in June 2017 for alleged anticompetitive practices implemented in the online search sector).

II REGULATION

i The regulators

The European Commission (Commission) is the most prominent regulatory body at the EU level. The Commission is equipped with a variety of regulatory and enforcement powers in areas related to TMT, including antitrust, privacy, online transactions, intellectual property and consolidation of the internal market for electronic communications. The regulatory framework for electronic communications adopted in 2009 increased the Commission’s powers to oversee the measures proposed by national regulatory authorities (NRAs) to address problems relating to competition in telecommunications markets.

The BEREC Regulation established the Body of European Regulators for Electronic Communications (BEREC), which became fully functional in 2011. Its role is to guarantee

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2 See Section III.iv.
consistent application of the EU regulatory framework by, for example, delivering opinions on NRAs’ draft regulatory measures and, upon request, offering assistance to NRAs in carrying out their duties under EU law. The Commission turns to BEREC before adopting recommendations on relevant product and service markets, which guide NRAs when they define the relevant national markets. The Commission may also task BEREC with carrying out ad hoc market studies.

In September 2016, the Commission proposed an updated BEREC Regulation to transform BEREC into an agency.\(^6\) The new regime would create a management board capable of taking regulatory, administrative and financial decisions and would provide the agency with additional resources. BEREC would be entrusted with legally binding powers to ensure that the regulatory framework is applied consistently. The Commission also proposes to amend the governance of BEREC. At the moment, the Commission can only attend as an observer on the board of regulators; on the basis of the proposal, the agency’s board would consist of one representative from each Member State, and two from the Commission. In a draft report presented on February 2017, the appointed rapporteur stated that the status quo is functioning well and suggested that there is no need to turn BEREC into an agency. In the final triilogue on this matter, held on 5 June 2018, the European Parliament and the Council agreed on a compromise regarding the legal personality of BEREC: the BEREC office will have legal personality, unlike BEREC itself, which would remain a body of national regulators.

\[\text{ii} \quad \text{Regulated activities}\]

In 2002, the EU adopted a new comprehensive regulatory framework for ECNs and services, with the aim of fostering consistent regulation across the EU. In 2009, Directive 2009/140/EC,\(^7\) Directive 2009/136/EC\(^8\) and Regulation (EC) No. 1211/2009 were adopted to improve and revise the 2002 regulatory framework.

As part of the DSM strategy, in May 2015 the Commission announced a complete review of the framework for electronic communications. The consultation closed in December 2015. In the context of the 2016 annual State of the Union,\(^9\) the Commission presented the connectivity package, proposing to strengthen the role of BEREC and to recast four of the existing directives (the Framework, Authorisation, Access and Universal Service Directives) into a new European Electronic Communications Code.\(^10\)

The new Code would overhaul the current EU rules on electronic communications by merging the four directives into a single piece of legislation. New rules on access to networks should create incentives to invest, especially in fibre. Moreover, the new rules would be based on the principle of same service, same rules, which aims at creating a level playing field for all players providing similar services (including OTT services).

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On 6 June 2018, the Parliament and the Council provisionally agreed on the Code. The vote of the European Parliament in plenary session is provisionally scheduled for November 2018. Within the framework of the DSM strategy, on 14 September 2016 the Commission proposed new rules to modernise the EU copyright regime, including two regulations and two directives. This set of legislative proposals aims to ensure wider online access to content in the EU, and to reach new audiences, adapt certain exceptions to the digital cross-border environment and foster a well-functioning and fair copyright marketplace. The proposed measures should make it easier for content providers to improve their online offers across EU borders by introducing, *inter alia*, a legal mechanism to obtain authorisations more easily from right holders. Moreover, the improved copyright rules introduce four mandatory exceptions to copyright for the purposes of education, research, cultural heritage and inclusion of disabled people. Finally, the proposed measures should create a fairer online environment for creators of content and the press by reinforcing the position of right holders to negotiate remuneration for their creative content.

The legislative proposal has been under discussion in the Council since November 2016. After prolonged negotiations aimed to find a compromise between the Member States, the Council reached an agreement on a common position on 25 May 2018. On the Parliament side, the Directive on Copyright in the Digital Single Market was approved at the plenary session on 12 September 2018. It will enter trialogue discussions that are expected to conclude in January 2019.

Audiovisual content was previously regulated by the Television Without Frontiers Directive. With the last revision in 2007, the Directive was renamed the Audiovisual Media Services Directive (AVMS), which was then codified in 2010. In May 2016, the Commission tabled a proposal to reform the AVMS Directive (see Section V). In the framework of the DSM strategy, the Commission adopted a regulation on geo-blocking and other forms of discrimination based on nationality, residence or place of establishment, which targets unjustified geographically based restrictions to cross-border trade. The new regulation against unjustified geo-blocking entered into force on 22 March 2018 and will apply from 3 December 2018. The Regulation prohibits traders from discriminating
against customers by denying them access to internet content on the basis of their location, and allows re-routing to a different version of a website only if a customer has given prior consent. It also prohibits discrimination of customers in relation to payments.

Geo-blocking measures also affect the portability of online services: users who have subscribed to certain online content (such as music, films, e-books and videogames) in their country are often denied access to the same content while travelling in another Member State. To address this issue, on 14 June 2017, the Parliament and the Council adopted the Regulation on cross-border portability of online content services, which applies from 1 April 2018.\textsuperscript{14} The regulation ensures that subscribers to online content services in the EU have the right to access and use these services while temporarily present in another Member State (e.g., in the case of holidays, business trips or learning periods).

The Commission also has extensive investigative powers in the area of antitrust. It cooperates with national competition authorities (NCAs) to prohibit concerted practices, agreements restricting competition and unilateral anticompetitive behaviour. The Commission has exclusive jurisdiction over mergers above certain thresholds, including in the area of TMT.\textsuperscript{15}

### Ownership and market access restrictions

In principle, EU undertakings and undertakings from non-EU States with reciprocity agreements can freely provide electronic communication services and networks. Under the Authorisation Directive,\textsuperscript{16} a prospective electronic communications provider needs an authorisation from the competent NRA. Obtaining this authorisation involves a procedure whereby an applicant notifies the NRA of its intentions and does not have to wait for approval by the NRA.\textsuperscript{17} The information that may be requested in such a notification must be limited to what is necessary to identify the provider. By contrast, the use of spectrum in telecommunications is subject to a licence granted by Member States. The Authorisation Directive lays down not only rules governing the procedures for granting general authorisations or rights to use RFs or numbers and the content of those authorisations, but also rules setting out the nature and scope of the financial payments related to those procedures that Member States may impose on electronic communications providers.\textsuperscript{18}


\textsuperscript{15} The respective competences of the Commission and NCAs to assess mergers are defined on the basis of the turnover of the undertakings concerned (See Article 1.2 of Council Regulation (EC) No. 139/2004 (Merger Regulation), OJ 2004 L 24/1–22). However, a Member State may also review a concentration that falls within the competence of the Commission and adopt the measures needed to protect certain legitimate interests, including the plurality of the media (see Article 21.4 of the Merger Regulation).


\textsuperscript{17} Article 5 of the Authorisation Directive.

\textsuperscript{18} See, e.g., the CJEU judgment of 17 December 2015, C-454/13, Proximus, Paragraph 19.
III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation


The Open Internet Regulation aims, first of all, to safeguard net neutrality. Within the EU, all internet traffic will be treated equally, subject to some specific public interest exceptions (e.g., those concerning network security and child pornography). Providers of internet access services must abstain from any discrimination, restriction or interference, irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used.20 Blocking, throttling, degradation or discrimination of internet traffic by ISPs is prohibited. IAPs can still adopt different traffic management measures without being discriminatory, but only for ‘objectively different categories of traffic’ (e.g., services like e-medicine), rather than for commercial reasons.21 Traffic management measures that do not comply with the above requirements are allowed only under three specific exceptions: compliance with EU or national legislation that requires, for example, blocking of specific content, applications or services; protection of the integrity and security of the network; and prevention of network congestions that are temporary or occur in exceptional circumstances.

For a limited number of services, such as high-quality voice calling on mobile networks, linear (live) broadcasting IPTV services with specific quality requirements and real-time health services (e.g., remote surgery), for which an assured level of access is indispensable to deliver the service, the Regulation allows for the provision of fast lanes provided that network capacity is sufficient.22

In addition, the Regulation provides for the end of roaming charges, which became effective from 15 June 2017 through a gradual one-year phase-out process.23

ii Universal service

Under EU law, telecoms operators should provide to all citizens a basic set of fixed network ECSs irrespective of end users' location and profitability. Access to broadband internet has traditionally been considered outside the scope of universal service at the EU level.24

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20 Regulation (EU) No. 2015/2120, Article 3.
22 The Regulation also includes a number of transparency measures for providers to ensure customer awareness of open internet access, and provides that national regulatory authorities have to monitor providers' compliance with the minimum service quality standards. Regulation (EU) No. 2015/2120, Articles 4 and 5.
23 On the end of roaming charges, see Section VI of the eighth edition of this publication.
However, on 19 January 2016 the European Parliament welcomed a review of the Universal Service Directive to ensure the requirements of high-speed broadband internet access are fit for purpose to reduce the digital divide.25

The Commission's major contribution to achieve the goal of broadband for all is the adoption of:

- a 2010 Broadband Communication outlining a common framework within which EU and national policies should be developed to lower the costs of broadband deployment throughout the entire EU territory;
- a 2010 Recommendation on NGA networks (NGA Recommendation);
- a 2013 Recommendation on non-discrimination obligations and costing methodologies for access services (Access Recommendation); and
- 2013 guidelines for the application of state aid rules relating to the rapid deployment of broadband networks.26

On 11 June 2015, the European Court of Justice (CJEU) issued a judgment clarifying the scope of the Universal Service Directive.27 It remarked that the Directive expressly enacts an obligation to guarantee the connection at a fixed location to a public communications network. However, mobile communication services are excluded from the minimum set of universal services defined by the Universal Service Directive.

In the framework of the proposal for an Electronic Communications Code, the Commission proposed modernising the EU universal service rules. Pursuant to Article 79 of the Code, Member States would be under an obligation to provide affordable access to basic broadband and voice communications services at least at a fixed location. Broadband would be 'defined by referring to a functional internet access connection defined on the basis of a minimum list of online services available to end users', such as email, social media, instant messaging, calls and video calls.28

### iii Restrictions on the provision of service

#### NGA Recommendation

The Commission adopted a recommendation on NGA networks on 20 September 2010.29 The NGA Recommendation seeks to provide NRAs with guidance to promote a common approach when deciding whether to impose obligations on incumbents in connection with NGA networks.

The Recommendation primarily covers remedies to be imposed on operators deemed to have significant market power. However, where it is justified on the grounds that duplication of infrastructure is economically inefficient or physically impracticable, NRAs may also

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27 Case C-1/14, Base Company NV and Mobistar NV v. Ministerraad.
28 See Proposal for a Directive establishing the European Electronic Communications Code, p. 11.
impose obligations of reciprocal sharing of facilities on non-dominant undertakings, which would be appropriate to overcome bottlenecks in the civil engineering infrastructure and terminating segments.

The proposed European Electronic Communications Code reaffirms these principles, including the obligation for operators with significant market power to grant access to civil infrastructures, such as poles and ducts.30

Access Recommendation

After a long debate with BEREC and NRAs, the Commission published a recommendation on access remedies on 11 September 2013.31 The Access Recommendation relies on two pillars: ensuring equivalence of access and setting out a harmonised costing methodology.

As to the first pillar, the Commission suggests that equivalence of input (EoI) (i.e., the supply to competitors of the same access services enjoyed by a vertically integrated company’s downstream units) is in principle the surest way to avoid non-price discrimination.32

As to the second pillar, according to former Commissioner Kroes, there is a ‘need to lift price regulation of high-speed networks where it is not warranted, and make regulation of copper prices stable and consistent across the EU’33 to guarantee market stability and regulatory consistency, thus favouring broadband investments. Therefore, the Commission suggested the adoption of a common costing methodology (called bottom up – LRIC +) that, for copper-based local loop unbundling services, should have led to monthly tariffs within a defined price band.34

To enhance regulatory stability and market consistency, the Commission recommended that, once they have set tariffs within the mentioned price band, NRAs should not modify the costing methodology (and hence the tariffs) without a market-analysis procedure, and should avoid undue price fluctuations by ensuring stable access prices over at least two review periods (i.e., about six years).

The Commission has extensively relied on the Access Recommendation’s principles to criticise NRA proposals that were inconsistent with the above-mentioned principles.35

30 See Article 70 of the Proposal for a Directive establishing the European Electronic Communication Code.
32 The EoI model ensures that the incumbent’s and competitors’ downstream access products use exactly the same physical upstream inputs (e.g., same tie cables, same electronic equipment, same exchange space). Conversely, the equivalence of output model ensures that the access products offered by the incumbent to alternative operators are comparable to the products it provides to its retail division in terms of functionality and price, but they may be provided by using different systems and processes.
33 Idem.
34 BEREC issued its Report on the Regulatory Accounting in Practice 2013, according to which data from NRAs generally confirmed the trend toward an increasingly consistent approach to regulatory accounting obligations among NRAs. The Report on the Regulatory Accounting in Practice 2017 confirms that the degree of consistent application of methodologies continues to be high among NRAs.
35 See for example the recommendation issued against Italy on 11 December 2013.
The European Electronic Communications Code proposed by the Commission also makes reference to the costing methodology set out in the Access Recommendation. 36

**Monitoring and control of content**

The Electronic Commerce Directive 37 explicitly sets out that no intermediary should be obliged to engage in monitoring activities of a general nature (mere conduit rule). 38 This was confirmed in the 2009 reform of the regulatory framework (see, in particular, Recital 30 of Directive 2009/136).

The interpretation of the mere conduit rule was probed in two cases before the CJEU, which concerned the possible responsibility of Scarlet (an ISP) and Netlog (a social networking website) for exchanges of allegedly unlawful content by its users. 39 In essence, according to the CJEU, the EU framework does not require a hosting service provider to filter all information stored by users as a preventive measure.

However, the Court left open the question on the admissibility of injunctions against specifically determined copyright-infringing practices.

On 27 March 2014, the CJEU held that an ISP may be ordered to block its customers’ access to a copyright-infringing website (UPC T elekabel). 40 The CJEU provided guidance on the correct interpretation of Article 5, Paragraphs 1 and 2, Letter b), and Article 8, Paragraph 3, of the Copyright Directive, 41 as well as some of the fundamental rights enshrined in EU law. Specifically, the Court held that Member States must ensure a fair balance among the fundamental rights at stake. Therefore, the fundamental rights concerned do not preclude an injunction on two conditions: the measures taken by the ISP do not unnecessarily deprive users of the possibility of lawfully accessing the information available; and those measures have the effect of preventing unauthorised access to the protected material or, at least, of making it difficult to achieve, and seriously discouraging users from accessing, the material that has been made available to them through breach of the intellectual property right.

In September 2016, the CJEU provided an interpretation of the mere conduit rule in a case concerning the liability of free Wi-Fi network providers for copyright infringements committed by its users (Mc Fadden). 42 The CJEU stated that, under the mere conduit rule, the provider of a free Wi-Fi connection cannot be held responsible for the download of unlawful content by its users. However, the copyright holder can seek an injunction ordering such open Wi-Fi to be protected with a password, as this would prevent future infringements by requiring users to reveal their identity.

Article 13 of the proposed Directive on Copyright in the Digital Single Market 43 appears to be more far-reaching than the mere conduit rule, as it requires information society service

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36 See Paragraph 179 of the Proposal for a Directive establishing the European Electronic Communications Code.
37 Directive 2000/31/EC.
38 See Section 4, Articles 12 to 15.
39 Cases C-70/10, Scarlet Extended v. SABAM; and Case C-360/10, Sabam v. Netlog NY. For more details on these judgments, see this chapter in the seventh edition of this publication.
40 Case C–314/12 UPC Telekabel Wien GmbH v. Constantin Film Verleih GmbH and Wega Filmproduktionsgesellschaft mbH.
42 Case C-484/14, Mc Fadden v. Sony Music.
43 See footnote 11.
providers to take appropriate and proportionate measures to ensure copyright protection also through effective content recognition technologies, thus introducing, to a certain extent, an obligation to monitor.

Another crucial aspect concerning the role of ISPs relates to the right to be forgotten. On 13 May 2014, the CJEU held that, by searching systematically for information published on the internet, indexing websites, and recording and making them available, the operator of a search engine is processing personal data within the meaning of Article 2(b) of Directive 95/46/EC (Google Spain).44

The Court did not describe such processing as unlawful, but clarified that even initially lawful processing of accurate data may become incompatible with the Directive ‘where those data are no longer necessary in the light of the purposes for which they were collected or processed [. . . ] in particular where they appear to be inadequate, irrelevant or no longer relevant, or excessive in relation to those purposes and in the light of the time that has elapsed’.45

The CJEU will address the extent of the right to be forgotten in a pending case referred by the French Council of State.46 Two main issues are at stake: whether the right to be forgotten should be absolute - that is, automatic removal is required when the content involves sensitive personal data, such as political affiliations or a criminal record; and whether the right to be forgotten should apply globally, beyond the boundaries of Europe.

On 28 September 2017, the Commission presented guidelines for online platforms to tackle illegal content47 aimed at improving the prevention, detection and effective removal of illegal content inciting terrorist propaganda and racist speech, and also preventing its reappearance through automatic tools.

Building upon the guidelines, on 1 March 2018 the Commission proposed a recommendation48 containing a set of operational measures to be taken by companies and Member States to remove illegal online content, such as the creation of fast-track procedures for trusted flaggers (i.e., individuals or entities considered by a hosting service provider to have particular expertise and responsibilities for the purposes of tackling illegal online content). In particular, terrorist content should be removed within one hour following a referral by Europol or other competent authorities.

44 Case C-131/12, Google Spain SL, Google Inc/Agencia Española de Protección de Datos, Mario Costeja González, Paragraphs 28 and 41. For more details on these judgments, see this chapter in the seventh edition of this publication.
45 The Directive grants individuals the right to obtain from the controller rectification, erasure or blocking of personal data (Article 12(b)) and to object to processing on compelling legitimate grounds (Article 14). The Court affirmed that these rights can also be invoked against search engines since ‘it is the search engine operator which determines the purposes and means of that activity and [. . . ] must, consequently, be regarded as the ‘controller’ in respect of that processing pursuant to Article 2(d)’ (Paragraph 33).
46 C-136/17, G C and Others (Déréférencement de données sensibles).
Finally, in April 2018 the Commission adopted a communication calling upon platforms to increase their efforts to tackle online disinformation and the spread of fake news. 49 In particular, platforms should improve the scrutiny of advertisement placements, ensure transparency about sponsored content and close fake accounts more efficiently.

iv Security

Privacy and data retention

On 27 April 2016, the European Parliament and the Council adopted the General Data Protection Regulation (GDPR) 50 together with the Police and Criminal Justice Data Protection Directive. 51 On 25 May 2018, the GDPR entered into force. It replaced the EU Data Protection Directive 52 and harmonised the processing of personal data by companies and public authorities across the EU.

Member States had to implement the Criminal Justice Data Protection Directive by 6 May 2018.

The Council and the Parliament made important changes to the Commission’s proposal, remarking that, inter alia:

a data protection is not an absolute right and must be weighed against other fundamental rights; 53
b data portability is restricted to data provided by individuals and does not apply if it adversely affects the rights and freedoms of others; 54
c automated decision-making, including profiling, is permitted for fraud and tax evasion monitoring and prevention purposes, and to ensure the security and reliability of a service provided by a controller; 55 and
d sanctions are to be proportionate. 56

The new rules principally advantage small and medium-sized enterprises by reducing unnecessary administrative requirements such as notification requirements for companies. The right to be forgotten has been reinforced, and a right to data portability facilitates transfer of personal data between service providers. Furthermore, the Regulation provides that market operators established outside Europe will have to apply the same rules when offering services in the EU, and it brings forward a one-stop shop for companies and users, who will only have to deal with one single supervisory authority, facilitating cross-border operations and business in the EU. The Regulation also ensures stronger protection against data breaches, as it provides that a company experiencing a breach has to report it to the relevant data protection authority within 72 hours.

52 Directive (EC) No. 1995/46 of 24 October 1995, OJ L281/1 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.
In line with the Data Protection Directive previously in force, Article 45 of the GDPR provides that the transfer of personal data from the EU to a country outside the EU or EEA may take place if that third country ensures an adequate level of protection of the data. The Commission has the power to determine whether a third country ensures an adequate level of protection, taking into account the relevant domestic legislation, respect for human rights and fundamental freedoms, and the international agreements that the third country concerned has entered into.

In 2000, under the regime previously in force, the Commission adopted a decision on the adequacy of the protection provided by the safe harbour privacy principles with regard to the US (Safe Harbor Adequacy decision). On 6 October 2015, the CJEU invalidated the 2000 Safe Harbor decision.

In February 2016, the Commission put forward a successor agreement (known as the EU–US Privacy Shield). As in the case of the former Safe Harbor Agreement, the Privacy Shield is intended to enable personal data of EU citizens to be transmitted to and processed in the United States. The final draft of the Privacy Shield, which was adopted by the Commission on 11 July 2016 by majority vote of the Member States, includes privacy principles that stipulate improved data protection requirements compared with the safe harbour with which US companies must comply if they want to be certified under the Shield. Following criticism of the first draft of the Privacy Shield, in a revised draft the Commission endeavoured to assuage, in particular, the concerns expressed recently by the Article 29 Working Party, the independent advisory body on data protection and privacy that comprises representatives from national data protection authorities in Europe.

On 12 July 2016, the Commission adopted the Privacy Shield Adequacy Decision, certifying that this measure ensures an adequate level of protection for the transfer of personal data in the US. On 16 September 2016, Digital Rights Ireland brought an action for annulment before the CJEU against the Commission’s adequacy decision, challenging in particular the legality of the mass recording of personal data by US public authorities, which remains possible under the Shield. On 22 November 2017, the General Court dismissed as inadmissible the action brought by Digital Rights Ireland.

On 9 January 2018, the Commission issued a notice stating that, as of the date of the UK’s withdrawal from the European Union, the UK will be treated as a third country within the meaning of GDPR rules on the transfer of personal data. Accordingly, it will not be automatically granted the status of a safe third country.


58 Case C-362/14, Maximillian Schrems v. Data Protection Commissioner. For more details on this judgment, see this chapter in the seventh edition of this publication.

59 In the meantime, Article 26 of Data Protection Directive applies. The latter provides for some alternative grounds on which specific data transfers may take place absent an Article 25 adequacy decision. In particular, transfers may be carried out where the entity responsible for determining the purposes and means of the processing of personal data adduces appropriate safeguards, including contractual clauses binding the exporter and the importer of the data.


The adoption of the GDPR also affects the ePrivacy Directive, which is *lex specialis* for the electronic communications sector. The review is overdue, because most of the articles of the current Directive apply to traditional telecoms companies but not to the growing number of OTT providers (that is, providers using the internet to deliver content).

Thus, on 10 January 2017, the Commission presented a proposal for a ‘Regulation concerning the respect for private life and the protection of personal data in electronic communications’ (ePrivacy Regulation), which would replace the ePrivacy Directive.

The proposed ePrivacy Regulation would apply not only to traditional telecom operators, but also to OTT service providers (such as Whatsapp, Facebook and Skype) that currently do not fall within the scope of the ePrivacy Directive. It would also apply to non-EU operators that provide services to users located in the EU.

The new rules place great emphasis on end users’ consent. Service providers must obtain users’ consent to process electronic communications content and metadata, such as data on the location of where a phone call was made. The Regulation would introduce more user-friendly methods to obtain such consent (e.g., appropriate settings of a browser or other application). The proposed Regulation also addresses the privacy concerns raised by tools that allow tracking of the online activities of users, such as cookies, by requiring a clear affirmative action to express consent to their use.

In April 2017, the Article 29 Working Party and the European Data Protection Supervisor released their opinion on the proposal, advocating for more effective rules, such as a general prohibition on tracking practices and privacy by default settings for software and applications. The new regulation should be adopted by end of 2018.

**Cybersecurity**

On 6 July 2016, the Parliament and the Council approved the Network and Information Security (NIS) Directive, also known as the Cybersecurity Directive, which was developed within the framework of the Commission’s EU Cybersecurity Strategy. The Directive aims to ensure a high common level of network and information security across the EU through a set of wide-ranging measures that will generate cooperation and information-sharing mechanisms, and set minimum requirements for a broad range of public and private players.

In January 2018, the Commission adopted an implementing regulation laying down rules for the application of the NIS Directive.

On 13 September 2017, the Commission and the High Representative for Foreign Affairs and Security Policy launched the cybersecurity package, a set of measures aimed at
improving the EU response to cyberattacks and crime, which includes proposals for the institution of the European Cybersecurity Agency and for a directive on the combatting of fraud and counterfeiting of non-cash means of payment.68

**Free flow of data and cloud computing**

The DSM Strategy calls for a European free flow of data initiative to promote the free movement of data and encourage innovation in the EU, while protecting personal data.69

In April 2016, the Commission launched the European Cloud Initiative,70 which includes a series of initiatives concerning the certification of cloud services to allow users to benefit from secure and high-quality services, the switching of cloud service providers and the development of a European Open Science Cloud for European researchers. The Cloud Initiative also provides for the creation of a European data infrastructure. On 16 February 2017, the European Parliament adopted by a large majority a resolution on the European Cloud Initiative.

This is considered a key initiative, as estimates of the cost of an incomplete DSM for cloud computing are between €31.5 billion and €63 billion per year.71 On the other hand, it was estimated that cloud computing can potentially contribute a total of €450 billion to the EU’s GDP between 2015 and 2020 and lead to the creation of an additional one million jobs and 300,000 companies in the EU throughout all sectors of the economy.72

On 11 January 2018, the Commission published its proposal for a regulation establishing the European High Performance Computing Joint Undertaking,73 a legal entity that would pool European resources to develop supercomputing infrastructure for European scientific and industrial users. At the moment, the top 10 supercomputers depend on non-European technology, and this creates risks for the EU in terms of competitiveness and innovation.

On 10 January 2017, the Commission adopted a communication on building a European data economy74 aimed at identifying unjustified restrictions on the free movement of data, such as data location restrictions.

In September 2017, the Commission adopted a proposal for a Regulation on the free flow of non-personal data in the EU.75 The proposal aims to achieve a more competitive and integrated internal market for data storage and other processing services and activities so as

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72 The International Data Corporation, Uptake of Cloud in Europe: Follow-up of IDC Study on Quantitative estimates of the demand for Cloud Computing in Europe and the likely barriers to take-up, 2015.
to unlock the potential of new digital technologies (e.g., cloud computing, big data, artificial intelligence and the IoT). The new Regulation would address certain obstacles preventing the free movement of data within the EU for companies, public administrations and citizens. Inter alia, the proposal would remove unjustified or disproportionate national rules that hamper or restrict companies in choosing a location for storage or processing of their data; ensure that competent authorities have access to data stored or processed in another Member State to perform their tasks in line with their regulatory mandate, just as they do when the data is stored in their own territory; and encourage the development of self-regulatory codes of conduct to make it easier to switch cloud service providers (e.g., by informing users about the terms and conditions under which they can port data outside their IT environments).

On 19 December 2017, the Council adopted its position, supporting the possibility for Member States to impose data localisation requirements only when justified on grounds of public security. The first trialogue was held on 14 June 2018; during the second trialogue, held on 19 June 2018, the Parliament, the Council and the Commission reached an agreement on the proposal for a new Regulation. The Parliament’s vote on the proposal in plenary is scheduled for 1 October 2018.

IV SPECTRUM POLICY

The DSM strategy considers a European spectrum policy to be necessary to boost investment, as some countries were slow in allocating the 800MHz band used for mobile communications, and lagged behind in rolling out 4G technology for mobile networks as a result.76 On the other side, some Member States have already outpaced EU regulation (e.g., Germany started auctioning spectrum from the 700MHz band for mobiles in May 2015).

On 9 June 2015, the Commission presented the outcome of a public consultation on the September 2014 Pascal Lamy report concerning the UHF band.77 The report discusses how the scarce spectrum resource in the UHF broadcasting band should be used in future. The results of the consultation suggest that there is general backing for spectrum-efficient technologies for DTTV equipment.

Accordingly, on 2 February 2016 the Commission presented a proposal for a Decision of the Parliament and the Council on the use of the 470–790MHz frequency band in the Union.78 On 17 May 2017, the Parliament and the Council adopted such decision,79 stating that Member States have to allow the use of the 700MHz frequency for wireless broadband ECSs by 30 June 2020.

The Commission also proposed measures to improve spectrum management across the EU in the framework of the new Electronic Communications Code. This objective

76 Commission’s DSM strategy, Pillar II, Action 9.
should be achieved by giving preference to the use of radio spectrum under general rather than individual authorisations, by granting long-term licences (at least 25 years) and by coordinating the timing of assignments of spectrum across the EU.80

On 23 October 2017, the Commission published a study on spectrum assignment for the deployment of 5G in the EU,81 which considers the approaches currently used across the Member States for authorising and assigning spectrum. The study suggests that longer licence durations attract larger investments and a wider network roll-out.

V MEDIA

The AVMSD provides for a minimum harmonisation of certain aspects of national legislation related to audiovisual media services (e.g., advertising, protection of minors and promotion of European works) with a view to facilitating the circulation of audiovisual services in the internal market on the basis of the country-of-origin principle. According to this principle, audiovisual media service providers must abide only by the rules of the Member State with jurisdiction over them.

The AVMSD applies to all audiovisual media services, whether linear (traditional television) or non-linear (VOD), irrespective of the technology used to deliver the content (the principle of technological neutrality).82

The Commission's DSM strategy envisages a regulatory fitness evaluation of the AVMSD to gauge whether it still represents a satisfactory regulatory regime, taking account of technological advances, and whether it is effective in attaining its objectives. Namely, the evaluation will assess the current material and geographical scope of the Directive as well as the system of graduated regulation (i.e., the difference in regulatory treatment between linear and non-linear services).

In May 2016, the Commission announced a proposal to amend the existing AVMSD that aims, inter alia, to introduce a uniform regulatory framework for TV broadcasters and VOD service providers. The proposal includes a liberalisation of rules for traditional services, stricter rules for non-linear services (e.g., the two-tier approach, based on lighter regulation for VOD compared with TV broadcasting with regard to protection of minors is replaced by common rules valid for all audiovisual media services providers without distinction), changes in the definition of audiovisual media services (including for first-time video-sharing platforms) and geographical scope.83

In May 2017, the Council adopted its position, opening the way for an inter-institutional triilogue. A political agreement was struck on 6 June 2018; a vote on the new rules at the plenary of the Parliament to adopt the new rules is scheduled for 2 October 2018.

80 See Articles 48, 49 and 53 of the Proposal for a Directive establishing the European Electronic Communication Code.
82 Article 1(1)(a) and the explanatory note provided by the Commission.
VI THE YEAR IN REVIEW

i Communication on artificial intelligence

In the mid-term review of the Digital Single Market strategy published in May 2017,84 the Commission stressed the importance for the EU of being in a leading position in the development of artificial intelligence (AI) technologies, platforms and applications.

On 25 May 2018, the Commission adopted a Communication on Artificial Intelligence for Europe.85 The Commission envisages a European Initiative on AI, based on three pillars: increasing public and private investments; preparing for socioeconomic changes brought about by AI; and ensuring an appropriate ethical and legal framework. In this regard, the Commission proposes a set of measures to boost the development of AI. First, the Commission is increasing investments in the development of AI to around €1.5 billion by the end of 2020 (which represents an increase of around 70 per cent). The Commission will also adopt measures to prepare for the socioeconomic changes in the labour market caused by the emergence of automation and robotics. This entails helping citizens to develop basic digital skills, assisting workers who perform jobs that are likely to disappear due to automation and training more specialists in AI. Finally, the Commission intends to propose several legislative and non-legislative measures to create a technical and legal framework for AI, including ethics guidelines to be developed by the end of 2018.

ii The .eu top level domain name

On 27 April 2018 the Commission adopted a proposal for a Regulation on the implementation and functioning of the .eu top level domain name86 aimed at and repealing the .eu Regulations.87 The .eu domain name is the specific domain name of the European Union, which allows European companies and citizens to participate on the internet and, at the same time, creates a European online identity for their websites and email addresses.

The proposal aims to modernise the existing legal framework by replacing the current regulations with a more efficient legal instrument; and create new eligibility criteria to allow EU citizens to register a .eu domain name, regardless of their place of residence, in order to ensure a wider use of the .eu top level domain name.

iii Proposal for a regulation on promoting fairness and transparency for users of online intermediation services

An increasing number of small and medium-sized companies nowadays use online marketplaces to sell their services and products to end users. Following its commitment in the mid-term review of the DSM Strategy to address the issue of unfair contractual clauses and

trading practices in platform-to-business relationships, on 26 April 2018 the Commission presented a proposal for a Regulation on promoting fairness and transparency for business users when dealing with online platforms.\(^{88}\)

The new rules aim at increasing transparency by requiring the providers of online intermediation services to make their terms and conditions for professional users understandable and easily available. This includes:

\(\begin{array}{l}
\text{a} \quad \text{setting out in advance the possible reasons why a professional user may be blocked or suspended from a platform;} \\
\text{b} \quad \text{respecting a reasonable minimum notice period for implementing changes to contractual terms;} \\
\text{c} \quad \text{stating clearly what data generated through their services can be accessed, by whom and under what conditions;} \\
\text{d} \quad \text{describing how they treat their own goods or services compared to those offered by other professional users; and} \\
\text{e} \quad \text{indicating the general algorithm that determines how goods and services are ranked in search results.}
\end{array}\)

In terms of dispute solving, the providers of online intermediation services are required to create an internal system to handle complaints and to indicate in their terms and conditions the qualified and independent mediators that will work to settle the dispute.

\(\text{iv Merger and antitrust control in telecommunication markets}\)

A significant number of mergers involving telecommunications operators were cleared by the Commission between June 2017 and July 2018.

On 6 February 2018, the Commission cleared the acquisition of Scripps by Discovery.\(^{89}\) The parties are US media companies that provide pay-TV channels to TV broadcasters in the EU, especially in the UK and Poland. The Commission concluded that the transaction would raise no competition concerns in the UK given the limited overlap between the parties’ activities. In Poland, however, where Scripps is active via the Polish company TVN, the proposed transaction risked increasing Discovery’s market power in relation to TV distributors, given that certain channels provided by TVN were considered essential for the Polish audience. The transaction was cleared subject to Discovery’s commitment to make such channels available to TV distributors in Poland for a reasonable fee for seven years.

Pursuant to Article 14(2) of the EU Merger Regulation, on 24 April 2018 the Commission imposed a fine of €124.5 million on Altice, a telecommunications company based in the Netherlands, for gun jumping, as the firm had implemented its acquisition of the Portuguese telecommunications operator PT Portugal before notification and approval by the Commission.\(^{90}\)

In its fining decision, the Commission noted that certain provisions of the purchase agreement resulted in Altice acquiring veto rights over decisions concerning PT Portugal’s

\(\text{References:}\)


\(^{89}\) Case M. 8665, Scripps/Discovery.

\(^{90}\) Case M. 7993, Altice/PT Portugal.
ordinary business, and that Altice had actually exercised decisive influence on PT Portugal, for example by giving instructions on how to carry out a marketing campaign and by receiving commercially sensitive information about the company.

The transaction was notified to the Commission and cleared subject to conditions in April 2015. At the time of the notification, Altice’s Portuguese subsidiaries competed with PT Portugal in Portugal in the market for fixed telecommunications. The Commission had concerns that the transaction would lead to higher prices for Portuguese clients; thus, it authorised the concentration subject to Altice’s commitment to divest its Portuguese subsidiaries.

On 12 June 2018, the Commission opened an in-depth investigation to assess the proposed acquisition of Tele2 NL by T-Mobile NL (two of the largest operators in the Dutch retail mobile telecommunications market). The transaction would reduce the number of MNOs in the Netherlands from four to three and, according to the Commission, it could lead to higher prices on the retail market or less choice in mobile services for Dutch consumers. The Commission also fears that the reduction in the number of players may increase the likelihood that the three remaining players would coordinate their behaviour. At the time of writing, the Commission is carrying out its Phase two investigation and has to take a decision by 17 October 2018.

On 15 June 2018, the Commission unconditionally approved the acquisition of Sky by Comcast, a US media, technology and entertainment company, which owns Universal Pictures and operates TV channels. The Commission found that the proposed transaction would have led to only a limited increase in Sky’s shares of the market for the acquisition of TV content, as well as of the market for the wholesale supply of TV channels in the relevant Member States. The Commission’s assessment focused on whether Comcast would be able to prevent or limit access by Sky’s competitors to its films, other TV content or TV channels; whether Sky would have the incentive to stop purchasing content from Comcast’s competitors; and whether Sky could prevent competing channels from accessing its platform. Based on the results of its market investigation, the Commission concluded that Sky would have no incentive to cease purchasing content from Comcast’s competitors, as this would reduce the quality of its offering; Comcast would not be able to prevent or significantly limit access by Sky’s competitors to films and other TV content, because pay-TV distributors would continue to have access to multiple alternative channels provided by Comcast’s competitors; and Sky would not be able to prevent competing channels from accessing its platform, because competitors are either contractually protected for a sufficient period of time or are not dependent on Sky’s retail platform in the relevant Member States. On this basis, the Commission cleared the transaction.

Finally, on July 9 2018, the Commission unconditionally cleared the acquisition of UPC Austria (mainly active in the market for fixed telecommunications) by T-Mobile Austria (mainly active in mobile telecommunications). The Commission concluded that, notwithstanding the fact that both companies are active in the provision of internet access for residential customers in Austria, UPC’s fixed internet access products are very different from

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91 Case M. 8792, Télé 2 NL/T-Mobile NL.
92 Case M. 8861, Comcast/SKY.
93 Case M. 8808, T-Mobile Austria/UPC Austria.
T-Mobile’s mobile broadband products and do not compete with the latter. In addition, the merged entity would have continued to face significant competition from other players in the provision of internet access for residential customers.

As to antitrust enforcement, in July 2018 the Commission concluded its long-lasting investigation in the Google Android case. The Commission imposed a fine of €4.34 billion on Google for having adopted illegal restrictions in its relationship with Android device manufacturers and MNOs to consolidate its dominant position in general internet searches. This is by far the highest fine ever imposed on a single firm under EU antitrust rules.

The Commission held that Google was dominant in the following markets: the national markets for general internet search services, due to the extremely high market shares held by Google (exceeding 90 per cent in most EEA Member States) and the presence of high barriers to entry; the worldwide market (excluding China) for licensable smart mobile operating systems, due to the share exceeding 95 per cent held by Google and the presence of high barriers to entry, and also as a result of indirect network effects and the need for significant resources; and the worldwide market (excluding China) for app stores for the Android mobile operating system, where Google holds a share exceeding 90 per cent, which is also protected by high barriers to entry.

The Commission contested three separate practices: the tying of Google Search, Google’s Chrome browser and Google’s app store (the Play Store); the grant of payments conditional on exclusive pre-installation of Google Search; and the obstruction of the development and distribution of competing Android operating systems.

In particular, according to the Commission, Google offered its mobile apps and services to device manufacturers as a bundle, which included Play Store, Google Search and Chrome. The Commission found that Play Store was a ‘must-have’ app, as users expect to find it pre-installed on their devices (and also because they cannot lawfully download it themselves). In this scenario, Google allegedly tied Play Store to two additional products: Google Search and Chrome. The tying of the products concerned ensured that Google Search and Chrome were pre-installed on practically all Android devices sold in the EEA. The Commission also noted that pre-installation can create a status quo bias, as users who find search and browser apps pre-installed on their devices are likely to stick to these apps. Accordingly, Google’s practice reduced both the incentives of manufacturers to pre-install competing search and browser apps, and the incentives of users to download such apps.

Secondly, according to the Commission, Google granted significant financial incentives to some of the largest device manufacturers and MNOs on condition that they exclusively pre-installed Google Search across their entire portfolio of Android devices. This significantly reduced their incentives to pre-install competing search apps. The Commission held that a rival search engine would have been unable to compensate a device manufacturer or MNO for the loss of the revenue share payments made by Google across all devices and still make profits. The decision made reference to the recent Intel judgment of the Court of Justice, according to which, in the assessment of loyalty inducing incentives, the Commission has to consider, among other factors, the conditions under which the incentives were granted, their amount, the share of the market covered by the agreements and their duration.

Finally, according to the decision, Google prevented device manufacturers from using any alternative version of the Android operating system developed by third parties and not

95 Court of Justice, C-413/14 P, Intel v. Commission.
approved by Google (Android forks). To be able to pre-install on their devices Google’s proprietary apps, including Play Store and Google Search, manufacturers had to commit not to develop or sell devices running on an Android fork. This limited the development of devices running on Android forks and related apps and services.

The Commission concluded that the three above-mentioned practices were part of an overall exclusionary strategy, which allegedly consolidated Google’s traditional dominance in general internet search services at a time when the importance of mobile internet was growing significantly, prevented other mobile browsers from competing effectively with Chrome and obstructed the development of Android forks.

The Commission is still investigating other practices implemented by Google. In particular, in 2016 the Commission adopted a statement of objections concerning the AdSense search advertising service.96 The Commission alleges that Google would have prevented third-party websites from sourcing search adverts from other ad search providers through clauses providing for exclusivity, quantity requirements and preferred placement. The case is still pending.

VII CONCLUSIONS AND OUTLOOK

In the past year, the TMT sector has experienced significant developments, and also due to the entry into force of the Regulation on cross-border portability of online content services (1 April 2018) and, more importantly, of the GDPR Regulation (25 May 2018). The first ensures that subscribers to online content services in the EU can access and use these services while being temporarily present in another Member State; the second one has drastically changed the way businesses and public authorities collect, store and use customers’ data, in order to reinforce EU citizens’ control over personal data and to guarantee that their information is effectively protected.

As affirmed by President Juncker in his speech at the 2017 State of the Union, the main priority in the EU agenda concerns now the development of cybersecurity measures. This prompted the Commission to propose a cybersecurity package to protect European companies from cyberattacks, which also include a proposal for the creation of an EU Cybersecurity Agency.

Finally, antitrust enforcement in the period under review – namely, the Commission’s decision in the Google Android case, which fined Google with the highest sanction ever imposed under EU competition law – confirms that the main focus of the Commission is to prevent anticompetitive practices by large firms active in high-tech markets that may further strengthen their dominant position and raise strategic barriers to entry.


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I OVERVIEW

The French regulatory framework is based on the historical distinction between telecoms and postal activities on the one hand, and radio and television activities on the other (sectors are still governed by separate legislation and by separate regulators). Amendments in the past 15 years reflect the progress and the convergence of electronic communications, media and technologies, and the liberalisation of the TMT sectors caused by the *de facto* competition between fixed telephony (a monopoly until 1998) and new technologies of terrestrial, satellite and internet networks. French law also mirrors the EU regulatory framework through the enactment of the three EU Telecoms Packages in 1996, 2002 and 2009, which have been transposed into French law.

The TMT sectors in France have been fully open to competition since 1 January 1998, and are characterised by the interactions of mandatory provisions originating from many sources and involving many actors (regulators, telecoms operators, and local, regional and national authorities). The TMT sectors are key to the French economy, and 2017 was once again an important year in many respects for these sectors' business.

II REGULATION

i The regulators

There are four specialist authorities involved in the regulation of technology, media and telecommunications in France:

a ARCEP is an independent government agency that oversees the electronic communications and postal services sector. It ensures the implementation of a universal service, imposes requirements upon operators that exert a significant influence in the context of market analyses, participates in defining the regulatory framework, allocates finite resources (RFs and numbers), imposes sanctions, resolves disputes and delivers authorisations for postal activities.

b The Superior Audiovisual Council (CSA) is the regulatory authority responsible for the audiovisual sector. The CSA sets rules on broadcasting content and allocates frequencies by granting licences to radio and television operators. It also settles disputes that may arise between TV channels and their distributors, and is empowered to
impose sanctions on operators in cases of breaches of specific regulations. Law No. 2013-1028 of 15 November 2013 relating to the independence of the French public broadcasting service has amended the legal nature of the CSA, its composition, the status and appointment procedure of its members and their powers.

The Data Protection Authority (CNIL) supervises compliance with data protection regulations, and is empowered to issue sanctions that range from warnings to fines.

The High Authority for the Distribution of Works and the Protection of Copyright on the Internet (HADOPI), which was established in 2009, is in charge of protecting intellectual property rights over works of art and literature on the internet.

These authorities may deliver opinions upon request by the government, Parliament or other independent administrative authorities such as the French Competition Authority (FCA), and also renders decisions and opinions that may have a structural impact on these sectors (except for HADOPI). The National Frequencies Agency is also an important agency responsible for managing frequency spectrum and planning its use (see Section IV).

The CSA and ARCEP are the two main regulators of the TMT sectors. Discussions about merging these entities at the time of the convergence or to limit the powers of ARCEP occurred regularly during the past few years, but such merger was finally given up. Instead, it was argued that the two regulators should work in closer cooperation on certain common subjects.

The prevailing regulatory regime in France regarding electronic communications is contained primarily in the Post and Electronic Communications Code (CPCE), and regarding audiovisual communications in Law No. 86-1067 of 30 September 1986 on Freedom to Communicate, as subsequently amended. The main piece of legislation governing the law applicable to data protection is Law No. 78-17 of 6 January 1978 on Information Technology, Data Files and Civil Liberties (1978 Data Protection Law), as subsequently amended. Intellectual property rights are governed by the Intellectual Property Code.

ii Regulated activities

Telecoms

Telecoms activities and related authorisations and licences are regulated under the CPCE.

To become a telecoms operator, no specific licences or authorisations are required; the implementation and the operation of public networks and the supply of electronic communication services to the public is free, subject to prior notification to ARCEP (Articles L32-1 and L33-1 of the CPCE). Law No. 2015-990 of 6 August 2015 for the growth, activity and equality of economic opportunities (also known as the Macron Law) grants ARCEP the power to register on its own initiative any actor that infringed the notification obligation to declare itself to ARCEP.²

Conversely, the use of RFs requires a licence granted by ARCEP (Article L42-1 of the CPCE).

Media

Authorisations and licensing in the media sector are regulated under Law No. 86-1067 of 30 September 1986.

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² Article L33-11 of the CPCE.
Authorisations for private television and radio broadcasting on the hertz-based terrestrial frequencies are granted by the CSA following bid tenders and subject to the conclusion of an agreement with the CSA. The term of authorisations cannot exceed 10 years. Broadcasting services that are not subject to the CSA’s authorisation – namely, those that are broadcast or distributed through a network that does not use frequencies allocated by the CSA (cable, satellite, ADSL, internet, telephony, etc.) – are nevertheless subject to a standard agreement or a declaration regime.

iii Ownership and market access restrictions

General regulation of foreign investment

Since the entry into force of Law No. 2004-669 of 9 July 2004, discrimination of non-EU operators is prohibited, and they are subject to the same rights and obligations as EU and national operators. According to Article L151-1 et seq. of the French Monetary and Financial Code, when a foreign (EU or non-EU) investment is made in a strategic sector (such as security, public defence, cryptographics or interception of correspondence), the investor must submit a formal application dossier to the French Ministry of Economy for prior authorisation. Any transaction concluded without prior authorisation is null and void, and criminal sanctions (imprisonment of up to five years and a fine amounting to up to twice the amount of the transaction) are also applicable. A Decree of 14 May 2014 expanded the list of sectors in which foreign investors must seek prior authorisation from the Ministry of Economy. In particular, the Decree has added to the regulated activities referred to in Article R153-2 of the French Monetary and Financial Code activities relating to the integrity, security and continuity of the operation of networks and ECSs.

Specific ownership restrictions applicable to the media sector

French regulations provide for media ownership restrictions to preserve media pluralism and competition. In particular, any single individual or legal entity cannot hold, directly or indirectly, more than 49 per cent of the capital or the voting rights of a company that has an authorisation to provide a national terrestrial television service where the average audience for television services (either digital or analogue) exceeds 8 per cent. In addition, any single individual or legal entity that already holds a national terrestrial television service where the average audience for this service exceeds 8 per cent may not, directly or indirectly, hold more than 33 per cent of the capital or voting rights of a company that has an authorisation to provide a local terrestrial television service.

Regulation of the media sector is currently evolving in reaction to a number of changes in French media ownership. As a consequence, French lawmakers adopted Law No. 2016-1524 of 14 November 2016, which amends the Law of 30 September 1986. Its purpose is to ensure freedom, independence and pluralism in media ownership, for example

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3 See Articles 28 to 32 of the Law of 30 September 1986, which determine the CSA’s allocation procedures.
4 Articles 33 to 34-5 of the Law of 30 September 1986.
5 Article L33-1 III of the CPCE.
7 Article L165-1 of the French Monetary and Financial Code.
8 Decree No. 2014-479 of 14 May 2014.
10 Law No. 2016-1524 of 14 November 2016 strengthening media freedom, independence and pluralism.
by requiring media outlets to provide yearly information on their capital ownership and governing bodies, \(^{11}\) and reinforcing the powers of the CSA over French media governance with the creation of deontology committees. \(^{12}\)

Regarding the radio sector, a single person cannot retain networks whose coverage exceeds 150 million inhabitants or 20 per cent of the aggregated potential audience. \(^{13}\) This regulation will, however, be subject to modification in the future, as it does not take into account local pluralism challenges. In this respect, a report was submitted to Parliament by the CSA in April 2014. \(^{14}\)

Further, unless otherwise agreed in international agreements to which France is a party, a foreign national may not acquire shares in a company holding a licence for a radio or television service in France that uses RFs if this acquisition has the effect of raising (directly or indirectly) the share of capital or voting rights owned by foreign nationals to more than 20 per cent. \(^{15}\) Under the same circumstances, such licence cannot be granted to a company in which 20 per cent of the share capital or voting rights is owned (directly or indirectly) by foreign nationals. \(^{16}\) These provisions do not apply to service providers of which at least 80 per cent of the capital or voting rights are held by public radio broadcasters belonging to Council of Europe Member States, and of which at least 20 per cent is owned by one of the public companies mentioned in Article 44 of the Law of 30 September 1986. \(^{17}\) Specific rules restricting cross-media ownership also apply. \(^{18}\)

iv Transfers of control and assignments

The general French merger control framework applies to the TMT sectors, without prejudice to the above-mentioned ownership restrictions and to specific provisions for the media sector. The merger control rules are enforced by the FCA. \(^{19}\)

Regarding the telecoms and post sectors, the FCA must provide ARCEP with any referrals regarding merger control, and ARCEP can issue a non-binding opinion. \(^{20}\)

Regarding companies active in the radio or TV sector involved in a Phase II merger control procedure before the FCA, a non-binding opinion from the CSA is necessary. \(^{21}\)

Any modification of the capital of companies authorised by the CSA to broadcast TV or radio services on a frequency is subject to the approval of the CSA. \(^{22}\)

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19 For recent examples of mergers in the TMT sectors, see, e.g., FCA, Decision No. 17-DCC-76 of 13 June 2017, in which the FCA ruled on the acquisition of Group News Participations by SFR Group.
20 Article L36-10 of the CPCE.

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III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

Under the CPCE, ECSs other than voice telephony to the public may be provided freely.\textsuperscript{23}

As regards the ADSL network, and following local loop unbundling, alternative operators must be provided with direct access to the copper pair infrastructure of France Téléc-Orange, the historical operator. Therefore, as with traditional fixed telephony, DSL networks are subject to asymmetrical regulation.

As regards services, ISPs can operate freely and provide services, but they must file a declaration with ARCEP before commencing operations.\textsuperscript{24} A failure to comply with this obligation constitutes a criminal offence.\textsuperscript{25}

More generally, ISPs must comply with the provisions of Law No. 2004-575 of 21 June 2004 on Confidence in the Digital Economy governing e-commerce, encryption and liability of technical service providers, as subsequently amended. Law No. 2004-575 of 21 June 2004 also sets out a liability exemption regime for hosting service providers. They are not subject to a general obligation to monitor the information they transmit or store; nor are they obliged to look for facts or circumstances indicating illicit activity. Nevertheless, when the provider becomes aware that the data stored is obviously illicit, it has the obligation to remove the data or render their access impossible. In that respect, the question of the qualification as ‘host provider’ has been widely debated before French courts.\textsuperscript{26}

ii Universal service

The EU framework for universal services obligations, which defines universal services as the ‘minimum set of services of specified quality to which all end users have access, at an

\textsuperscript{23} Article L32-1 of the CPCE.
\textsuperscript{24} Article L33-1 of the CPCE.
\textsuperscript{25} Article L39 of the CPCE.
\textsuperscript{26} This issue now seems resolved regarding video-sharing sites: see, for instance, the judgment of the French Supreme Court (Cass civ 1ère, 17 February 2011, No. 09-67896, Joyeux Noël) in which the Supreme Court recognised a simple hosting status for Dailymotion. The Supreme Court ruled that host websites did not have to control \textit{a priori} the content they host but need to ensure the content is not accessible once it has been reported as illegal (Cass Civ 1ère, 12 July 2012, No. 11-15165 and No. 11-15188, Google and Auféminin.com). This issue is still to be debated with respect to online marketplaces such as eBay from which it follows that French courts, which are favouring a very factual analysis of the role of the services provider, will give significant importance to judges’ discretion. In that respect, see Cass Com, 3 May 2012, No. 11-10.507, \textit{Christian Dior Couture}, No. 11-10.505, \textit{Louis Vuitton Malletier} and No. 11-10.508, \textit{Parfums Christian Dior}, in which the Supreme Court confirmed an earlier decision of the Paris Court of Appeals that did not consider eBay as a ‘host provider’, and therefore refused to apply the liability-exemption regime. See, in contrast, \textit{Brocanteurs v. eBay}, Paris Court of Appeals, Pôle 5, ch 1, 4 April 2012, No. 10-00.878, in which second-hand and antique dealers accused eBay of encouraging illegal practices by providing individuals with the means to compete unfairly against professionals, and in which the Paris Court of Appeals considered eBay as a host provider able to benefit from the liability-exemption regime. The Court of Appeals based its decision on the fact that eBay had no knowledge or control of the adverts stored on its site. If the seller was asked to provide certain information, it was for the purpose of ensuring a more secure relationship between its users. The issue is also debated in the context of online forums. The Supreme Court ruled on 3 November 2015 that publishing directors are responsible for ‘personal contribution spaces’ from the moment they become aware of their content and must be held criminally liable for failing to take down defamatory comments (Cass Crim, 3 November 2015, No. 13-82645).
affordable price in the light of specific national conditions, without distorting competition', 27 has been implemented by Law No. 96-659 of 26 July 1996 and further strengthened by Law No. 2008-3 of 3 January 2008. Universal service is one of the three components of public service in the telecoms sector in France (the other two being the supply of mandatory services for electronic communications and general interest missions).

Obligations of the operator in charge of universal service are listed in Article L35-1 of the CPCE and fall into two main categories of services:

a telephone services: connection to an affordable public telephone network enabling end users to take charge of voice communications, facsimile communications and data communications at data rates that are sufficient to allow functional internet access and free emergency calls; and

b enquiry and directory services (either in printed or electronic versions).

These services must be rendered under tariff and technical conditions that take into consideration the difficulties faced by some users, such as users with low incomes, and that do not discriminate between users on the ground of their geographical location. Following calls for applications (one per category), the Minister in charge of electronic communications designates the operator or operators in charge of the universal service for a period of three years. France Télécom-Orange was designated as such until 2020.28

Universal service currently only covers telephone provision and not information technologies. However, in Opinion No. 11-A-10 of 29 June 2011, the FCA considered that the reduced price policy (also called the ‘social tariff’) set up for telephone networks, pursuant to universal service rules might be extended to internet services even though the EU Telecoms Package does not expressly allow for the inclusion of such in the universal service. In the absence of regulation, France Télécom-Orange launched a ‘social tariff’ for multi-service offers (telephone and internet) on 9 February 2012.

ARCEP determines the cost of the universal service and, when it is necessary to finance it in the event that it represents an excessive burden for the operator in charge, ARCEP also determines the amount of the other operators’ contributions to the financing of USOs through a sectoral fund. In principle, every operator contributes to the financing, with each contribution being calculated on the basis of the turnover achieved by the operators in their electronic communications activities.29

iii Restrictions on the provision of service

Net neutrality is a growing policy concern in France. From the electronic communications regulator’s standpoint, which focuses on the technical and economic conditions of traffic conveyance on the internet, the key question in the debate over net neutrality is how much control internet stakeholders can rightfully exert over the traffic. This implies examining operators’ practices on their networks, as well as their relationships with some content and application providers.

The Digital Republic Law30 recently introduced the principle of net neutrality into the national legal framework and grants ARCEP with new investigatory and sanctioning

27 Article 1(2) of Directive No. 2002/22/EC.
28 See Ministerial Order of 27 November 2017 designating Orange (JORF No. 0282 of 3 December 2017).
29 Article L35-3 of the CPCE.
30 Law No. 2016-1321 of 7 October 2016 for a Digital Republic.
powers to ensure compliance (see also Section VI.i). In particular, Arcep is now in charge of implementing net neutrality in accordance with Regulation No. 2015/2120 of 25 November 2015 establishing measures concerning open internet access. When Arcep identifies a risk of infringement by an operator, it can require said operator to comply ahead of time. The Digital Republic Law also reinforces the conditions under which the Minister in charge of electronic communications and Arcep can conduct an investigation.

Since the adoption of the Digital Republic Law, ARCEP has published a courtesy French translation of the guidelines for national regulatory authorities on the implementation of Regulation No. 2015/2120 of 25 November 2015, which the Body of European Regulators for Electronic Communications published on 30 August 2016. In June 2018, for a second year, ARCEP also published its annual report on the state of the internet in France, which identifies various threats that could undermine the internet’s proper functioning and neutrality, and sets out the regulator’s actions to contain these threats. This document addresses issues regarding data interconnection, the transition to IPv6, the quality of fixed internet access, net neutrality and open platforms. Arcep issued in parallel a report devoted to the ways in which end user devices (mobiles and boxes) influence internet openness.

As to content, pursuant to the Law of 21 June 2004, ISPs have a purely technical role, and they do not have the general obligation to review the content they transmit or store. Nevertheless, when informed of unlawful information or activity, they must take prompt action to withdraw the relevant content, failing which their civil liability may be sought. Since 2009, HADOPI has been competent to address theft and piracy matters. It intervenes when requested to by regularly constituted bodies for professional defence that are entitled to institute legal proceedings to defend the interests entrusted to them under their statutes (e.g., SACEM), or by the public prosecutor. After several formal notices to an offender, the procedure may result in a €1,500 fine.

Finally, French e-consumers benefit from consumer law provisions and from specific regulations. In particular, they are protected against certain unsolicited communications via email if their consent has not been obtained prior to the use of their personal data. Moreover, consumers must be provided with valid means by which they may effectively request that such unsolicited communications cease. In addition, Decree No. 2015-556 of 19 May 2015 provides for the implementation of an opposition list on which any consumer can add his

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31 Articles 40 to 47 of Digital Republic Law.
32 Article 40 of Digital Republic Law.
33 Article 43 of Digital Republic Law.
36 IPv6 is the most recent version of the Internet Protocol, the communications protocol that provides an identification and location system for computers on networks and routes traffic across the internet. IPv6 has been developed to deal with the issue of IPv4 address exhaustion, and is intended to replace IPv4.
39 See Article L34-5 of the CPCE.
or her name so that advertising material may not generally be sent to him or her. 40 The Decree joins a list of programmes in place to ensure consumer protection. With regard to phone-based advertising, new restrictions have been implemented since 1 June 2016 thanks to the designation of Opposetel, which is in charge of preventing unsolicited communications to consumers registered on an opposition list. 41 The Bloctel service had over 2 million registered users two months after its launch. All telephone operators also have the obligation to offer their users the possibility to register on an opposition list. 42

iv Security

The past few years have seen increasing terrorist security threats, resulting in substantial changes in the legal framework regarding security in telecommunications.

Law No. 91-646 of 10 July 1991 concerning the secrecy of electronic communications, now codified in the Internal Security Code, provides that the Prime Minister may exceptionally authorise, for a maximum period of four months (renewable only upon a new decision), the interception of electronic communications in order to collect information relating to the defence of the nation or the safeguarding of elements that are key to France’s scientific or economic capacity. In addition, pursuant to Law No. 2015-912 of 24 July 2015 (new Article L851-3 of the Internal Security Code) and only for the purpose of preventing terrorism, the Prime Minister may impose on providers of electronic communication services the obligation to implement an automated data-processing system for a maximum period of two months (renewable only upon a new decision) with the aim of detecting connections likely to reveal a terrorist threat. Article L851-2 of the Internal Security Code as amended by Law No. 2016-987 of 21 July 2016 provides that the administration is authorised, for prevention of terrorism, to collect real time connection data concerning individuals, beforehand identified, likely to be linked to a terrorist threat. 43

Further, Law No. 2013-1168 on Military Programming (LPM) introduced a new chapter in the Internal Security Code relating to administrative access to data connection, including real-time geolocation. 44 The new regime, which entered into force on 1 January 2015, 45 authorises the collection of ‘information or documents’ from operators as opposed to the collection of simply ‘technical data’. In addition, access to data is exclusively administrative, namely without judicial control. Requests for implementing such measures are submitted by designated administrative agents to a ‘chosen personality’ appointed by the National Commission for the Control of Security Interceptions (CNCIS) upon the proposal of the Prime Minister. CNCIS is in charge of controlling (a posteriori) administrative agents’ requests for using geolocation measures in the course of their investigation. The Minister

40 See Article L223-1 of the Consumer Code.
41 See Ministerial Order of 25 February 2016 designating SA Opposetel (JORF No. 0050 of 28 February 2016).
42 The red list service ensures that contact information will not be mentioned on user lists. The orange list service ensures that contact information will not be communicated to corporate entities with the goal of advertisement. The contact information remains available on universal directories made available to the public.
43 Initially, this article provided that the collection could be authorised against the individual’s relatives. However, the Constitutional Council, in decision No. 2017-648 QPC of 4 August 2017, censored this provision because it infringes the balance between public security and right to privacy.
44 New Article L246-1 et seq. of the Internal Security Code introduced by Article 20 of the LPM.
45 Article 20 IV of the LPM.
for Internal Security, the Defence Minister and the Finance Minister can also issue direct requests for the implementation of real-time geolocation measures to the Prime Minister who, in this case, will directly grant authorisations.

Law No. 2014-1353 of 13 November 2014, implemented by Decree No. 2015-174 of 13 February 2015, also entitles the administrative authorities to request ISPs to prevent access to websites supporting terrorist ideologies or projects. Additionally, laws linked to the state of emergency created extraordinary means of data search and seizure and expanded the provisions of Law No. 2014-1353.

In the context of the terrorism threat, the French legislator has amended the Criminal Proceedings Code to tackle organised crimes such as terrorism acts. Law No. 2016-731 of 3 June 2016 allows police officers, with the authorisation and under the control of a judge, to access, remotely and without consent, the correspondences stored in electronic communications available through identification. Police officers can also be authorised, by a judge and under his or her control, to use a technical disposal, such as an international mobile subscriber identity-catcher, to collect technical connection data to identify terminal equipment or users’ subscription numbers as well as data regarding the location of the terminal equipment used. This Law also extended some existing investigating powers to all organised crimes, such as the real-time collection of computer data without consent, in the context of both preliminary investigations and investigations of flagrancy.

In addition to the general rules applicable to the protection of personal data laid down in the 1978 Data Protection Law, the CPCE provides specific rules pursuant to which operators must delete or preserve the anonymity of any traffic data relating to a communication as soon as it is complete. Exceptions are provided, however, in particular for the prevention of terrorism and in the pursuit of criminal offences.

Unauthorised access to automated data-processing systems is prohibited by Articles 323-1 to 323-7 of the French Penal Code. In addition, with regard to cyberattacks, Law No. 2011-267 on Performance Guidance for the Police and Security Services (LOPPSI 2) introduced a new offence of online identity theft in Article 226-4-1 of the French Penal Code and empowers police officers, upon judicial authorisation and only for a limited period, to

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47 However, the Constitutional Council established boundaries in the fight against terrorism regarding infringements of the freedom of communication. In Decision No. 2016-611 QPC of 10 February 2017, the Council considered as unconstitutional Article 421-2-5-2 of the French Criminal Code introduced by Law No. 2016-731 of 3 June 2016, which punishes any person who frequently accesses online public communication services conveying messages, images or representations that directly encourage the commission of terrorist acts or defend these acts when this service has the purpose of showing images or representations of these acts that consist of voluntary harm to life.
48 Law No. 2016-731 of 3 June 2016 reinforcing the fight against organised crime and terrorism and their funding, and improving the efficiency and the protection of guarantees of criminal proceedings.
52 See Articles L34-1 and D98-5 of the CPCE.
install software in order to observe, collect, record, save and transmit all the content displayed on a computer's screen. This helps with the detection of infringements, the collection of evidence and the search for criminals by facilitating the creation of police files and by organising their coordination. Cybersecurity threats are dealt by the National Agency for the Security of Information Systems (ANSSI), a branch of the Secretariat-General for Defence and National Security created in 2009.53

In terms of personal data protection, LOPPSI 2 increases the instances where authorities may set up, transfer and record images on public roads, premises or facilities open to the public in order to protect the rights and freedom of individuals, and recognises that the CNIL has jurisdiction over the control of video protection systems.

With regard to the detection of cyberattacks, Law No. 2018-607 of 13 July 201854 created Article L.33-14 of the CPCE that involves operators in the detection of cyberattacks. Pursuant to this article, electronic communications operators are entitled to use technical markers such as IP addresses to detect or prevent any potential threat that may affect the security of information systems of their subscribers. In this case, operators shall inform the ANSSI without delay.

IV SPECTRUM POLICY

i Development

The management of the entire French RF spectrum is entrusted to a state agency, the National Frequencies Agency. It apportions the available radio spectrum, the allocation of which is administered by governmental administrations (e.g., those of civil aviation, defence, space, the interior) and independent authorities (ARCEP and the CSA) (see Section II).

ii Flexible spectrum use

The trend towards greater flexibility in spectrum use is facilitated in France by the ability of operators to trade frequency licences, as introduced by Law No. 2004-669 of 9 July 2004.55

The general terms of spectrum licence trading are defined by Decree No. 2006-1016 of 11 August 2006, and the list of frequency bands the licences of which could be traded are laid down by a Ministerial Order of 11 August 2006. A frequency database that provides information regarding the terms for spectrum trading in the different frequency bands open in the secondary market is publicly accessible. A spectrum licence holder may transfer all of its rights and obligations to a third party for the entire remainder of the licence (full transfer) or only a portion of its rights and obligations contained in the licence (e.g., geographical region or frequencies). The transfer of frequency licences is subject either to the prior approval of ARCEP56 or to notification to ARCEP, which may refuse the assignment under certain circumstances.57 Another option available for operators is spectrum leasing, whereby the licence holder makes frequencies fully or partially available for a third party to operate.

55 Article L42-3 of the CPCE.
56 Article R20-44-9-2 of the CPCE.
57 Ibid.
Unlike in a sale, the original licence holder remains entirely responsible for complying with the obligations attached to the frequency licence. All frequency-leasing operations require the prior approval of ARCEP.

iii Broadband and next-generation mobile spectrum use

Until 2009, there were three 3G licence holders in France: Orange France, SFR and Bouygues Telecom. The fourth 3G mobile licence was awarded to Free Mobile on 17 December 2009.

In addition, spectrum in the 800MHz and 2.6GHz bands was allocated for the deployment of the ultra-high-speed 4G mobile network: in that respect, licences for the 2.6GHz frequency were awarded to Bouygues Telecom, Free Mobile, Orange France and SFR in September 2011, and in December 2011, licences for the 800MHz were awarded to the same operators except Free Mobile, which has instead been granted roaming rights in priority roll-out areas. New spectrum in the 700 and 800MHz bands was transferred in December 2015 to promote better network capacities in areas with low population density, but the transfer will only be made effective from October 2017 to June 2019. The French government launched a call for applications, to be sent before 2 October 2018, in order to reassign the 900MHz, 1,800MHz and 2.1GHz bands, whose authorisations will expire between 2021 and 2024. As a result of an agreement reached between ARCEP, the French government and operators on 14 January 2018, the reassignment procedure will take into account operators’ stated commitments to improve voice and data coverage in all territories, making regional development targets a priority.

On 16 June 2017, ARCEP had authorised Bouygues Telecom and SFR to deploy 4G networks in the 2.1GHz band, historically used by French mobile operators’ 3G networks, to improve 4G speeds.

Additionally, under ARCEP supervision, 5G deployment is being prepared, with network coverage estimated to begin in 2020. The European Union’s public–private partnership between the European Commission and telecom industries, the 5G-PPP, which was launched on 1 July 2015, provides a framework for national 5G development. On 30 September 2015, ARCEP gave Orange authorisation to conduct initial tests for 5G in the city of Belfort until the end of 2016. The authorisation delivered to Orange tests three formerly unused spectrum ranges, namely the 3,600–3,800MHz, 10,500–10,625MHz, and 17,300–17,425MHz frequencies. ARCEP recently published a synopsis of the responses to its public consultation on ‘New frequencies for superfast access in the regions, for businesses, 5G and innovation’ launched on 6 January 2017. Following said consultation, ARCEP now seeks to prepare 5G deployment in the 26GHz and 1.5GHz bands. On 16 July 2018, the French government officially launched its 5G roadmap. Three main goals have been announced: (1) launching of several 5G pilot programmes in various regions; (2) allocation of new 5G frequencies and ensuring a commercial rollout in at least one major city by 2020; and (3) provision of 5G coverage for main transport routes by 2025. Additionally,

58 ARCEP, Decision No. 2011-1080 of 22 September 2011.
59 ARCEP, Decision No. 2011-1510 of 22 December 2011.
60 See ARCEP press release of 2 August 2018.
63 See ARCEP press release of 22 June 2017.
64 See ARCEP press release of 30 July 2018.
four main working areas have been identified: (1) free-up and attribute RFs for the 5G network; (2) foster the development of new industrial uses; (3) accompany the deployment of 5G infrastructures; and (4) ensure transparency and dialogue on 5G deployments and the exposure of the public.

iv  Spectrum auctions and fees

Spectrum auctions in the case of scarce resources

Pursuant to Article L42-2 of the CPCE, when scarce resources such as RF are at stake, ARCEP may decide to limit the number of licences, either through a call for applications or by auction. The government sets the terms and conditions governing these licensing selection procedures, and until now such proceedings have always been in the form of calls for applications.

Fees

Pursuant to Articles R20-31 to R20-44 of the CPCE, licensed operators contribute to the financing of the universal services.

V  MEDIA

i  Restrictions on the provision of service

Media are, in particular, subject to certain content requirements and restrictions.

Content requirements

At least 60 per cent of the audiovisual works and films broadcast by licensed television broadcasters must have been produced in the EU, and 40 per cent must have been produced originally in French.66

Private radio broadcasters must, in principle, dedicate at least 40 per cent of their musical programmes to French music.67

In addition, pursuant to Law No. 2014-873 of 4 August 2014 for genuine equality between women and men, audiovisual programmes have the duty to ensure fair representation of both women and men. Furthermore, audiovisual programmes and radio broadcasters must combat sexism by broadcasting specific programmes in this respect.68

A draft law69 with regard to ‘fake news’ is currently being debated before the French Parliament and suggests several measures in order to limit the impact of false information on the public election process. For instance, in the state of the discussions, the draft provides that certain operators of online platforms – in the context of public elections – should implement measures to combat the broadcasting of false information likely to trouble public order or alter polls’ reliability. They should implement easily accessible and visible systems that will allow users to report such false information, including when they are financed by third parties.

66  Articles 7 and 13 of Decree No. 90-66 of 17 January 1990.
68  Article 56 of the Law of 4 August 2014.
69  The last draft published is draft law No. 1219 as amended regarding the fight against the manipulation of information.
Advertising
Advertising is particularly regulated in television broadcasting. In particular, advertising must not disrupt the integrity of a film or programme, and there must be at least 20 minutes between two advertising slots. Films may not be interrupted by advertising that lasts more than six minutes.

Rules governing advertisements are stricter on public channels. In particular, since 2009, advertising is banned on public service broadcasting channels from 8pm to 6am. This prohibition does not, however, concern general-interest messages, generic advertising (for the consumption of fruits, dairy products, etc.) or sponsorships, which may continue to be broadcast.

In addition, some products are prohibited from being advertised, such as alcoholic beverages above a certain level of alcohol or tobacco products.

A new decree, Decree No. 2017-159 dated 9 February 2017, extended the media owners’ transparency requirements in order to protect advertisers of digital advertisement. According to Article 2 of the Decree, the media owners have to provide advertisers with the date and place of diffusion of the advertisements; the global price of the advertising campaign; and the unitary price charged for each advertising space.

Internet-delivered video content
Internet video distribution refers to IPTV services, which can be classified into the three following main categories: live television, time-shifted programming and VOD.

For customers who cannot afford triple-play offers, access to video content is limited to the content of free channels. The regulatory framework for ‘social’ offers set by the Law of 4 August 2008 is only limited to mobile telephony offers, triple play offers being thus outside its scope. Following FCA Opinion No. 11-A-10 and in the absence of regulation, France Télécom-Orange launched a ‘social tariff’ for multi-service offers (telephone and internet) (see Section III.ii).

Mobile services
Mobile personal television, initiated in 2007, has suffered from substantial delays due to disagreements among operators and content providers on the applicable economic model and on how to finance the deployment of a new network.

Thus, on 8 April 2010, the CSA delivered authorisations to 16 channels (13 private channels selected by the CSA after a call for applications launched on 6 November 2007, together with three public channels selected by the government) for the broadcasting of personal mobile television services.

On 22 April 2010, TDF, a French company that provides radio and television transmission services, services for telecoms operators and other multimedia services, and Virgin Mobile signed an agreement under which TDF committed to develop the new network with up to 50 per cent coverage of the ‘outdoor’ population and 30 per cent of the ‘indoor’ population, with Virgin Mobile paying TDF a monthly per-customer fee using DVB-H, an airwave broadcasting format that does not allow interaction with the user. However, after Virgin Mobile’s decision to withdraw from the project, TDF decided to end the agreement in January 2011, and in June 2011 announced that it no longer wished to be

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the DVB-H operator in charge of mobile personal television. Following TDF’s withdrawal, the CSA granted a two-month period to the selected channels to appoint a new operator in charge of mobile personal television. On 14 February 2012, no operator being appointed, the CSA acknowledged that the project was abandoned, and withdrew the authorisations it delivered to the 16 channels on 8 April 2010.71

VI THE YEAR IN REVIEW

i The ‘blockchain’ ordinance

On 9 December 2017, the French government published Ordinance No. 2017-1674 relating to the use of the blockchain technology for the record of the issuance and assignment of certain securities.

Pursuant to Article L211-3 of the French Monetary and Financial Code, securities must be recorded in an account (compte-titres) kept by the issuer of the titles or an intermediary. As of 1 July 2018, blockchain technology should be accepted as a parallel form of records for all transactions involving securities that are not listed, provided that the issuer of the securities formally accepts the use of such technology.

A decree, which has yet to be published, shall set out the conditions of this mechanism, including the technical requirements intended to ensure the security and inviolability of these transactions records.

The French government’s ambition to put France in a leading position in financial innovation has been met with similar enthusiasm from the National Assembly, the latter having launched in January 2018 a fact-finding mission on blockchain technology.72

In September 2018, the CNIL published first elements of analysis for stakeholders who want to develop blockchain technology in the context of processing of personal data.73

ii The new data protection law

A new data protection law was enacted on 20 June 201874 to adapt 1978 Data Protection Law to the GDPR75 and Directive (EU) 2016/680.76 The enactment of the new law served to implement the derogations to the GDPR that apply to French residents, regardless of the data controller’s country of establishment. Decree No. 2005-1309, supplementing the 1978 Data Protection Law implementing decree, was also amended to reflect the GDPR change by Decree No. 2018-687 of 1 August 2018.

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71 CSA, Decision No. 2012-275 of 14 February 2012.
72 http://www2.assemblee-nationale.fr/15/missions-d-information/missions-d-information-communes/chaines-de-blocs/(block)/47246.
74 Law No. 2018-493 of 20 June 2018 on the protection of personal data.
75 Regulation (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).
76 Directive (EU) 2016/680 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/JHA.
However, further actions will be needed from the French government to pass an ordinance to overhaul the entire Law No. 78-17 to enhance comprehensibility of the act and to ensure the coherence of the French legislation on data protection.

**The abolition of the existing authorisation regime**

The prior filing requirements before the CNIL have been abolished with the exception of three types of processing activities: (1) certain types of processing of health data; (2) certain types of processing activities carried out by the state in its exercise of public authority; and (3) processing activities carried out by public or private persons which use the National Identification Number (i.e., the social security number).

**The extended powers of the CNIL**

Under this new law, the CNIL's advisory, investigative and corrective powers have been enhanced.

In addition, an emergency procedure was created, whereby the CNIL's president is empowered to refer a case to the restricted committee when (1) a violation of the applicable data protection laws infringes upon public or individual liberties, human identity or human rights or (2) when the CNIL's president considers that a prompt intervention is necessary.

**The derogations allowed by the GDPR, as adopted by the French legislator**

Under the GDPR, the French legislator was entitled to adopt a number of derogations, applicable where the data subject's residence is in France.

The 1978 Data Protection Law now provides that a minor can consent alone to the processing of his or her data in relation to information society services upon reaching the age of 15. Minors under this threshold may only give their consent after being duly authorised to do so by the holder of parental rights and, therefore, the lawfulness of the processing activity will require a double consent.

The new law also broadens the possibility to bring a class action in connection with non-compliance with the GDPR or Law No. 78-17. The concerned data subjects will be entitled to claim compensation alongside an association accredited on a national scale and having the protection of privacy and personal data as its statutory purpose.

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77 Article 54 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

78 Article 27 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

79 Article 22 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

80 Article 11 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

81 Articles 43 quinquies and 44 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

82 Articles 45 and 46 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

83 Article 46 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

84 Article 5-1 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

85 Article 7-1 of the Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.

86 Article 43 ter of Law No. 78-17 of 6 January 2018 on information technology, data files and civil liberties.
iii The implementation of the Network and Information Security Directive

With regard to cybersecurity, the Network and Information Security Directive (NISD) has been implemented into French law by Law No. 2018-133 of 26 February 2018 and Decree No. 2018-384 of 23 May 2018. This framework imposes an obligation in terms of security of network and information systems on two categories of entities: (1) the operators of essential services (OESs) and (2) digital service providers (DSPs).

The categories of services considered as essential services are listed in the appendix of Decree No. 2018-384 (e.g., payment services, insurance, services involving preventive medicine, diagnosis and healthcare, selling of electricity and gas). The prime minister can designate operators as an OES if they provide at least one of the services listed. The operator is notified of the prime minister’s intent to designate it as an OES and can formulate observations. The first designations are expected in November 2018.

DSP are providers of cloud, online marketplace and search engine services normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services.

Nevertheless, the French implementing law excludes from its scope certain types of entities already subject to information system security regulations, such as operators for their activities related to the operation of ECNs or the provision of ECSs and providers of trust services for electronic transactions subject to Article 19 of Regulation 910/2014 dated 23 July 2014.

Both OESs and DSPs shall appoint a representative in charge of the contact with the ANSSI. For DSPs, this representative acts in the name of the provider for compliance with its obligations set forth of the NSID framework. DSPs shall keep an updated list of all networks and information systems necessary for the provision of their services within the European Union.

As regards security measures that should be implemented, OESs shall comply with security measures defined by the prime minister in a specific regulation (which has not been adopted to date). DSPs shall ensure, based on the state of art, a level of security for all networks and information systems necessary for the provision of their services within the European Union appropriate to the existing risks. DSPs shall refer to Article 2 of the Commission Implementing Regulation of 30 January 2018 for the security measures that should be implemented. Documents attesting to this implementation should be made available to the ANSSI in case of control.

Both OESs and DSPs shall report to the ANSSI, without delay, after becoming aware of any incident affecting networks and information systems that has or is likely to have a significant impact on the continuity of services.\textsuperscript{99}

Non-compliance with the obligations set forth in the NSID framework may be sanctioned with criminal fines ranging from €100,000 to €125,000 for OESs\textsuperscript{100} and from €75,000 to €100,000 for DSPs.\textsuperscript{101}

\textsuperscript{99} Articles 7 and 13 of Law No. 2018-133; Articles 11, 12, 20 and 21 of Decree No. 2018-384 dated 23 May 2018.

\textsuperscript{100} Article 9 of Law No. 2018-133 of 26 February 2018.

\textsuperscript{101} Article 15 of Law No. 2018-133 of 26 February 2018.
I OVERVIEW

ICT contributes more to wealth creation in Germany than the traditional technologies of automotive and mechanical engineering. With an annual business volume of approximately €228 billion in 2016, the ICT sector is one of the largest economic sectors in Germany. Constantly growing, it already employs more than 1.1 million people in Germany.\(^1\)

ICT has become a driving force in Germany’s economy, contributing to 4.8 per cent of the national gross value-added services in 2016.\(^3\)

By focusing on key issues such as convergence, mobility, data protection and internet security, the government has tried to advance the information society through targeted policies to modernise legal and technical frameworks and to promote research and market-oriented development over the past decade. As part of this overall effort, the federal government has adopted specific programmes and strategies tailored to the needs of the ICT sector. On 20 August 2014, it concluded the Digital Agenda 2014–2017, focusing on a strategy for the digital future of Germany,\(^4\) which was extended by the Digital Strategy 2025\(^5\) in 2016. There are also plans to ensure nationwide broadband access with transmission rates of at least 50Mbit/s in rural areas until 2018 through the Netalliance Digital Germany initiative.\(^6\) In 2017, the initiative announced Zukunftsoffensive Gigabit-Germany, which aims to establish a nationwide availability of 100MBit/s in a four-phase plan by investing €100 billion in

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2 www.bmwi.de/Redaktion/DE/Artikel/Branchenfokus/Wirtschaft/branchenfokus-informationstechnik-und-telekommunikation.html; the German ICT industry is Europe’s largest ICT market and the fifth-largest worldwide.


6 The Netalliance platform for innovation and investment is formed by the government and ICT companies. It commenced work in 2014 under the guidance of Alexander Dobrindt, the Minister for Transport and Digital Infrastructure (https://www.bmwi.de/DE/Themen/Digitales/Breitbandausbau/Netzallianz/netzallianz.html).
network infrastructure.\textsuperscript{7} The Digital Agenda further includes themes such as digital security and the Strengthening Industry 4.0 initiative. In addition, data protection and liability within networks are issues in both policy and court decisions.

The question as to whether media convergence as a technological phenomenon will inevitably lead to a convergence in media and telecommunications law is still the subject of lively debate in the political and academic fields.

\section*{II REGULATION}

\subsection*{i The regulators}

Due to the federal policy of considering media as a fourth division of power and a tendency to deregulate and decentralise, there is no single media authority in Germany. All television and radio broadcasters are subject to state control. Public service broadcasters are supervised by internal committees: content-related supervision is carried out by the respective broadcasting council. The respective administrative board, which is appointed by the broadcasting council, supervises all management decisions made by the director.

Private broadcasters, in contrast, are subject to external supervision. The competent authority is the respective state media authority of each German state,\textsuperscript{8} whose responsibilities – apart from supervision – include granting authorisations and assigning transmission capacities.\textsuperscript{9} They also have a wide range of powers to supervise broadcasters with, such as warnings, prohibitions, or withdrawals and revocations of licences.\textsuperscript{10}

The state media authorities work together in a committee concerning licensing and supervision as well as in the development of private broadcasting on fundamental questions, primarily with a view to the equal treatment of private TV and radio broadcasters. The goals and remits of this cooperation are laid down in the Contract on the Cooperation of the Media Authorities in the Federal Republic of Germany of 20 November 2013. The focus is on promoting programming diversity, and thus freedom of information and opinion in private television and radio. This involves, in addition to controlling media power by means of licensing limitations and licence monitoring, the promotion of media literacy among viewers and listeners.

The state media authorities are also responsible for the compliance of private TV and radio broadcasts with basic programming principles. They supervise the observance of regulations on advertising limitations, the protection of minors and the protection of pluralism. Their tasks are carried out by several committees.

The main regulator in the area of telecommunications is the federal legislator due to his or her competence regarding the postal system and telecommunications. Important federal laws in the field of telecommunications are the German Telecommunications Act (TKG) and, for telemedia services, the German Telemedia Act (TMG). EU directives and decisions of the European Court of Justice (CJEU) and the Federal Court of Justice (FCJ) have a strong impact on the law in the ICT sector.

\begin{footnotesize}
\textsuperscript{7} \url{https://www.bmvi.de/SharedDocs/DE/Publikationen/DG/netzallianz-digitales-deutschland.pdf?__blob=publicationFile}.
\textsuperscript{8} Several states have joint media authorities, such as Berlin and Brandenburg as well as Hamburg and Schleswig-Holstein.
\textsuperscript{9} Section 50 et seq. of the Inter-State Broadcasting Treaty (RS\textsuperscript{2}V).
\textsuperscript{10} Section 38(2) of the RS\textsuperscript{2}V.
\end{footnotesize}
The compliance of telecommunications companies with the TKG is monitored by the Federal Network Agency (BNetzA). The Agency ensures the liberalisation and deregulation of the telecommunications, postal and energy markets through non-discriminatory access and efficient use-of-system charges. It is responsible, inter alia, for securing the efficient and interference-free use of frequencies and protecting public safety interests. Apart from regulation, the BNetzA performs a number of other tasks related to the telecommunications market such as administering frequencies and telephone numbers, detecting radio interference, and offering advice to citizens on new regulations and their implications.

ii Regulated activities

Private and public television broadcasting in Germany is governed by the RStV, which outlines the side-by-side existence of public and private broadcasting. The 21st amendment to the RStV came into effect on 25 May 2018.11 Further legal sources, at federal level, are various other interstate treaties, such as the Interstate Treaty on the Protection of Minors in Broadcasting and in Telemedia (JMStV), and at state level, individual state media laws.

All private broadcasters require a licence for the purpose of providing broadcasting services (Section 20(1) RStV). According to Section 20(2) of the RStV, the provider of an electronic information and communications service – if it is categorised as a broadcast – requires a licence as well. If the competent state media authority determines that this is the case, the provider, after being notified of this classification, must at his or her choice either submit a licence application within three months or change the service in a way that it is no longer qualified as a broadcast.

When providing telecommunication or network services, operators have to adhere to the TKG. The law has developed in accordance with European regulations and was implemented in 2004. Since then, further changes have been made (e.g., on data retention). The last amendment came into effect on 9 November 2017 regarding the protection of professional secrecy.

German telecommunications law does not generally oblige telecommunications services or network providers to apply for a licence; however, in accordance with the Access Directive (2002/19/EC), it requires certain providers such as public telecommunications network providers or providers of public telecommunications services to notify the BNetzA when they start to provide the services or the network.12 A notification is not necessary for non-public telecommunications networks or services. It is, however, not unequivocal in each case which services are exempt from a notification. Operators of wireless LAN hotspots that typically use the operator's existing telecommunications infrastructure are arguably not under a duty to notify.13

iii Ownership and market access restrictions

Generally, German law makes no distinction between German and foreign nationals regarding investments or the establishment of companies. However, it provides for certain

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12 Section 6 of the TKG.
restrictions on foreign capital and investments. The German Federal Ministry of Economics and Technology (BMWi) may prohibit certain acts that might interfere with German or foreign interests according to Section 4 of the Foreign Trade Law (AWG).14

Owing to the security-related aspects of telecommunications services, the TKG imposes certain obligations on telecommunications service providers and network operators. Agreements relating to telecommunications services and network access can be negotiated freely (e.g., access, payment terms, currency and billing) with providers and operators, unless one party has significant market power (in which case, price terms and access obligations are regulated by the TKG; a provider with significant market power is not able to choose its customers freely).15

The RStV contains special ownership control provisions16 that are designed to achieve media-plurality objectives. These rules apply in addition to the general merger control regime under German and European competition law and are administered by the Commission on Concentration in the Media.

Section 11d (2) No. 3 RStV further states that public broadcasting companies are not entitled to offer non-broadcasting-related print media. Criteria to evaluate content are to what extent the offer meets a democratic, social and cultural need of society, whether the offer will contribute to journalistic competition and the financial costs. Since 2012, proceedings concerning the Tagesschau-App have been ongoing. Publishing houses claimed that the Tagesschau-App provides a high amount of non-broadcasting-related textual content and therefore has a competition-distorting effect in terms of Section 11d (2) No. 3 RStV in conjunction with Section 4 No. 11 Act against Unfair Competition (UWG) (previous version). On 30 April 2015, the FCJ held that not only the concept of the app has to comply with the RStV, but also the specific content, which is subject to full judicial review.17 If broadcasting and non-broadcasting elements are implemented, it is necessary to determine the focus. On 30 September 2016, the Higher Regional Court of Cologne came to the conclusion that the Tagesschau-App content on the relevant day was not sufficiently broadcasting-related but equivalent to print media and hence not permitted under Section 11d (2) No. 3 RStV.18 In 2018, the Federal Court of Justice (BGH) did not accept the appeal for the decision, ultimately bringing the case before the Federal Constitutional Court (BVerfG).19

iv Transfers of control and assignments

The German merger control provisions are enforced by the Federal Cartel Office (BKartA) in Bonn. The current legislation can be found in Chapter VII of the Act Against Restraints of Competition (GWB), which deals with the control of concentrations affecting the German market. In addition, Section 101 et seq. of the Treaty on the Functioning of the EU and the EC Merger Regulation20 apply.

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14 The AWG was last modified and July 2017 to include further criminal offences.
15 See Sections 21 and 28 of the TKG.
16 Section 25 et seq. of the RStV.
17 BGH GRUR 2015, 1228 et seq.
18 OLG Köln, 6 U 188/12 (30 September 2016).
19 MMR-Aktuell 2018, 402395.
Germany

The filing of merger notifications in Germany is mandatory if the turnover thresholds according to Section 35(1) of the GWB are met and none of the de minimis exemptions21 applies. If the statutory conditions for prohibition are fulfilled, the BKartA will prohibit the merger or order the divestment or disposal of certain assets of a completed merger.

Mergers that are subject to merger control may not be completed before either the BKartA has cleared the transaction or the relevant waiting periods of one month (first phase) or four months (first and second phases together) after submission of a complete notification have expired without the BKartA having prohibited a transaction.

There are no legal deadlines for a notification of a concentration, but notifiable concentrations must not be completed before clearance. Therefore, it is advisable to submit a notification well before the envisaged completion date. It is possible to file a pre-merger notification even prior to the signing of the transactional documents. Furthermore, parties should not forget to submit the mandatory post-completion notice to the BKartA, which needs to be filed without undue delay following completion of the transaction.22 In principle, all parties involved in a merger are responsible for filing.

Submission of an incorrect or incomplete filing, failure to submit a post-merger completion notice, or cases of incomplete, incorrect or late notices, constitute administrative offences and can lead to a fine of up to €100,000.

After the ninth revision to the GWB, which came into effect on 9 June 2017, the BKartA can now also consider services provided without remuneration and scaling effects in its assessment of market share or market power, and the threshold for merger control is now a transaction value of €400 million.23

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

All IP-based services are regulated under the TMG, adopted on 18 January 2007 and last amended on 28 September 2017. Commercial rules for telemedia are covered in the TMG, while aspects relating to journalistic content are regulated in a specific section of the RStV24 and the JMStV. Telemedia services are permission-free and generally do not need to be registered.

Telecommunications services and telemedia services are mutually exclusive; therefore, telecommunications are excluded from the scope of the TMG. In practice, the distinction is often difficult to make. Moreover, the regulatory structure of telemedia services oscillates

21 Two de minimis exemptions apply under the following conditions:
   a one party to the merger achieved less than €10 million turnover during the preceding fiscal year (in the case of the target including the seller and all its affiliates, provided that the seller controls the target and, in the case of the acquirer, including all its affiliates) (Section 35, Paragraph 2); or
   b the relevant market (which must have been in existence for at least five years) had a total annual value of less than €15 million in the previous calendar year (de minimis market clause, Section 36, Paragraph 1).
23 Cf. Section 18 (3a) and Section 35 (1a) GWB; cf. also Seeliger/deCrozals, ZRP 2017, 37.
24 Section 54 et seq. of the RStV.
somewhere between the unregulated press and the framed supervision the television and radio broadcasters are under. The state media authorities are also regulators of telemedia services.

ii  Universal service

Germany has good broadband penetration that compares decently against international levels. Based on the currently accepted broadband definition of at least 1Mbit/s, penetration amounts to approximately 99.9 per cent of German households. More than 76 per cent of German households currently have broadband access with transmission rates of at least 50Mbit/s. While the development of LTE (3.9G, often referred to as 4G) only began in 2010, 96.5 per cent of German households already had LTE access in 2017. In November 2014, the first mobile provider supplied LTE Advanced (4G, up to 500 Mbit/s) in a few areas, followed by another provider in the second quarter of 2015. By 2017, almost all larger cities were supplied with LTE Advanced, and since mid-2018, LTE Advanced Pro with up to 1,000Mbit/s is already available in some areas.

The federal government intends to give a further boost to the development of the broadband network by, for example, capitalising on synergies in the construction of infrastructure, using the digital dividend and formulating regulations that foster investments. Various initiatives exist at the federal, state and local levels: especially worth mentioning are the Digital Agenda 2014–2017, the National Digital Summit, the German broadband initiative, the Netalliance Digital Germany initiative and Zukunftsoffensive Gigabit Germany, whose objective is to ensure nationwide broadband access with transmission rates of at least 100Mbit/s until 2025.

Moreover, the federal government encourages projects to pursue industry solutions. For example, small and medium-sized telecommunications companies can borrow funds on privileged terms and with adequate risk pricing through the corporate financing programme of Germany’s state-owned development bank.

In any event, the existing federal and state loan guarantee scheme is generally available to companies in the telecommunications sector to prevent economically desirable broadband
projects from failing due to a lack of suitable finance. With these programmes, the federal government and federal states assume up to 90 per cent of the risk of default for project financing.32

White areas (i.e., those rural areas in Germany that still lack high-speed internet connections) are shrinking rapidly, partly due to ongoing investment by the network operators. The reduction has also largely been achieved thanks to the hosting of action programmes offered by the federal states, local authority broadband initiatives in those areas, and the nationwide activities of associations such as the German Association of Internet Enterprises,33 the Association of the Providers of Telecommunications and Value-Added Services34 and the Association of Towns and Municipalities.35

The government’s policy is to actively encourage people to use the internet and to help them acquire skills in the areas of new media by, inter alia, providing governmental services such as e-government and e-justice electronically, and the implementation of the De-Mail Act in 2011.36

iii Restrictions on the provision of service

The BNetzA is responsible for ensuring broadband network owners comply with the TKG.37 Whereas, until recently, the subject of net neutrality appeared to be of no major concern to the German and the European legislators – the German legislator in particular trusted that existing competition would ensure neutral data transmission on the internet and other new media – the subject has now gained considerable attention. The amendment of 3 May 2012 of the TKG introduced the concept of net neutrality.38 The federal government is authorised to draft a regulation that sets out the requirements for non-discriminatory data transmissions, and non-discriminatory access to content and applications, to preclude an arbitrary deterioration of services and an unjustified deceleration of data traffic.39 Two draft regulations proposed by the BMWi have not yet been passed. On a European level, the European Commission published its legislative plans for net neutrality on 12 September 2013 (the Connected Continent legislative package),40 and these have come to fruition. Article 3 of Regulation 2017/2120/EC now provides, inter alia, that providers of internet access shall treat all traffic equally, but permits reasonable traffic management measures provided these are transparent, non-discriminatory and proportionate, and are not founded on commercial

33 www.eco.de.
34 www.vatm.de.
35 www.dstgb.de.
36 The Parliament passed an e-government statute, which came into effect on 1 August 2013: see www.bmi.bund.de/DE/Themen/IT-Netzpolitik/E-Government/E-Government-Gesetz/e-government-gesetz_node.html. This statute facilitates electronic communication with administrative authorities. Furthermore, the German legislator adopted an e-justice statute that will enable electronic communication with all courts in Germany from 2020 onwards. As of 2022, it will be mandatory for lawyers to communicate with the court by certain electronic means: see dipbt.bundestag.de/dip21.web/bt.
37 See Section 126 et seq. of the TKG.
38 Sections 2(2) and 41a of the TKG.
39 Section 41a(1) of the TKG.
considerations. Further, the Body of European Regulators for Electronic Communications is charged with issuing guidelines for the implementation of the obligations of national regulatory authorities (Article 5 (3)).

Following the EU Directive concerning Unfair Business-to-Consumer Commercial Practices, the legislator enacted extensive provisions regarding unsolicited calls, emails and text messages in the UWG. Making first contact with consumers by such measures requires the explicit approval of the consumers. Fines can be as high as €300,000.

Following roaming charges being reduced significantly in recent years, the European Parliament passed a regulation on 27 October 2016 abolishing all roaming charges for calls, SMS and data use in the EU area, which has been in effect since 15 June 2017.

iv Security

On 14 August 2009, the Parliament passed a new law on the federal authority for IT security (BSIG), which came into force on 20 August 2009. A major amendment has been made by the Law on IT Security from 25 July 2015, aiming at an improvement in the IT security of critical infrastructure. The latest amendment has been made by the law on modernising the scale of fees and charges, having become effective on 23 July 2016. Parts of the BSIG strengthen the position of the Federal Office for Information Security (BSI) as described below, while other sections impose obligations on private entities maintaining critical infrastructure that are relevant for common welfare.

The BSI is a superior federal authority overseen by the Federal Ministry of the Interior with wide-ranging tasks of threat prevention in IT systems. According to Section 3 of the Law, its tasks include developing criteria, procedures and tools to test and evaluate the security of information technology systems and components. Therefore, the BSI is the central reporting office for disruptions and attacks on IT systems in private enterprises, using the information submitted by private entities to evaluate them and summarising them in reports that are then provided to the enterprises. The BSI now also functions as the central authority on IT issues in relation to foreign institutions.

The BSIG especially imposes obligations on private enterprises to safeguard IT security, such as the duty to report disturbances in IT systems to the BSI. Private enterprises that are subject to these obligations are, in particular, operators of critical infrastructure in the energy, IT, telecommunication, transport, health, water, nutrition, finance and securities sectors. Within two years of the BSIG coming into force, they had to upgrade their IT systems to make them state-of-the-art, and from then on must prove their compliance with the above-mentioned obligations once every two years through security audits or certificates. In the future, they will also have to establish a contact centre to exchange information with the BSI. Operators of telecommunication services now have the duty to inform their customers...

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42 Section 20(1) and (2) UWG.
45 Section 8a of the BSIG.
46 Section 8b of the BSIG.
of any IT security risk, and to provide information on solutions for these problems. On the EU level over the past few years, the European Commission has adopted several measures to prepare Europe against cyber incidents. The Directive on Security of Network and Information Systems (NIS Directive) was adopted by the European Parliament on 6 July 2016 and is the first EU-wide legislation on cybersecurity. It includes measures to ensure a high common level of network and information security across the EU. The NIS Directive was implemented into German law on 29 June 2017.

**Privacy and consumer protection**

To better protect the privacy of individuals against the intrusions of modern data processing, in a 1983 decision, the Federal Constitutional Court developed the notion of an individual’s right to decide how his or her data is to be used. This right means that it is up to each individual to determine what and how much personal information he or she would like to reveal. This right to privacy is an element of the general right to free development of one’s personality, which is protected under Article 2(1) in conjunction with Article 1(1) of the German Constitution. The collection, processing and use of personal data are governed by the German Federal Data Protection Act (BDSG) and state laws, supplemented by the TMG. The BDSG applies to federal public authorities, and to non-public entities such as corporations.

Every private organisation is generally required to ask a person’s consent if it would like to collect, store or process personal data, unless such collection, storage or processing is permitted under a specific section of the BDSG or any other law. Such exception applies, for example, if the data subject is already aware of such collection or storage from other sources, or if the data is necessary for the performance of a contract with the relevant person. If a body responsible for processing data harms a data subject by unlawfully or incorrectly collecting, processing or using such person’s data, and in doing so failed to act with due care, that body is liable for damages.

Individuals may request information from public and private organisations about stored personal data and the reason for storing these data. They may also request the deletion or blocking of data if unlawfully stored or no longer needed.

Data protection is supervised by BFDI, the Federal Data Protection Officer, whose position was strengthened by a Law of 25 February 2015 amending the BDSG. With the new General Data Protection Regulation further strengthening individual rights and meeting the challenges of globalisation and new technologies, the BDSG was heavily amended and revised with effect from 25 May 2018. The effect of the General

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47 Section 109a(4) of the TKG.
48 Section 13(7) of the TMG.
52 www.bfdi.bund.de/SharedDocs/Publikationen/GesetzeVerordnungen/Unabhaengigkeitsgesetz.pdf?__blob=publicationFile&v=1. The law will come into effect on 1 January 2016.
Data Protection Regulation was significant, as in some cases violators of the stricter and user-strengthening regulations may be fined up to €20 million or up to 4 per cent of their annual worldwide turnover of the preceding financial year.

In addition, with effect from 1 January 2018, the Network Enforcement Act was implemented to secure and improve the enforceability of penalties against unlawful contact on significant social media platforms. Social network providers are now obliged to combat fake news and hate speech by blocking, and to remove unlawful content. Furthermore, it is required that a transparent, accessible and effective procedure for users to report unlawful content has to be established under which social network providers have to report unlawfully. Failure to comply with the obligations may result in fines of up to €50 million.

**Data retention for the purpose of inner security**

Since the BVerfG rendered data retention as intended under the TKG of 2007 to be unlawful, the question of whether and to what extent data retention is in line with national and European law has been discussed widely. The CJEU decided similarly that European Directive 2006/24/EC setting out the framework for data retention is invalid. After two drafts of a data retention act in 2011 and 2013 were not adopted, the Committee on Legal Affairs of the Parliament presented a recommended resolution based on drafts by parliamentary groups and the federal government containing less extensive possibilities to save data for criminal investigations. The Parliament adopted the law on 16 October 2015, and it came into force on 18 December 2016. The introduced obligation for data retention had to be met by 1 July 2017. Contrary to media reports, the European Commission announced that it will not take any actions against Germany enacting such law.

In this context, the BGH nevertheless held that service providers in Germany may store information on IP addresses used by their customers for a period of seven days to enable security measures against cybercrime.

**Protection of children**

Youth protection provisions applicable to the media can primarily be found in the Law for the Protection of the Youth (JuSchG) and the JMStV, a reform of which is planned.

The Federal Department for Media Harmful to Young Persons (BPjM) is the authority responsible for protecting children and adolescents in Germany from media that might contain harmful or dangerous content under the JuSchG. The types of media monitored include, **inter alia**, videos, books, computer games and websites. The BPjM can act only at the request of other administrative institutions, and not on its own initiative. Once an official
request has been filed, the BPjM is obliged to process the complaint. Possible measures in the event of a violation are a prohibition on publication, blocking the provider and fines of up to €500,000.

The JMStV forms the legal basis for assessing content distributed in broadcast or media services. The compliance of broadcast and media services with the JMStV is controlled by the Commission for the Protection of Minors in the Media (KJM). The JMStV distinguishes between illegal content and content that impairs the development of minors: illegal content must not be distributed via broadcasting or media services. Content that is rated as impairing the development of minors (e.g., a severe depiction of violence) is subject to access restrictions. In the event of a breach of the provisions of the JMStV, the KJM decides on the sanctions to be imposed against the respective media content provider. The measures depend on the severity of the breach, and can range from a complaint against the content provider to fines. The issue may even be handed over to the State Prosecutor.

As of 27 January 2015, new offences to prevent child pornography were implemented under the German Criminal Code (StGB). Cyber-grooming (i.e., exerting influence over children via information or telecommunication technologies to prepare them for acts of sexual abuse) is now a criminal offence (Section 176 (4) StGB).

IV SPECTRUM POLICY

i Development

Originally, frequencies in Germany were used – with a few exceptions – by Germany’s federal mail service, Deutsche Bundespost. Since 1996, however, the markets for network and telephony have been fully liberalised.

Today’s development goes hand in hand with the population’s increasing demand for mobile communication services. Not least because of the new technical possibilities opened up by, inter alia, UMTS and LTE, demand for more bandwidth will continue to rise in line with increasing mobility. Growing demand and technological innovation both call for the availability of an adequate frequency spectrum. The development does not end here; the next generation of mobile network – 5G – is already being developed. In addition to the University of Technology Dresden working on a 5G project, the government is also focusing on 5G as part of the Digital Agenda, and is endeavouring to bring Industry 4.0 and the IoT (i.e., networks of physical objects with embedded computer technologies) to the next level.

ii Flexible spectrum use

The use of a spectrum requires its prior allocation. The TKG states that the allocation of spectra shall be regulated by a Spectrum Regulation, and requires the Federal Council’s consent. Based on the allocation of frequencies and the specifications set out in the Spectrum Regulation under Section 53 of the TKG, the BNetzA shall divide the spectrum ranges into spectrum uses and related terms of use. Spectra for wireless access to telecommunication networks must be assigned in a technologically and service-neutral manner.

60 Section 55(1) of the TKG.
61 Section 53(1) of the TKG.
62 Section 54(1) of the TKG.
63 Section 54(2) of the TKG.
The TKG provides the framework for a flexible use of allocated spectra. Owners of an allocated frequency have the possibility to trade their frequency, and to let third parties use their frequency, for example, by way of a lease, co-use or in the form of a joint use via spectrum pooling. It is necessary, however, that the BNetzA releases such forms of use for flexible use and specifies the corresponding conditions.64

iii Broadband expansion through spectrum auctions

A few rural areas in Germany still lack high-speed internet connections. The federal government plans to invest €2.7 billion into expanding broadband networks, of which €1.33 billion was earned through the last auction of mobile spectra.65 However, it also concentrates on the development of the broadband network towards a fibre-optic network with planned investments of €100 billion by 2025.66

If the BNetzA finds that the number of available spectra is not sufficient for their allocation, it can order that the allocation of frequencies be preceded by a procurement procedure.67 Often, the procurement is held in the form of a spectrum auction, which is organised by the BNetzA.68

On 19 June 2015, the latest auction of mobile broadband spectrum ended following 181 bidding rounds within 16 days. After the merger of Telefónica and E-Plus in the summer of 2014, only three operators (Telefónica, Telekom and Vodafone) were allowed to bid: no new entrants were admitted. The auction of frequencies in the fields of 700MHz, 900MHz, 1,500MHz and 1,800MHz aggregated a total amount of about €5 billion. The BNetzA imposed rather strict requirements on the auction. For example, the right to use frequency includes, inter alia, an obligation to provide internet access to 98 per cent of the population.69

The BNetzA announced that the auction of the 2GHz (UMTS) and 3.4 to 3.7GHz (5G) frequencies is planned for early 2019.70

V THE YEAR IN REVIEW

Significant legislative changes include the General Data Protection Regulation, which primarily aimed to give control to citizens and residents over their personal data and to simplify the regulatory environment for international business by way of harmonising national legislation. It led many companies and websites to change their privacy policies and website features to comply with the new requirements. Given the impact of the changes, the European data protection standards are used as a global baseline.71

64 Section 62(1) and (2) of the TKG; also see Scherer/Heinickel, NVwZ 2012, 585 (591f).
67 Section 55(10) of the TKG.
68 Section 61 of the TKG.
69 www.bundesnetzagentur.de/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Frequenzen/Projekt2016_Frequenzauktion/projekt2016-node.html.
70 https://www.bundesnetzagentur.de/SharedDocs/Pressemeldungen/DE/2018/20180713_5g.html.
While the German Network Enforcement Act was highly debated, its practical impact remains questionable, and the administrative office only registers few complaints. The law has also been challenged before the Federal Constitutional Court for its possible violation of constitutional rights.

In a relevant decision, the Federal Court of Justice clarified the obligation of search engine providers regarding personal rights violations. It was stated that there is no obligation for a search engine provider to verify, before displaying a search result, whether the content found by a search algorithm contains personal rights violations. It is solely necessary for the search engine provider to react accordingly if he or she receives a clear indication of an obvious and clearly recognisable violation of the constitutional right of privacy.

VI CONCLUSIONS AND OUTLOOK

The ICT sector in Germany is highly important and fast-growing, entailing a fast-paced legal and policy environment.

Convergence presents an abundance of challenges for policymakers, industry and society. Cooperation on a European and global level is vital for most German ICT policy issues, including telecommunication and frequency policies, ICT research, anti-spam measures as well as consumer, copyright and youth protection in the context of new media.

74 BGH, NJW 2018, 2324.
Chapter 10

HONG KONG

Simon Powell and Chi Ho Kwan

I OVERVIEW

Hong Kong has one of the most developed telecommunications and internet services markets in the world. Its legal and regulatory system promotes competitiveness while at the same time striving to enhance and facilitate business investment.

In terms of telecommunications, there are in total four MNOs,2 27 local fixed network operators3 and 241 external fixed telecommunications service providers4 serving Hong Kong’s population of slightly over 7.44 million in a land area of approximately 1,000 square kilometres.5 The residential fixed line penetration rate is 89.60 per cent,6 and the mobile subscriber penetration rate is 248.2 per cent.7 The competition for internet services is intense, with a total of 249 ISPs.8 The number of registered customer accounts with broadband access amounts to approximately 2.67 million, and the household broadband penetration rate is 92.6 per cent.9 According to the Office of the Communications Authority (OFCA), there are approximately 2.17 million subscribers to licensed domestic pay-TV services in Hong Kong10 out of around 2.57 million households in Hong Kong.11 There are more than 56,600 public Wi-Fi access points in the city,12 and the numbers continue to grow. As these figures demonstrate, the use of telecommunications services is advanced and widespread in Hong Kong.

1 Simon Powell is a partner and Chi Ho Kwan is an associate at Latham & Watkins.
2 As of September 2018, provided by the Office of the Communications Authority (OFCA).
3 i.e., licensees authorised to provide facility-based local fixed telecommunications services under an FTNS licence, an FCL or a UCL using wireline or wireless technology (as of September 2018, provided by OFCA).
4 i.e., licensees authorised to provide facility-based external telecommunications services (ETS) under an FTNS licence, an FCL or a UCL, and those authorised to provide service-based ETS under SBO licences (as of September 2018, provided by OFCA).
5 As of mid-2018, provided by the Census and Statistics Department (CSD).
6 The residential fixed line penetration rate is calculated by dividing the number of residential fixed lines by the number of households in Hong Kong (as of June 2018, provided by OFCA).
7 As of March 2018, provided by OFCA.
8 i.e., licensees authorised to provide internet access services under an FTNS licence, an FCL, a UCL or an SBO licence (as of September 2018, provided by OFCA).
9 As of June 2018, provided by OFCA.
10 As of June 2018, provided by OFCA.
11 According to statistics from May 2018 to July 2018, provided by the CSD.
12 As of September 2018, provided by OFCA.
In terms of television broadcasting, despite the fact that there is no limit to the number of licences that can be granted, until 2015 there had only ever been two domestic free-to-air television programme service providers in Hong Kong for the past 30 years. Recently there have been some major changes in this respect. On 1 April 2015, the Chief Executive in Council granted a third domestic free-to-air television programme service licence to HK Television Entertainment Company (HKTVE), enabling HKTVE to provide free television services in Hong Kong using a fixed network as its transmission mode for 12 years. HKTVE commenced its service on 6 April 2016 with a Cantonese language general entertainment television channel, ViuTV. PCCW, HKTVE’s parent company, also operates an IPTV platform, Now TV, and a media streaming service, Viu. Further, Asia Television Limited, one of the two original domestic free-to-air television service providers, ceased to be a domestic free-to-air television programme service licensee on 1 April 2016 following the expiry of its licence. On 31 May 2016, the government announced that the Chief Executive in Council had decided to grant a domestic free-to-air television programme service licence to Fantastic Television Limited (Fantastic TV), a subsidiary of listed communications company i-CABLE Communications Limited. The licence is valid from 31 May 2016 for 12 years until 30 May 2028, subject to a mid-term review around 2022. Fantastic TV launched its integrated Cantonese channel on 14 May 2017, and its English and Putonghua channel on 30 July 2018. Therefore, there are currently three domestic free-to-air television licensees in Hong Kong. As for domestic pay-TV service, there are currently two licensees (Hong Kong Cable Television Limited and PCCW Media Limited).

In addition to domestic free-to-air and domestic pay-TV service providers, there are two other main categories of television broadcasting licences: non-domestic television programme service licences (mainly satellite television services) and other licensable television programme service licences (mainly hotel room television services).

Domestic television licences (both free-to-air and pay) are granted and renewed by the Chief Executive in Council (with recommendations from the Communications Authority (CA)), while the CA issues and renews licences in the other two categories. Post-licensing, the responsibility for regulating compliance with the relevant rules and regulations and monitoring compliance and non-compliance rests mainly on the CA.

The Chief Executive in Council is responsible for issuing sound broadcasting licences. There are two licensees of analogue sound broadcasting services. This does not include Radio Television Hong Kong (RTHK), which is funded by the government (and does not hold a sound broadcasting licence). Hong Kong’s close proximity to Mainland China means it is not uncommon for radio signals from radio stations on Mainland China to be picked up in Hong Kong.

The development of DAB services in Hong Kong has not been satisfactory. In March 2011, the government granted 12-year sound broadcasting licences to three providers for the provision of DAB services in Hong Kong. They were required under their licences to provide 24-hour DAB services within 18 months of the licences being granted and launched in stages, with a wide variety of programmes. Between September 2015 and September 2016 (three to four years after service launch), all three commercial DAB licensees sought approval from the Chief Executive in Council to surrender their respective licences before expiry. According to the Review of the Development of Digital Audio Broadcasting in Hong Kong published by the Communications and Creative Industries Branch of the Commerce and Economic

13 As of September 2018, provided by OFCA.
Development Bureau (CEDB), the DAB operators cited the lack of a critical audience mass for DAB services and of any prospect of making the business model commercially viable as the grounds for early termination. On 28 March 2017, the Chief Executive in Council decided that DAB services should be discontinued in Hong Kong, and that the DAB services provided by the public broadcaster, RTHK, would be terminated. RTHK’s DAB services were terminated at midnight on 3 September 2017 (its analogue radio service remains).

II REGULATION

i The regulators

*The Telecommunications Authority and the Office of the Telecommunications Authority*

Prior to 1 April 2012, the Hong Kong telecommunications industry was regulated by the Telecommunications Authority (TA) through its executive arm, the Office of the Telecommunications Authority (OFTA). OFTA advised and regulated the telecommunications industry with a view to formulating macro-supervisory policies, and supervised the licensing of telecommunications services providers (such as unified carriers, space station carriers and MVNOs). Its other roles included enforcing fair competition in the market, formulating, allocating and managing RF spectrum and satellite coordination. OFTA was also responsible for supervising and overseeing the implementation and enforcement of measures against unsolicited electronic messages, and represented Hong Kong in the International Telecommunication Union and other international forums.

*The Broadcasting Authority and the Television and Entertainment Licensing Authority (TELA)*

Prior to 1 April 2012, the broadcasting industry in Hong Kong was regulated by the Broadcasting Authority (BA), an independent statutory body established under the Broadcasting Authority Ordinance comprising members appointed by the Chief Executive of Hong Kong. The BA’s responsibilities included handling licence applications and renewals, handling complaints, conducting enquiries, overseeing the enforcement of fair competition and levying sanctions on licensees who breached the laws, rules and regulations. It relied on the Commissioner of the Television and Entertainment Licensing Authority (TELA) to discharge its executive functions.

As the executive arm of the BA with regard to broadcasting regulation, TELA was mainly responsible for dealing with complaints against the content of broadcasting programmes and complaints regarding anticompetitive behaviour, and for processing applications (new and renewals) for television programme service licences.

Further, as the regulatory agency responsible for the entertainment, film and newspaper industries, TELA also monitored publications, handled film censorship, and processed applications for other entertainment and gaming licences (such as amusement arcade licences and mahjong licences) and the registration of newspapers.

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15 Chapter 391 of the Laws of Hong Kong.
The CA and OFCA

In light of the continued blurring of the roles of the BA and the TA, on 1 April 2012, the Communications Authority Ordinance came into operation, and the CA was created as a unified regulator to service the broadcasting and telecommunications (including internet) industries. The functions of the BA and the TA were transferred to the CA. Like the TA before it, the CA operates through an executive arm, OFCA. OFCA is a combination of the broadcasting arm of TELA (other TELA functions were transferred to other government departments) and OFTA. The Office for Film, Newspaper and Article Administration under OFCA took over TELA’s previous functions in relation to film classification, control of obscene and indecent articles and newspaper registration, but the issuance of entertainment licences was transferred to the Home Affairs Department. The CA took over all powers and functions of the TA and the BA, and the TA and the BA were both dissolved on 1 April 2012.17

The major pieces of legislation administered by OFCA are:

a. the Communications Authority Ordinance;
b. the Telecommunications Ordinance (TO);18
c. the Unsolicited Electronic Messages Ordinance (UEMO);19
d. the Broadcasting Ordinance;
e. the Competition Ordinance;20
f. the Broadcasting (Miscellaneous Provisions) Ordinance;21 and
g. the Trade Descriptions Ordinance (TDO).22

The purpose of the TO is to ‘make better provision for the licensing and control of telecommunications, telecommunications services and telecommunications apparatus and equipment’. For this purpose, the TO contains provisions regulating, inter alia, licensing, preventing some anticompetitive practices and imposing some restrictions on ownership.

The Legislative Council enacted the Competition Ordinance in June 2012, giving the CA concurrent jurisdiction with the Competition Commission with regard to the investigation and bringing of enforcement proceedings in respect of competition cases in the communications sector before the Competition Tribunal (the tribunal established within the judiciary to hear and adjudicate competition cases). The Competition Ordinance fully came into force on 14 December 2015, and the competition provisions in the Broadcasting Ordinance and TO were repealed simultaneously.

The UEMO ‘provide[s] for the regulation of the sending of unsolicited electronic messages and for connected purposes’ and was adopted in 2007. All forms of commercial electronic messages with a Hong Kong link are regulated so as to monitor and regulate professional spamming activities. Users of telecommunications services in Hong Kong now have an option to register on facsimile, short message and pre-recorded message do-not-call registers. As of September 2018,23 more than 2.7 million numbers have been registered.

16 Chapter 616 of the Laws of Hong Kong.
17 Part 2, Section 7 of the Communications Authority Ordinance.
18 Chapter 106 of the Laws of Hong Kong.
19 Chapter 593 of the Laws of Hong Kong.
20 Chapter 619 of the Laws of Hong Kong.
21 Chapter 391 of the Laws of Hong Kong.
22 Chapter 362 of the Laws of Hong Kong.
23 Based on the Registration Statistics on Do-not-call Registers published by OFCA.
However, the effectiveness of this legislation is sometimes queried, as service providers in various industries still appear able to circumvent the regulations and restrictions, and continue to make or send unsolicited marketing calls, facsimiles and text messages. In March 2018, the government proposed that a statutory do-not-call register for cold calls should be established, and that this new register should be managed by the Privacy Commissioner (see the section below), which will serve as a one-stop shop to administer the statutory register and enforce the new rule.24

The purpose of the TDO is:

[to] prohibit false trade descriptions, false, misleading or incomplete information, false marks and misstatements in respect of goods provided in the course of trade or suppliers of such goods; to confer power to require information or instruction relating to goods to be marked on or to accompany the goods or to be included in advertisements; to restate the law relating to forgery of trade marks; to prohibit certain unfair trade practices; to prohibit false trade descriptions in respect of services supplied by traders; to confer power to require any services to be accompanied by information or instruction relating to the services or an advertisement of any services to contain or refer to information relating to the services; and for purposes connected therewith.

On 19 July 2013, amendments to the TDO came into effect to ‘provide greater protection for consumers by extending its coverage from goods to services and specified unfair trade practices’25 by prohibiting false trade descriptions of services, misleading omissions, aggressive commercial practices, bait advertising, bait-and-switch and wrongly accepted payments. The CA has concurrent jurisdiction with the Customs and Excise Department to enforce these provisions in the broadcasting service sector. The CA does not preview or pre-censor any material before its broadcast. Editorial responsibility lies with the licensees themselves. The CA has promulgated a set of codes of practice for television and sound broadcasting services to provide guidance on these issues to the service providers.

The Office of the Privacy Commissioner for Personal Data

Hong Kong was the first territory in Asia to legislate and establish an independent privacy commissioner for personal data, covering both the private and public sectors. Hong Kong’s Privacy Commissioner for Personal Data (Privacy Commissioner) has formulated operational policies and procedures relating to the implementation of privacy protection provisions, and is responsible for ensuring the protection of the privacy of individuals with respect to personal data and for overseeing the administration and supervision of the Personal Data (Privacy) Ordinance (PDPO),26 the legislation that regulates the collection and use of personal data in Hong Kong.

There are six data protection principles under the PDPO that must be adhered to, the fourth of which deals with the security of personal data. Telecommunications and broadcasting service providers must be prudent at all times in safeguarding personal data that is in their possession against unauthorised or accidental access, processing, erasure or other use. There have been several incidents in Hong Kong regarding the alleged breach of this principle: for example, the leakage of personal data by members of the Hong Kong police

26 Chapter 486 of the Laws of Hong Kong.
force as a result of a peer-to-peer application that was installed on their personal computers. The police force’s alleged lack of awareness of the potential impact of such programmes led to the leakage of important personal data to the public via the internet. A second example is the alleged misuse of the personal data of more than 2 million individuals in Hong Kong that had registered under a rewards programme run by the service provider of the biggest electronic payment system in Hong Kong (Octopus). The leak of the personal data of Octopus users was so significant that the Privacy Commissioner issued its first-ever interim report on its investigation into the matter at the end of July 2010. The final report was published in October 2010.

In response to increasing concerns over the alleged misuse of personal data, the PDPO was amended in 2012 to:

a. address the unauthorised disclosure of personal data by a person who obtained such personal data from a data user;
b. extend the enforcement power of the Privacy Commissioner;
c. clarify the requirements when using personal data for direct marketing and when providing personal data to another for use in direct marketing; and
d. provide legal assistance to aggrieved individuals seeking compensation from a data user for damages suffered as a result of the data user’s contravention of any requirement imposed by the PDPO in relation to their personal data.

The Privacy Commissioner has published codes and guidelines on personal data privacy protection regarding the internet for information technology practitioners, biometric data users, CCTV and drone operators as well as mobile service operators.

The Hong Kong Computer Emergency Response Team Coordination Centre

The Hong Kong Computer Emergency Response Team Coordination Centre (HKCERT), managed by the Hong Kong Productivity Council, is the centre for coordination of computer security incident responses for local enterprises and internet users. It facilitates information dissemination, provides advice on preventive measures against security threats and promotes information security awareness, as well as issuing security alerts to warn about vulnerable computer systems.

Sources of law

Hong Kong’s laws governing broadcasting, communications, media and the publication of books and newspapers are scattered across multiple pieces of legislation, including:

a. the Communications Authority Ordinance;
b. the Broadcasting Ordinance;
c. the Competition Ordinance;

d. the Privacy Ordinance.

27 Octopus runs a rewards programme for customers to incentivise the usage of the Octopus card. When one registers for the Octopus reward programme, certain personal data is provided to Octopus. In the summer of 2010, it was revealed that Octopus had been selling personal data of those registered for the reward programme to other unrelated service providers (such as insurance companies) for direct marketing purposes. In July 2010, Octopus disclosed that it had made HK$44 million since early 2006 by selling personal data.

d the Film Censorship Ordinance;  
\[29\]
e the Interception of Communications and Surveillance Ordinance;  
\[30\] 
f the TO;  
g the UEMO;  
h the Books Registration Ordinance;  
\[31\] 
i the Registration of Local Newspapers Ordinance;  
\[32\] 
j the TDO; and  
k the PDPO.

The Communications and Creative Industries Branch of Hong Kong’s CEDB is the policy bureau responsible for broadcasting and telecommunications policy. However, the responsibility for supervision of licensees rests with the CA.

iii Ownership restrictions

The TO  
The CA has power to impose conditions, including the period of validity, in respect of the licences issued under the TO. In addition, the CA has authority to require a licensee to comply with the terms of its licence and any applicable legislation, regulations and codes of practice, and to suspend or revoke licences in accordance with the TO or other rules or regulations to protect the public interest.

The TO disqualifies two categories of person from controlling an entity with a sound broadcasting licence: disqualified persons and unqualified persons. Subject to exemptions, disqualified persons are restricted from exercising control (or increasing control) over a sound broadcasting licence holder.  
\[33\]  Disqualified persons include:

- advertising agents;  
- suppliers of broadcasting materials to licensees;  
- a sound broadcasting licence holder;  
- any person who (as its business) transmits sound or television material, whether in Hong Kong or outside Hong Kong;  
- a domestic free-to-air or a domestic pay-TV licensee; or  
- an associate of any of such persons, or any person who exercises control of a corporation that is a person referred to above.  
\[34\]

Unqualified persons are persons who are not, for the time being, ordinarily resident in Hong Kong  
\[35\] and who have not at any time been resident for a continuous period of no less than

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29 Chapter 392 of the Laws of Hong Kong.
30 Chapter 589 of the Laws of Hong Kong.
31 Chapter 142 of the Laws of Hong Kong.
32 Chapter 268 of the Laws of Hong Kong.
33 Section 13G of the TO.
34 Section 13A of the TO.
35 Ordinarily resident in Hong Kong:

- in the case of an individual, means:
  - (i) resident in Hong Kong for not less than 180 days in any calendar year; or  
  - (ii) resident in Hong Kong for not less than 300 days in total in any two consecutive calendar years; and
- in the case of a company, means a company:
  - (iii) that is formed and registered in Hong Kong under the Companies Ordinance (Cap 622);
seven years; or, in the case of a company, is not a company that is ordinarily resident in Hong Kong. The aggregate of the voting shares that can be held by unqualified persons may not exceed 49 per cent of the total number of voting shares of a sound broadcasting licence holder.

The CA also imposes a disposal restriction after the grant of a sound broadcasting licence. Unless the CA otherwise agrees, a right, title or interest in 15 per cent or more of the shares in a sound broadcasting licence holder may not be transferred or acquired, directly or indirectly, within a three-year period after the grant date. Any agreement or similar arrangement or understanding that breaches this requirement is void.

The regulation and classification of internet and IP-based services fall under the purview of the TO. There is no separate regime insofar as internet services are concerned. All sectors of Hong Kong’s telecommunications market have been liberalised with no foreign ownership restrictions.

**The Broadcasting Ordinance**

The Chief Executive in Council grants licences under the Broadcasting Ordinance for domestic free-to-air and domestic pay-TV programme services, whereas the CA is responsible for granting licences for non-domestic and other licensable television programme services.

Control restrictions for broadcasting licences are set out in Section 8(4) of the Broadcasting Ordinance. The restrictions in relation to domestic free-to-air and domestic pay-TV programme service licences are:

a. the exercise of the control and management of the licence holder must be **bona fide** in Hong Kong and, where there are two or more directors (the majority being individuals as opposed to corporates), the individuals who actively participate in the company must satisfy a residency requirement. The residency requirement is equally applicable to those directors who actively participate in management and operations, and to the principal officers (being those in charge of the selection, production or scheduling of television programmes) of the licence holder; and

b. no disqualified person or their controlling entities or persons or associates (unless otherwise disclosed in the licence application) can exercise control over (or remain in control of) the licence holder. The purpose of this is to restrict cross-media ownership.

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36 Section 13I of the TO.
37 Section 13J of the TO.
38 Telecommunications Overview published by OFCA, June 2016.
39 Sections 8(1) and (2) of the Broadcasting Ordinance.
40 Such individuals must be ordinarily resident in Hong Kong. According to Section 2(1) of the Broadcasting Ordinance, ordinarily resident in Hong Kong in relation to an individual means that the individual must reside in Hong Kong for no less than 180 days in a calendar year or have done so for no less than for a total of 300 days in any two consecutive years and, further, such individuals must have ordinarily resided in Hong Kong for a period of not less than seven years.
The restrictions are less stringent for non-domestic and other licensable television programme service licence holders, which are only required to have at least one director or principal officer satisfying the residency requirement.

Broadcasting licences ownership and voting restrictions

The Broadcasting Ordinance sets out detailed restrictions regarding the holding, acquisition or exercise of voting control of licence holders who are not qualified voting controllers (except for domestic pay-TV licence holders). A qualified voting controller is someone who, in the case of an individual, has resided in Hong Kong for a period of no less than seven years or, in the case of a corporation, whose directors satisfy the Hong Kong residency requirement. An unqualified voting controller is anyone who is not a qualified voting controller. Unqualified voting controllers cannot exercise voting control in excess of 49 per cent of the total voting control at any time. Further, prior approval of the CA is required for the holding, acquisition or exercise of voting control by an unqualified voting controller of 2 to 6 per cent or 6 to 10 per cent, or more than 10 per cent of a licence holder. If an unqualified voting controller holds more than 10 per cent, only up to 10 per cent of the voting rights can be exercised by such controller.

Further, a domestic free-to-air television programme service licence will not be granted to a company that is a subsidiary of a corporation.41

iv Competition measures

The Competition Ordinance

On 14 June 2012, the Competition Ordinance was passed as a general and cross-sector competition law curbing anticompetitive conduct across all industry sectors. The Competition Ordinance came into full force on 14 December 2015. Under the Competition Ordinance, the CA has concurrent jurisdiction with the Competition Commission to enforce the Competition Ordinance in respect of the conduct of telecommunications and broadcasting licensees, including merger and acquisition activities involving carrier licensees.42 A memorandum of understanding was entered into between the CA and the Competition Commission in December 2015 to affirm their commitment to exercising their functions with a consistent interpretation and application of the provisions of the Competition Ordinance.43 The CA will ordinarily take the role of lead authority on matters that fall within the concurrent jurisdiction.

The Competition Ordinance provides for a cross-sectoral competition law prohibiting anticompetitive conduct through three competition rules:

a the First Conduct Rule:44 an undertaking45 must not make or give effect to an agreement, engage in a concerted practice or, as a member of an association of undertakings, make

41 Section 8(3) of the Broadcasting Ordinance.
42 Section 159 of the Competition Ordinance.
43 Press release of the Competition Commission and Memorandum of Understanding between the Competition Commission and the CA dated 14 December 2015.
44 Section 6(1) of the Competition Ordinance.
45 Undertaking means any entity, regardless of its legal status or the way in which it is financed, engaged in an economic activity, and includes a natural person engaged in an economic activity.
or give effect to a decision of the association, if the object or effect of the agreement, concerted practice or decision is to prevent, restrict or distort competition in Hong Kong;

*b* the Second Conduct Rule: an undertaking that has a substantial degree of market power must not abuse that power by engaging in conduct that has as its object or effect the prevention, restriction or distortion of competition in Hong Kong;\(^{46}\) and

*c* the Merger Rule: an undertaking must not, directly or indirectly, carry out a merger involving telecommunications carrier licensees that has, or is likely to have, the effect of substantially lessening competition in Hong Kong.\(^ {47}\) When determining whether a merger has, or is likely to have, the effect of substantially lessening competition, the CA may take into account:

- the extent of competition from competitors outside Hong Kong;
- whether the acquired undertaking, or part of the acquired undertaking, has failed or is likely to fail in the near future;
- the extent to which substitutes are available or are likely to be available in the market;
- the existence and height of any barriers to entry into the market;
- whether the merger would result in the removal of an effective and vigorous competitor;
- the degree of countervailing power in the market; and
- the nature and extent of change and innovation in the market.\(^ {48}\)

For the telecommunications industry, in addition to the provisions of the Competition Ordinance, the TO also contains a further provision relating to dominant licensees – Section 7Q (exploitative conduct). Under this section, a licensee in a dominant position in a telecommunications market must not engage in conduct that in the opinion of the CA is exploitative. In determining whether a licensee is dominant, the CA must take into account, *inter alia*:

- the market share of the licensee;
- the licensee’s power to make pricing and other decisions;
- any barriers to entry to competitors in the relevant market;
- the degree of product differentiation and sales promotion; and
- any other matters stipulated in guidelines issued for the purposes of Section 7Q.

### III SPECTRUM POLICY

#### i Development

Spectrum policy in Hong Kong encompasses management, pricing, supply and rights relating to spectrum. It was monitored and regulated by the former TA prior to 1 April 2012, and is now monitored and regulated by the CA. Since 2007, the government has adopted a market-based approach to spectrum management,\(^ {49}\) and it will not depart from this approach

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\(^{46}\) Section 21(1) of the Competition Ordinance.

\(^{47}\) Section 3, Schedule 7 of the Competition Ordinance.

\(^{48}\) Section 6, Schedule 7 of the Competition Ordinance.

\(^{49}\) Market-based approach for spectrum management means methods relying on market forces to ensure the efficient use of spectrum as a public resource. (From the Radio Spectrum Policy Framework (April...
unless there is a public policy reason to do so. The CA is open about the availability of spectrum, and a spectrum release plan governing a three-year period going forward was released pursuant to the Radio Spectrum Policy Framework that was announced in April 2007. Under the spectrum release plan, industry participants can bid for spectrum use rights through an open bidding or tendering process. To ensure industry participants are kept aware of the availability of spectrum, the spectrum release plan is updated annually on a rolling basis or as required taking into account the latest developments. Spectrum availability determines the number of market players in the industry. Currently, spectrum is auctioned and allocated by the CA through the latest spectrum release plan. Where spectrum has been previously allocated under an earlier release plan, this will be clearly stated in the current release plan.

The CA announced the spectrum release plan for 2018 to 2020 on 26 July 2018. According to the plan, 4,500MHz of bandwidth is expected to be available for release to the market through auction, tendering or other appropriate means (subject to the outcome of consultation and the enactment of the relevant subsidiary legislation) in 2019. Nonetheless, the CA has clearly stipulated that the release plan is non-binding, and it is not bound to allocate or assign any spectrum to any industry player. All allocation of spectrum, as and when such allocation is made, is subject to the CA's discretion.

As part of the spectrum management policy, Hong Kong is also considering spectrum trading to create a market for secondary trading of spectrum use. The government is understood to have commissioned feasibility studies, but it has yet to make the consultant's report publicly available. However, the consultant's conclusions can be inferred from the reports of the Subcommittee on Telecommunications. These suggest that, in jurisdictions where it is permitted, spectrum trading does not occur frequently. Further, while demand for spectrum remains incessant, few holders of spectrum rights are willing to transfer their rights to other operators. The administration did not therefore consider spectrum trading a matter of priority, even though it is viewed as desirable under the Radio Spectrum Policy Framework.

In November 2013, two Hong Kong TV stations were fined by OFCA for renting transmission capacity without the prior consent of the CA, per the licence requirement, constituting illegal spectrum trading under the current legislation.

In February 2016, the CA and the Secretary for Commerce and Economic Development (SCED) jointly published a consultation paper in relation to the arrangement for reassignment of the frequency spectrum in the 900MHz and 1,800MHz bands upon expiry of the existing assignments between November 2020 and September 2021. The 900–1,800MHz spectrum consists of 50MHz of spectrum in the 900MHz band and 150MHz of spectrum in the 1,800MHz band. It accounts for 36 per cent of the 552MHz of spectrum already assigned to the industry for the provision of public mobile telecommunications services.

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50 Spectrum Release Plan for 2018–2020 dated 26 July 2018 published by OFCA.
52 Report of the Subcommittee on Telecommunications, LC Paper No. CB (4) 170/12-13; LC Paper No. CB (4) 364/12-13(05).
54 Press release of the CA dated 3 February 2016.
to HKT, Hong Kong’s largest operator of fixed-line and mobile networks, it is the largest amount of spectrum ever assigned in one lot, and the frequency bands are critical blocks for the provision of 3G, 4G and future 5G services. In essence, there are three proposals put forward by the government: a full-fledged administratively assigned approach that assigns all the spectrum to the incumbent MNOs through the offer of a right of first refusal; a full-fledged market-based approach that reassigns all the spectrum by way of auction; and a hybrid approach that reassigns 40MHz or one-fifth of the 900–1,800MHz spectrum to the incumbent MNOs through the offer of the right of first refusal and the rest by way of auction.

In February 2017, the CA and the Secretary for Commerce and Economic Development (SCED) launched the second round of public consultation in relation to the arrangement for reassignment of 200MHz of frequency spectrum in the 900MHz and 1,800MHz bands. Having considered the submissions received in response to the February 2016 consultation paper, and the findings of a consultancy study on the impact on service quality arising from the various spectrum reassignment options set out in that consultation paper, in the second consultation paper, the CA proposed for further consultation the hybrid option of the administratively assigned cum market-based approach for the reassignment of the frequency spectrum in the 900MHz and 1,800MHz bands. That approach would reassign part of the spectrum to the incumbent spectrum assignees through the offer of a right of first refusal, with the remaining spectrum to be reassigned by auction. Under the hybrid approach proposed by the CA:

a 2 x 10MHz of spectrum in the 1,800MHz band would be reassigned to each of the four incumbent spectrum assignees through the offer of a right of first refusal (RFR spectrum): i.e., a total of 80MHz or 40 per cent of the 900 and 1,800MHz spectrum would be offered as RFR spectrum;
b the remaining 70MHz of spectrum in the 1,800MHz band and all the 50MHz of spectrum in the 900MHz band would be assigned by way of auction: i.e., at least a total of 120MHz or 60 per cent of the 900 and 1,800MHz spectrum would be auctioned; and
c any spectrum that may become available arising from the decision of any incumbent spectrum assignee to not take up the RFR spectrum (as mentioned in (a) above) will be pooled together with the 120MHz of spectrum (as mentioned in (b) above) to form the auctioned spectrum.55

In December 2017, the CA announced its decision to adopt a hybrid administratively assigned cum market-based approach to reassign the 200MHz of spectrum in the 900 and 1,800MHz bands upon the expiry of their existing assignments. Under the hybrid approach, each of the incumbent spectrum assignees will be offered a right of first refusal to be reassigned 20MHz of spectrum in the 1,800MHz band, amounting to a total of 80MHz of RFR spectrum. This will leave at least 70MHz of spectrum in the 1,800MHz band, which, together with the 50MHz of spectrum in the 900MHz band, is to be reassigned by way of auction (the auctioned spectrum). As to spectrum utilisation fee (SUF), the SECD decided that the auction reserve price for the auctioned spectrum in the 900MHz and 1,800MHz bands should be set at HK$38 million per MHz, and that the SUF of the RFR spectrum should be set at the average SUF of the auctioned spectrum in the 1,800MHz band, subject

to a minimum price of HK$54 million per MHz and a cap at HK$70 million per MHz.\textsuperscript{56}

The OFCA published an information memorandum in September 2018 for the auction of spectrum in the 900MHz and 1,800MHz bands. Parties interested in participating in the auction should submit their applications to OFCA between 15 and 16 November 2018.\textsuperscript{57}

The recent consultations have renewed calls to allow spectrum trading among Hong Kong’s telecommunications network operators. However, the CA’s view is that as spectrum is a scarce resource, it is unlikely that MNOs would be willing or able to release any spectrum to make trading viable. The CA considers the implementation of spectrum trading in Hong Kong a policy matter on which the government has commissioned a consultancy study. The CA noted that this issue will be addressed further once the findings of that consultancy study are available.\textsuperscript{58} The CEDB asked Analysys Mason and DotEcon to provide an assessment on the potential implementation of spectrum trading in Hong Kong. In their presentation to the Panel on Information Technology and Broadcasting of the Legislative Council dated 11 June 2018,\textsuperscript{59} they concluded that there is limited evidence that spectrum trading is necessary or beneficial in the Hong Kong context, and that the benefits of spectrum trading are unlikely to justify the costs and risks of implementing spectrum trading in Hong Kong.

\textbf{ii Broadd and next-generation mobile spectrum use}

With over 56,600 registered Wi-Fi access points,\textsuperscript{60} Hong Kong has extensive public Wi-Fi service coverage. Wi-Fi operates on unlicensed spectrum in the 2.4GHz and 5GHz bands. Small cells are installed in payphone kiosks, bus stops and shops and on lampposts to boost mobile network capacity and improve signal reception. OFCA facilitates the extension of mobile broadband coverage by use of microwave backhaul links for the connection of small cells to the core network.

The CA adopts a light-handed licensing and regulatory approach for public Wi-Fi services.\textsuperscript{61} As of September 2018, eight unified carrier licensees are authorised to provide public Wi-Fi services.\textsuperscript{62} The CA aims to release available spectrum blocks as soon as they are made available to the public so that the public can enjoy the benefits of advanced wireless technologies as early as possible.

It is expected that there will be greater demand for radio spectrum for the development and commercial application of 5G mobile technologies, which is expected to launch in the market around 2020. The SCED indicated in his written reply to a question raised in the Legislative Council that, since it is expected that 5G services will use radio spectrum above the 6GHz band, the CA will closely monitor the latest developments in the allocation of the concerned spectrum for the provision of 5G services in the international arena, and plan for the necessary supply of spectrum having regard to the actual situation in Hong Kong.\textsuperscript{63}

\begin{footnotesize}
\begin{itemize}
    \item[56] Press release of the CA dated 19 December 2017.
    \item[57] Press release of OFCA dated 21 September 2018.
    \item[58] Annex to the second consultation paper, Paragraph 22.
    \item[59] Powerpoint presentation, Study on the implementation of spectrum trading in Hong Kong by David Abecassis dated 11 June 2018.
    \item[60] As of September 2018, provided by OFCA.
    \item[61] OFCA presentation, Facilitating the Wireless Broadband Connection of Hong Kong, by Sandra Cheuk, Assistant Director (Regulatory) dated 9 March 2016.
    \item[62] Provided by OFCA.
\end{itemize}
\end{footnotesize}
In March 2018, the CA decided that the allocation of the 3.4–3.7GHz band will be changed from fixed satellite service to mobile service from 1 April 2020, with 200MHz of spectrum in the 3.4–3.6GHz band assigned for the provision of public mobile services and 100MHz of spectrum in the 3.6–3.7GHz band partitioned as a guard band to minimise radio interference. The CA opened up the 5GHz band typically used for Wi-Fi for use by mobile operators in June 2018. A total bandwidth of 580MHz was made available, with MNOs free to apply to the CA for use of the concerned band to provide public mobile services through necessary amendments to their UCLs. This decision is intended to enable Hong Kong to become one of the first few economies in the world to adopt advanced mobile technologies, such as licensed assisted access, in the 5GHz shared band for the provision of higher speed public mobile services.

The SCED and CA jointly launched a public consultation in August 2018 on the allocation and assignment arrangements on a total of 200MHz of spectrum in the 3.3GHz and 4.9GHz bands for the provision of public mobile services. Spectrum in these two frequency bands forms part of the 4,500MHz of new spectrum that the CA is expected to release in 2019 and 2020 for supporting the development of 5G services.

iii Spectrum auction and fees

Since it is a limited resource, and demand is high, the government imposes a fee on the use of spectrum. The SUF is applicable to all use of spectrum save that reserved for government use. As an example, in March 2013, a total of 50MHz of radio spectrum in the 2.5–2.6GHz band was sold for HK$1.54 billion to four bidders.

The results of the auction of spectrum in the 1.9–2.2GHz band were announced by OFCA on 10 March 2015. A total of 49.2MHz of spectrum was reassigned after the incumbent spectrum assignees exercised their right of first refusal. Following the decision of the CA on the arrangements for reassignment of the spectrum, and its decision to give conditional consent to the acquisition by HKT Limited of CSL New World Mobility Limited, the other three incumbent spectrum assignees accepted the right of first refusal for the reassignment of 68.2MHz of the 118.4MHz of paired spectrum that was assigned in 2001. The remaining 49.2MHz was reassigned through auction, where a non-incumbent spectrum assignee was assigned a total of 19.6MHz of spectrum, with the rest being assigned to the incumbent spectrum assignees. Together, the winners of the auction paid SUFs of HK$2.42 billion for their 15-year licences, which commenced on 22 October 2016.

The SECD considers that determining the SUF for the auctioned spectrum and the RFR spectrum in the 900 and 1,800MHz spectrum is a policy matter and, in accordance with the government’s Radio Spectrum Policy Framework, a market-based approach in spectrum management will be used wherever the CA considers that there are likely to be competing demands from providers of non-government services for the spectrum. An SUF that reflects the full market value of the spectrum, as determined by the market through a competitive

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64 Statement of CA dated 28 March 2018.
65 Press release of CA dated 4 June 2018.
66 Press release of CA dated 28 August 2018.
bidding process, seeks to ensure that spectrum, being a scarce public resource, is put into the hands of those who value it the most and who will consequently put it to the most efficient use. See subsection i in relation to the SUFs for the auctioned spectrum and RFR spectrum.

IV MEDIA

i Mobile services

To facilitate the development of broadcast-type mobile TV services, the government announced the Framework for Development of Broadcast-type Mobile TV Services in Hong Kong in February 2010. In the Framework, the government announced that the radio spectrum of 678–686MHz would be released for the introduction of broadcast-type mobile TV services in Hong Kong, with at least 75 per cent of the transmission capacity to be used to provide mobile TV services and with the operator entitled to harness the remaining capacity of the UHF allocated for delivery of other services such as datacasting.\(^\text{69}\)

Pursuant to the TO, an operator of the network used to transmit mobile TV services via the assigned spectrum is required to obtain a UCL. The government has also indicated that the content of mobile TV, either local broadcast-type or streaming-type, should be subject to regulation by general laws rather than under the Broadcasting Ordinance. To enable self-regulation, the industry will be required to develop codes of practice on the provision of mobile TV services prior to service commencement. The codes should include, \textit{inter alia}, the requirement of conditional access with a view to protecting public morals and children.\(^\text{70}\)

The radio spectrum of 678–686MHz was auctioned off in June 2010, with China Mobile Hong Kong Corporation Limited successfully bidding for the spectrum for an SUF of HK$175 million. OFTA announced that, after payment of the SUF and submission of the performance bond, China Mobile Hong Kong Corporation Limited would be assigned the spectrum under a 15-year UCL. The licensee would be obliged to provide service coverage to at least 50 per cent of Hong Kong’s population within 18 months from licence grant.\(^\text{71}\)

V THE YEAR IN REVIEW

i Examination of the licence conditions of Television Broadcasts Limited

In May 2017, the CA indicated that it had engaged a Queen’s Counsel to examine the licence conditions of, and statutory declarations and deeds of undertakings submitted by, Television Broadcasts Limited (TVB),\(^\text{72}\) Hong Kong’s largest free-to-air television broadcaster, and to review its compliance with the Broadcasting Ordinance’s provisions regarding ownership and control. The investigation arose following a concern highlighted by the Takeovers and Mergers Panel of the Securities and Futures Commission (Panel) in its ruling dated 10 May 2017 on an application for a waiver of the obligation to make a mandatory general offer (whitewash waiver) for TVB shares under the Takeovers Code (ruling). Specifically, the Panel was of the view that China Media Capital, an indirect shareholder of TVB controlled by Chinese media

\(^{69}\) Framework for Development of Broadcast-type Mobile TV Services in Hong Kong (February 2010) published by the then Communications and Technology Branch of the CEDB.

\(^{70}\) Ibid.

\(^{71}\) Press release of the OFTA dated 29 June 2010.

\(^{72}\) \textit{South China Morning Post}, ‘Hong Kong’s telecoms regulator to examine TVB’s shareholding structure’, published on 18 May 2017.
tycoon Mr Li Ruigang, had great influence over the appointment of directors at TVB,\(^7\) which appears to be contrary to the stipulation in the Broadcasting Ordinance that only a permanent resident of Hong Kong can be a qualified voting controller of a domestic TV licensee such as TVB.

In the ruling, the Panel referred to various provisions under Schedule 1 to the Broadcasting Ordinance that place restrictions on the ownership and control of domestic free-to-air television licensees, including but not limited to Section 20(1), which provides that an unqualified voting controller is required to obtain prior written approval from the CA if its holding crosses 2, 6 or 10 per cent of the licensee's issued shares; Section 3, which provides that a disqualified person is restricted from holding more than 15 per cent of the licensee's shares; and Section 19, a scale-back provision that restricts the voting control that can be exercised by unqualified voting controllers at the licensee's general meetings.\(^7\) The Panel recommended that the Securities and Futures Commission provide certain relevant documents and a copy of the ruling to the CA so that the CA may discharge its duties.\(^7\)

TVB applied for leave for judicial review of the ruling seeking, *inter alia*, an order to quash the ruling. The court granted leave for judicial review, quashed the ruling partially and declared that the scale-back provision set out in Section 19 of Schedule 1 of the Broadcasting Ordinance applied to the shareholders' approval of the whitewash waiver.\(^7\) In particular, the court held that the Panel's decision to make the grant of the whitewash waiver conditional upon the majority votes cast at the general meeting of TVB in favour of the resolution to approve the whitewash waiver without adjustment under the scale-back provision is not permissible under the Broadcasting Ordinance. This in effect calls for a vote by the independent shareholders of TVB on the whitewash waiver, but without applying the scale-back provision. The court remitted the question of whether to grant the whitewash waiver to TVB back to the Takeovers Executive (which is the Executive Director of the Corporate Finance Division of the Securities and Futures Commission and its delegates) for consideration.

In January 2018, it was reported that TVB had decided to abandon its share buy-back plans, which would have helped Mr Li Ruigang to raise his stake in TVB.\(^7\)

**Recent enforcement trends**

On 30 January 2018, OFCA conducted an evening raid into a suspected use of an illegal radio transmitter for FM sound broadcasting by Citizens’ Radio at an industrial building in Chai Wan. Pursuant to the authority of a warrant, OFCA officers entered the premises and seized one radio transmitter set during the operation. A person who establishes or maintains a means of telecommunications without an appropriate licence under the TO contravenes Section 8(1) of the TO and may be subject to prosecution. An offender is liable to a fine.

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73 Takeovers and Mergers Panel's ruling on an application for a waiver of the obligation to make a mandatory general offer for the shares of Television Broadcasts Limited under the Takeovers Code arising from an offer under the Share Buy-backs Code and related matters dated 10 May 2017, Paragraphs 59 and 65.

74 Ibid., Paragraph 7.

75 Ibid., Paragraph 75.

76 *Television Broadcasts Ltd v. The Takeovers and Mergers Panel & Others* [2017] 5 HKLRD 541. Judgment dated 4 October 2017 by the Honourable Lisa Wong J.

77 *South China Morning Post*, ‘TVB abandons stock buy-back, dealing a blow to mainland mogul’s plan to extend control’, published on 23 January 2018.
of HK$100,000 and five years’ imprisonment upon conviction. A person who knowingly participates in the transmission of messages through unlicensed radio transmitters may also commit a criminal offence under Section 23 of the TO and be liable to a fine of HK$50,000.78

iii Mobile numbers with leading digits 4, 7 and 8 made available

To meet the demand for additional mobile phone numbers, OFCA advised the public in February 2018 that about 10.6 million new numbers with the prefixes 4, 7 and 8 would be made available for the provision of mobile services in Hong Kong. These new mobile numbers are now being used by the general public in conjunction with the previously existing mobile numbers with the leading digits 5, 6 and 9.79

iv Relaxation of regulations governing indirect advertising

In July 2018, the CA announced its decision to relax the regulation of indirect advertising in television programme services and to lift the prohibition on the broadcast of advertisements for undertaker and associated services. With effect from 27 July 2018, indirect advertising will be permitted in TV programmes except for news programmes, current affairs programmes, children’s programmes, educational programmes, and religious service and other devotional programmes. The regulations governing indirect advertising will be relaxed in respect of product placement and unpaid commercial references.80

Product placement refers to the inclusion of products or services within a programme in return for payment or other valuable consideration being received by a licensee. So long as the exposure or use of products or services within a programme is presented in a natural and unobtrusive manner having regard to the programme context and genre, and there is no direct encouragement of purchase or use of the products or services, product placement is to be allowed. Licensees are required to clearly inform viewers of the inclusion of product placement at the start of a programme.

Unpaid commercial references involve indirect advertising where no payment or valuable consideration is received by a licensee. For instance, unpaid indirect advertising in acquired programmes and indirect re-transmission channels will be exempted from compliance with the regulations. Licensees are also required to clearly inform viewers of the inclusion of indirect advertising in acquired programmes and indirect retransmission channels.

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I OVERVIEW

Demand for telephones in India saw a rapid increase in the 1990s, and the government was under huge pressure to allow the private sector to invest in the Indian telecoms industry as part of the country’s liberalisation, privatisation and globalisation policies. Thus, private investment in the value-added services sector was allowed by the government, and the cellular telecom sector was opened up for competition among private investors. The government announced the National Telecom Policy in 1994 (NTP-94), under the terms of which eight cellular mobile telephone service licences were granted to private operators.

The entry of private operators in the telecoms industry created a need for independent regulation. The Telecom Regulatory Authority of India (TRAI) was therefore established in 1997 to regulate the telecom services of India, including fixation of tariffs for telecom services, which were earlier regulated by the central government. Further, in 1998, the government declared the policy for internet service provision by private operators, and the licensing of ISPs began from then. A New Telecom Policy came into existence in 1999 (NTP-99), which emphasised the opening of all segments of the telecoms industry for private sector participation. The NTP-99 strived to create an environment that would enable the continued attraction of investment into the telecoms sector and also enhance the creation of technological infrastructure by leveraging technological developments. An addendum was added to the NTP-99 introducing UASLs to allow licensees to provide telecom services stipulated therein, covering various geographical areas in India.

The introduction of UASLs brought some sweeping changes in the telecoms sector over the next decade, along with a controversy-laden dual technology regime, all of which have proved to be game changers for the telecommunications sector:

a the Broadband Policy was introduced in 2004, as was an increase in foreign direct investment (FDI) limits from 49 to 74 per cent in 2005, which was further increased to 100 per cent in 2013;
b renewed 2G licences were issued in 2007;
c access to 3G/BWA services occurred in 2011;
d the unified licence (UL) regime was implemented in 2013;
e access to spectrum for 4G services occurred in 2015;
f pan-India mobile number portability was implemented in 2015;
g spectrum sharing and trading guidelines were issued in 2015; and
h the 5G spectrum network.

1 Atul Dua is a partner and Anuradha is a senior associate at Advaita Legal.
3G and BWA services hold compelling potential for the internet and a host of other applications, which have been further strengthened by the rollout of 4G services. The combined effect of these regulatory policy regimes led to a sudden spurt in the growth rate of the sector and falling tariffs. Recently, however, growth in this sector has been threatened by limited availability of spectrum, declining rates of return and deterioration in the quality of service.

In January 2011, the Department of Telecommunications (DoT), Ministry of Communications and Information Technology, announced the formation of a committee to revisit the NTP-99 and drafted the New Telecom Policy, which was approved by the Union Cabinet with few amendments as the National Telecom Policy 2012 (NTP-12) in May 2012, finally replacing the NTP-99. The NTP-12 seeks to provide a stable policy regime for about 10 years, and focuses on the availability of affordable and effective communications for citizens as well as the convergence of network, services and devices. The DoT, with the approval of the Union Cabinet, implemented the UL regime, which covers all telecom services in India, in keeping with the objective of the NTP-12 and the ‘one nation, one licence’ policy (see Section II.ii). With the advent of new and emerging technologies such as 5G, artificial intelligence and the IoT, the Department of Telecommunications released the draft National Digital Communications Policy, 2018 (NDCP 2018), which aims to provide a roadmap for ushering in a digital revolution in the country and further seeks to unlock the transformative power of digital communication networks in order to achieve the goal of digital empowerment and the wellbeing of the people of India.

To understand the true state of the TMT sector in India, the multiple issues that plague the telecoms industry and growth in the country must be recognised. While the constant decrease in ARPU worries industry stakeholders post the offers brought in by Reliance Jio, consumers on the other hand are frustrated by increased network congestion and call drops, and the attendant quality-of-service issues. Recent changes in technology and regulatory policies, such as liberalised FDI, the UL regime and NTP-12, along with discussions about the issue of OTT players, net neutrality, the Communication Convergence Bill 2001 and NDCP 2018, have brought changes in the industry to the benefit of end users as well as to the structure of industry players.

II REGULATION

i Principal regulations

Telecommunication and broadcasting sectors are governed by various policies, statutes, rules and regulations broadly coming under the ambit of the following:

- the Telegraph Act 1885;
- the Wireless Telegraphy Act 1933;
- the Prasar Bharti (Broadcasting Corporation of India) Act 1990;
- the Cable TV Networks (Regulation) Act 1995;
- the Telecom Regulatory Authority of India Act 1997 (TRAI Act);
- the NTP-12, which replaced the NTP-99;
- the Broadband Policy 2004;
- the FDI Restrictions;
- the Information Technology Act 2000 (IT Act) as amended by the Information Technology (Amendment) Act 2008 (along with the Rules thereunder); and
- the policy guidelines for uplinking and downlinking of television channels.
The Telegraph Act 1885 empowers the government to operate and maintain working telegraph services in India. The DoT is entrusted with the task of granting licences to Indian companies for the provision of various telecoms services. The Ministry of Information and Broadcasting (MIB), along with Prasar Bharti (India’s largest public service broadcaster), is the nodal agency for controlling and issuing guidelines, policies and licences for the broadcasting sector and the electronic media. The Broadcasting Services Regulation Bill 2009 (Broadcasting Bill) proposes forming a broadcasting authority to regulate issues relating to, *inter alia*, cross-ownership and content regulation for television channels. The TRAI acts as a regulatory body for both the telecom and broadcasting sectors and has both regulatory and recommendatory functions. It issues regulations and tariff orders on various subject matters pertaining to the telecommunication and broadcasting sectors, and gives recommendations to the government on the allocation of spectrum, guiding terms and conditions of various licences. The Telecom Disputes Settlement and Appellate Tribunal (TDSAT) was set up under Section 14 of the TRAI Act by an amendment to the same in 2000 to adjudicate disputes and dispose of appeals with a view to protecting the interests of service providers and consumers of the telecoms sector, and to promote and ensure orderly growth of the telecoms sector. The functions of the Appellate Tribunal are to adjudicate any dispute between a licensor and licensee, between two or more licensees, or between a licensee and a group of consumers, and to hear and dispose of appeals against any decision or order of the TRAI. India is a signatory to the WTO Basic Telecommunications Agreement, and has duly met the terms of its agreed obligations, including the opening up of basic voice, cellular mobile and data services, and private leased lines, and the waiver of customs duties on the telecoms sector.

The IT Act and its Rules provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication.

**Regulated activities**

In terms of the Telegraph Act 1885, the DoT may grant a licence to any Indian company to operate a telegraph subject to certain terms and conditions and in consideration for an appropriate payment.

A telegraph licence enables a licensee to offer licensed communication services by establishing, maintaining or operating telegraph devices such as exchanges, routers, switches and transmitters. Licensed activities include transmission of voice and data over the telecommunications network. The regulatory framework for telegraph licences in India went through a sea change with the introduction of the UL regime, as contemplated by the NTP-12. The erstwhile licensing arrangement was classified by the type of services offered, which was derived from the NTP-99.

Under the recently implemented UL regime, telecoms service providers are entitled to provide all telecom services within the ambit of a single licence, namely the UL. Telecom service providers are required to indicate the services intended to be provided at the time of applying for a UL. The following are the service authorisations available under the UL:

- **a** UL (all services);
- **b** access service (service area-wise);
- **c** internet service (Category A with all-India jurisdiction);
- **d** internet service (Category B with jurisdiction in a service area);
- **e** internet service (Category C with jurisdiction in a secondary switching area);
- **f** national long distance services;
- **g** international long distance services;
global mobile personal communication by satellite services;
public mobile radio trunking services;
very small aperture terminal closed-user group services;
the Indian National Satellite System mobile satellite system reporting service; and
resale of international private leased circuit services.

The UL, in addition to general conditions of the licence and provision of services, also contains certain service authorisation-specific conditions for the licensees of the respective authorisation.

It should be noted that for some categories, like other service providers (including business processing outsourcing units), no licences are issued by the DoT; there is only a requirement for registration as provided under the Revised terms and conditions other service provider category, 2008, as amended from time to time.

Under NDCP 2018, in order to secure universal broadband access, a national broadband mission (Rashtriya Broadband Abhiyan) is to be established. To accelerate migration to 4G and 5G, a fibre to the tower programme will be facilitated. In order to improve international connectivity and to reduce the cost of international individual bandwidth, the sharing of active infrastructure must be encouraged.

The DoT also endeavours to bring about and update the licensing and regulatory regime, notifying various changes to the existing arrangement. One such significant development occurred in 2016, when the DoT (pursuant to the NTP-12) issued guidelines and a licence agreement for virtual network operators, discussed in detail in Section VI. The various services regulated or licensed under the broadcasting sector include DTH services, FM radio services, uplinking and downlinking of TV channels, and HITS.

To offer most types of broadcasting service, a broadcasting company must obtain two types of licence: a licence granting permission to offer broadcast services issued by the MIB, and a wireless operating licence from the Wireless Planning and Coordination Authority of the DoT (WPC).

In the case of foreign investment, an applicant company is also required to obtain the requisite approvals or clarification from the Foreign Investment Promotion Board. Further, the appointment of foreign nationals to key positions in such companies may require clearance from the Ministry of Home Affairs.

iii Ownership and market access restrictions

The provision of telecommunication services in India is subject to certain restrictions on foreign ownership imposed by the government. Foreign investment (both direct and indirect) in telecommunication services is permitted up to 100 per cent, which was revised up from 74 per cent in August 2013. The enhanced limits have given a boost to foreign participation in telecom companies in India, and the regulatory authorities have witnessed a large number of applications for increased foreign investment. It may be noted that the condition of foreign investment up to 49 per cent being allowed through the automatic route applicable to the previous FDI cap of 74 per cent has been retained for the enhanced cap of 100 per cent, and any investment beyond that is subject to specific government approval. The revised FDI cap is applicable to all telecom services.

Further, foreign investment of up to 100 per cent is allowed for activities such as infrastructure providers providing dark fibre, right of way, duct space and tower (IP Category I),
email and voicemail; however, this is subject to the condition that such investors or companies will divest 26 per cent of their equity in favour of the Indian population after five years if these companies are listed in other parts of the world.

Further, FDI is subject to licensing and security requirements as prescribed by the DoT and as laid down in the FDI policy.

iv Transfers of control and assignments

In the terms and conditions of their respective licences, the TRAI and the DoT have taken measures to devise ownership licences that bar a single company or group from controlling more than one licence within a service area. The MIB and the DoT also forbid certain entities from controlling more than one broadcasting service in the same market.

In early 2014, the DoT issued guidelines regulating mergers and acquisitions of telecom services. The DoT has to be notified for any proposal relating to compromise arrangements and the amalgamation of companies as filed before the National Company Law Tribunal. The provisions for substantial equity or cross-holding will not be applicable during a period of one year, unless extended by the DoT in writing. The merger of a licence or authorisation will be for the respective service category. Upon a transfer of assets, the licence or authorisation held by such acquired company will be transferred to the acquiring company, and as such the licence or authorisation of the acquired company will be included in the resultant entity. To offer any additional service or service area, the UL with the concerned authorisation must be obtained.

In 2018, the DoT amended the guidelines issued in 2014 regulating mergers and acquisitions of telecom services. A transfer or merger of licences shall be allowed where the market share for access services in the respective service area of the resultant entity is up to 50 per cent. Upon the implementation of the scheme, the total spectrum held by the resultant entity shall not exceed 35 per cent of the total spectrum assigned for the access services by way of auction or otherwise in the concerned service area. The spectrum cap on combined spectrum holdings in the sub-1GHz bands (700MHz, 800MHz and 900MHz bands) will be 50 per cent.

With regard to mergers and acquisitions of telecom companies, combinations breaching the thresholds stated under the Competition Act 2002 (amended in 2009) require notice to be filed with the Competition Commission of India (CCI) within 30 days of board approval or execution of a binding agreement, whichever is earlier. The CCI scrutinises such combinations and forms a prima facie opinion within 30 days of the notice. Where the prima facie opinion is affirmative, the CCI would then order a detailed inquiry into the combination. After the inquiry, the CCI issues its final decision on the combination, which could be to approve the combination, reject it or order certain modifications. Modifications, if acceptable to the parties, would be carried out under the scrutiny of independent agencies, after which a compliance report is submitted to the CCI.

It may be noted that the proposed Broadcasting Bill aims to impose certain cross-ownership regulations on media companies in addition to imposing restrictions on the accumulation of interests to provide for competition and plurality of views. The guidelines for DTH licences state that:

broadcasting companies and/or cable network companies shall not be eligible to collectively own more than 20 per cent of the total equity of applicant company at any time during the licence period.
Similarly, the applicant company not to have more than 20 per cent equity share in a broadcasting and/or cable network company.
Further, the UL specifically mentions ownership rules that bar a single company or group from controlling more than one licence within a service area. Under the conditions imposed by the UL on telecom licensees, a promoter or a corporate group is prohibited from owning more than 10 per cent of the equity in more than one service provider within the same service area.

The transfer and assignment of licences is permitted subject to the prior approval of the DoT and the fulfilment of certain conditions prescribed by the UL. One significant condition is that the transfer or assignment should not reduce the level of competition in the service area.

### III TELECOMMUNICATIONS AND INTERNET ACCESS

#### i Internet and internet protocol regulation

Internet and internet-based services are now an integral part of the telecommunications sector.

The internet was first introduced to India in 1990 through the Education and Research Network (ERNET) Project funded by the United Nations Development Programme. It was implemented by the Department of Electronics in partnership with various research and technical institutions. However, in the mid-1990s, the external funding of the ERNET ceased, after which the government proposed the NTP-94. In November 1998, the government opened up the sector for providing internet services to private operators (ISPs). A liberal licensing regime was put in place with a view to increasing internet penetration across the country. The NTP-99 envisaged the opening up of internet telephony, whereupon the government decided to permit ISPs to process and carry voice signals (restricted internet telephony) with effect from 1 April 2002.

Pursuant to the NTP-99, the DoT announced guidelines that initially only permitted ISPs to process and carry voice signals. Further, with the introduction of new ISP licences in 2008, ISP licence holders were allowed to provide various IP-based services, including IPTV. There are no specific separate guidelines for IP-based services, except that IPTV services are also required to follow MIB guidelines. As per UL guidelines, the authorisation for provision of internet services is granted under the UL. The applicant company has to apply for a UL with authorisation for internet services.

The NDCP 2018 envisages the establishment of a light touch licensing regime for the proliferation of public data offices and public data office aggregators for providing internet access through Wi-Fi hotspots.

#### ii Universal service

The DoT has created a USO fund to be used exclusively for meeting the USO by providing access to telegraph services (which may include internet, internet telephony, VoIP and other new technology services) to people in rural and remote areas at affordable and reasonable prices.

The USO fund was primarily established to provide access to only basic telegraphic services, but provision was subsequently made in the Indian Telegraph (Amendment) Act 2006 to include all types of telegraphic service. The Telegraph Rules 1951 were subsequently amended to enable support for mobile services and broadband connectivity in rural and remote areas of the country. The Telegraph Rules also provide subsidy support to eligible
operators for operational sustainability of rural wireline household direct exchange lines. In
furtherance of the foregoing, in 2009, BSNL, India’s state-owned telecoms provider, also
launched a new scheme to promote broadband in rural areas.

The NDCP 2018 provides for the implementation of various initiatives (BharatNet,
GramNet, NagarNet, JanWiFi) funded through the USO fund and public–private
partnerships to ensure universal broadband access.

iii Restrictions on the provision of service
The TRAI is empowered to monitor and regulate charges (including interconnection usage
charges and termination charges) and other terms of service. As appropriate, the TRAI issues
directions or notifications to regulate charges and terms of service.

The TRAI has mandated open access to all network operators, and any disputes therein
may be addressed before the TDSAT. Further, the delivery of online content through IPTV
is required to conform to the Programme and Advertisement Code.

Telecoms licensees providing TV channels are required to broadcast such channels in
exactly the form as are registered with or otherwise allowed by the MIB. However, in such cases,
the responsibility of ensuring that content is in accordance with the laws, rules and regulations
will be with the broadcaster, and the telecoms licensee will not be held responsible. Carrying
any broadcast satellite TV channels that are either permanently or temporarily prohibited or
that are not registered with the MIB is also not permitted. Guided by the recommendations
of the TRAI and MIB notifications of January 2014, Broadcast Audience Research Council
(BARC) India brings together the three key stakeholders in television audience measurement
– broadcasters, advertisers, and advertising and media agencies – via their apex bodies. BARC
India seeks to establish a robust, transparent and accountable governance framework for
providing the data points required to plan media spends more effectively.

Network operators are only required to monitor and block transmission of content that
may be objectionable, obscene or unauthorised pursuant to the requirements of the licensing
terms, the IT Act and other applicable regulations.

iv Security
Any voice services, data and images transmitted through telecommunication, broadcasting
and cable services are subject to restrictions under several central and state laws, rules and
regulations. The Indian Constitution empowers the government to impose reasonable
restrictions on free speech and expression in the interests of India’s sovereignty and integrity,
state security, friendly relations with foreign states, public order, decency and morality, and
to avoid contempt of court, defamation and incitement to an offence. The Indian Penal Code
applies, inter alia, to all types of expressive media, whether written, spoken or in the form of
images.

Further, under the provisions of the Cable TV Networks Act, cable operators are
prohibited from transmitting programmes that do not comply with the Cable Programme
Code (under the Cable Networks Rules), which lists various programmes that ought not to
be broadcast on a cable network in the interest of national security and public order.

Finally, the government may impose restrictions on the grounds of national security on
internet content and websites under the IT Act and under applicable ISP licences. The IT
Act provides for the protection of personal data, and contains penal provisions if such data
India

is misused by or due to negligence of a service provider, operator or company. Further, any unauthorised access to customer data or information and any misuse of such information are strictly dealt with under the IT Act and the penal law of India.

Telecoms operators are required to maintain call records for their subscribers for a certain period, and are prohibited from sharing customer details with any third party for any purposes other than billing. Last year, the Supreme Court gave judgment in a landmark case considering the right to privacy. The Court held that the right to privacy is a fundamental right guaranteed under the Constitution. In furtherance to this, the government recently introduced the Data Protection Bill, 2018 (DP Bill 2018), which provides for strict regulation of cross-border transfers of personal data, and every data fiduciary is required to store one serving copy of personal data on a server or data centre located within the territory of India.

According to the TRAI Recommendations on Privacy, Security and Ownership of the Data in the Telecom Sector, the existing framework for the protection of the personal information and data of telecom consumers is not sufficient. The TRAI has further stated that until the time that a general data protection law is notified, the existing rules and licence conditions applicable to TSPs for the protection of users’ privacy will be applicable to all the entities in the digital ecosystem. The concept of data minimisation will be inherent to the implementation of the privacy by design principle. The DP Bill 2018 makes individual consent the keystone of data sharing. To be valid, consent must be freely given, informed, specific, clear and capable of being withdrawn. The Bill provides for the setting up of a Data Protection Authority that will be responsible for the enforcement and effective implementation of the law, and also provides for the imposition of penalties on data fiduciaries and compensation for data principals for violations of the data protection law. Further various obligations have been imposed on data fiduciaries who have access to and process personal data.

IV SPECTRUM POLICY

i Development

The laws governing spectrum policy are the Telegraph Act 1885 and the Indian Wireless Telegraphy Act 1933, combined with various rules and regulations. These statutes empower the government or the DoT to grant licences to service providers for carrying out public telephony services under certain terms and conditions. The WPC is the national radio regulatory authority responsible for frequency management, including licensing, and caters to the needs of all wireless users in the country. It exercises statutory governmental functions, issues licences to establish, maintain and operate wireless stations, and is responsible for formulating and maintaining the National Frequency Allocation Plan.

In terms of the existing policy, spectrum allocation is linked with the granting of a licence by the DoT. However, as previously mentioned, the TRAI has recommended the delinking of spectrum and access service licences, doing away with subscriber-based criteria for spectrum allocation and linking rural rollout with fresh spectrum allocation. It is expected that a thorough review of the latest recommendations will provide a further boost to the telecoms and media sector in India. The NDCP 2018 provides for a transparent and fair mode of spectrum allocation by developing a fair, flexible, simple and transparent method of spectrum assignments and allocations. To promote efficiency, NDCP 2018 provides for further liberalising the spectrum sharing, leasing and trading regime, and also provides for simplifying the process of obtaining permissions from various agencies such as the WPC and the Standing Advisory Committee on Radio Frequency Allocation.
In NDCP 2018, spectrum is recognised as a key natural resource for the public benefit to achieve India’s socioeconomic goals; optimise availability and utilisation by identifying and making available new spectrum bands for access and backhaul segments for the timely deployment and growth of 5G networks; and liberalise the spectrum sharing, leasing and trading regime. Further, it proposes constituting a Spectrum Advisory Team to facilitate the identification of new brands, applications and efficiency measures to catalyse innovation and efficient spectrum management.

ii Flexible spectrum use
The WPC was responsible for the allocation and assignment of spectrum in India after the delinking of spectrum, which introduced considerable change to the spectrum-allocation methodology.

Various telecom regulatory bodies such as the International Telecom Union, the Office of Communications (UK) and the US Federal Communications Commission have recognised that the optimal use of radio spectrum is dependent on flexible spectrum management policies and the multi-time sharing of this precious resource. The NTP-12 had made it an objective to delicense additional frequency bands for public use. It is further specified that the government will identify additional frequency bands periodically to exempt them from licensing requirements for the operation of low-power devices for public use.

The NDCP 2018 provides that efficient spectrum utilisation and management can be ensured by systematic audits of spectrum allocated to both commercial and government organisations and further publishing annual spectrum utilisation and availability roadmaps for communication needs, including for aircraft and vessels.

iii Broadband and next-generation mobile spectrum use
Trading and resale of spectrum are not allowed in India. The DoT may ask for the return or surrender of unutilised spectrum or a shift to another spectrum after surrendering a previously allocated spectrum. Due to their rapid and continuous growth, low spectrum allocation and interconnection problems, Indian cellular networks are facing traffic congestion problems, especially in the metropolitan areas.

In its recent recommendations in 2018 on the auctioning of spectrum, the TRAI has stated that any remaining unsold spectrum in the 770MHz, 800MHz, 900MHz, 1,800MHz, 2,100MHz and 2,500MHz bands in the auction that was held in October 2016 should be made available for the auction that is to be held in 2018. The NDCP 2018 mentions various actions for the promotion of NGA technologies in India, which include encouraging licensed service providers to utilise NGA technologies to ensure cost optimisation, service agility and new revenue streams, and recognising mid-band spectrum, particularly the 3GHz to 24GHz range, as central to India’s strategy for next-generation networks. The revised provisions of the spectrum cap will be extended to the 3,300–3,600MHz band, including a spectrum holding cap of 100MHz per licence.

The TRAI has recommended the timing, pricing and quantum of spectrum to be sold in the next round of auctions. According to its recommendations, the entire spectrum should be available for forthcoming auction. Efforts should be taken by the Department of Telecommunications to carry out a harmonisation exercise with respect to the 800MHz, 2,300MHz and 3,400MHz–3,425MHz bands in order to ensure that the entire spectrum that is available for commercial use is subject to the forthcoming spectrum auction. Regarding
the 900MHz band, the new entrant should be allowed to bid for 5MHz if at least one chunk of contiguous 5MHz is available; otherwise, the minimum block size should be kept at 0.6MHz.

The TRAI further recommends that the 3,300–3,600MHz band should be auctioned as a single band, and that a time division duplex-based frequency arrangement should be adopted for it. Further, spectrum in this band should be put to auction in a block size of 20MHz with a limit of 100MHz per bidder.

iv Spectrum auctions

The DoT has brought about some reforms in the spectrum allocation policies of India, in line with a judgment of the Supreme Court mandating the allocation of natural resources through an auction process. The government had liberalised the payment terms for spectrum auctions by allowing two options for payments to telecom companies to acquire the right to use spectrum: upfront payments and payments in instalments.

The NDCP 2018 states that, in order to expand mobile and broadband connectivity across the country, it is necessary to explore and utilise the opportunities presented by next-generation networks like 5G and other pioneering network access technologies, including satellite communications. However, until the time that the NDCP 2018 is approved, the previous NTP 2012 provisions will be applicable.

TRAI has recommended that the entire available spectrum should auctioned in the forthcoming October 2018 auction. Further, it has stated that the DoT should carry out the harmonisation exercise in the specific licensed service areas in the 800Mhz band, and should also carry out the refarming and harmonisation exercise in the 2,300MHz band.

V MEDIA

i Restrictions on the provision of service

Network operators are licensed by the DoT and regulated under the Telegraph Act, whereas content providers are required to follow guidelines issued by the MIB.

Operators are obliged to transmit channels operated by or on behalf of Parliament in the manner and name as may be notified by the federal government, and at least two terrestrial channels (operated by Prasar Bharati subsidiary Doordarshan) and one regional language channel of a state in the prime band, in satellite mode on frequencies other than those carrying terrestrial frequencies.

The guidelines for downlinking of television channels issued by the MIB regulate the broadcasting of foreign channels in India. The guidelines do not specify requirements for local content, but the MIB prescribes the must-carry obligations for the broadcaster. Further, a company permitted to downlink registered channels must comply with the Programme and Advertising Code prescribed under the Cable Television Networks (Regulation) Act 1995, and is required to adhere to any other code, standards, guidelines or restrictions that may be prescribed by the MIB for the regulation of content on TV channels from time to time. Content restrictions are also imposed through licensing terms and conditions.

Content that, *inter alia*, offends against morality or decency, promotes superstition, is defamatory, denigrates India’s sovereignty and integrity, affects national security or is in contempt of court is restricted from being broadcast through any service.
In addition to the above, the MIB issues advisories and guidelines requiring TV channels to not telecast and carry coverage of certain events and activities, such as the live coverage of terror attacks.

Advertisements on cable and radio are regulated under the Cable Advertisement Code and All India Radio's Advertising Code (under the Phase II FM Policy) respectively.

ii Internet-delivered video content

The economics of video distribution have changed drastically with the use of the internet for video distribution. The move from broadcasting video distribution has affected the broadcasting industry, and the MIB has brought out new guidelines to regulate this.

The MIB has issued guidelines for the provision of IPTV services. According to these guidelines, cable operators, while providing IPTV services, will continue to be governed by the provisions of the Cable Television Networks (Regulation) Act 1995 (Cable Act), the TRAI Act and any other laws as applicable, and as such will be able to provide such content on their IPTV service as is permissible under the Cable Act, and that is in conformity with the Programme and Advertisements Code prescribed thereunder. Further, it provides that if a telecoms licensee provides a television channel through IPTV, such channel should be transmitted in the same form as it is registered with or permitted by the MIB, and it shall be the responsibility of broadcasters to ensure that the content is in accordance with the extant laws, rules and regulations. Carrying any broadcast satellite television channels that are either permanently or temporarily prohibited or not registered with the MIB is not permitted.

VI THE YEAR IN REVIEW

Digital India is an ambitious programme projected at approximately US$17 billion. It aims to prepare India for a knowledge-based transformation and to deliver good governance to citizens through synchronised and coordinated engagement with both the central and state governments.

As a next step towards this initiative, the government has introduced new telecom policy, namely NDCP 2018, which is still a draft and has yet to be approved and implemented.

Digital infrastructure and services are increasingly emerging as the key enablers and critical determinants of a country's growth and wellbeing. At the current pace of digitisation and digitalisation, it is estimated that India's digital economy will reach US$1 trillion by 2025. The rapid and unprecedented proliferation of mobile phones, the internet, social media platforms, digital payments, and data consumption and generation across India indicate that the data economy and digital technologies and services are no longer the prerogative of the privileged few; rather, they have evolved into widespread instruments of access and empowerment for more than a billion Indians.

The convergence of a cluster of revolutionary technologies including 5G, the cloud, the IoT and data analytics, along with a growing start-up community, promise to accelerate and deepen India's digital engagement, opening up a new horizon of opportunities to implement a successful national optical fibre network project under the BharatNet regime. The NDCP 2018 aims to achieve its objectives by 2022. To ensure the sovereignty, safety and security of digital communications, the government has drafted a Personal Data Protection Bill 2018, which makes individual consent the keystone of data sharing. Consent, in order to be valid, must be free, informed, specific, clear and capable of being withdrawn. The Bill provides for the setting up of a Data Protection Authority that will be responsible for the enforcement
and effective implementation of the law, and also provides for imposition of penalties on data fiduciaries and compensation to data principals for violations of the data protection law. Further various obligations have been imposed on data fiduciaries who have access to and process personal data. Personal data can be processed only on the basis of the consent of the data principal, which should be given before commencement of the processing.

The DoT is planning a spectrum auction in 2018, which will include the spectrums which were left unsold in the last auction and also the 5G spectrum.

The TRAI has issued recommendations on the sharing of infrastructure in the television broadcasting distribution sector, providing that in order to reduce the cost per subscriber of network establishment, operations and maintenance, accelerate the geographical expansion of services and reduce the rural–urban digital divide, the sharing of infrastructure in the TV broadcasting distribution network should be allowed on voluntary basis. Infrastructure will ultimately lead to an ecosystem wherein the network operator can focus on the efficient operations and maintenance of distribution networks and associated systems to ensure maximum uptime and optimal utilisation of available distribution network capacities, while a data protection officer (DPO) providing services using the network of another DPO can also focus on servicing the needs of consumers.

In furtherance of previous efforts to regulate unsolicited commercial communications (UCC), the TRAI recently issued the Telecom Commercial Communications Customer Preference Regulations, 2018, wherein a completely new technology, which is based on distributed ledger technology, has been introduced to curb the menace of UCC.

VII CONCLUSIONS AND OUTLOOK

Digital India is already unfolding, India’s digital profile and footprint are among the fastest growing in the world. The country is in the process of laying down a new telecom policy, the NDCP 2018, which discusses the following:

- the provision of broadband for all;
- the creation of four million additional jobs in the digital communications sector;
- enhancing the contribution of the digital communications sector to amount to 8 per cent of India’s GDP;
- propelling India into the top 50 nations in the ICT Development Index of the International Telecommunication Union;
- enhancing India’s contribution to global value chains; and
- ensuring digital sovereignty.

Improvements in regulation and ongoing structural reforms are the pillars of the policy, which recognises the importance of the continued improvement of the regulatory framework for attracting investment and ensuring fair competition to serve the needs of Indian citizens. With its diverse provisions, the NDCP 2018 is intended to benefit consumers as well as industry players providing telecommunications services.

With the advent of newer technologies and the use of data services, the need for spectrum is rising every day. This has paved way for the upgrade to 5G networks in the telecom sector. Recently, in reference to a DoT letter dated 23 July 2018, the TRAI outlined its recommendations on the auction of spectrum, including recommendations on the
valuation and reserve price of spectrum in the 700MHz, 800MHz, 900MHz, 1,800MHz, 2,100MHz, 2,500MHz, 3,300–3,400MHz and 3,400–3,600MHz bands, under which it recommended that the entire available spectrum should be put to auction.
Chapter 12

ITALY

Marco D’Ostuni, Marco Zotta and Manuela Becchimanzi

I  OVERVIEW

Many important events happened in the Italian TMT sector in 2018.

Mindful of EU targets, the legislator took major steps to advance the development of ultra-fast connectivity, 5G networks and access infrastructure. With growing demand for broadband and ultra-broadband networks, the Budget Law for 2018 assigned the 700MHz band to 5G services and applications, freeing it from TV broadcasting.

In turn, the Italian Communications Authority (AGCOM):

1. published the results of a survey on development prospects for wireless and mobile systems towards 5G and the use of new portions of spectrum above 6GHz (Resolution No. 89/18/CONS);
2. established new rules to allocate and use 5G frequencies (Resolution No. 231/18/CONS); and
3. adopted a plan to assign new frequencies to DTTV in lieu of the 700MHz band (Resolution No. 290/18/CONS).

The national auction to allocate 5G frequencies was awarded on 2 October 2018 for a record amount of €6.55 billion, well above the government’s expectations. The 700MHz band will be available to 5G from 2022 onwards and continue to channel TV broadcasting until then.

Mobile communications also saw major changes in 2018, as a new operator, Iliad, entered the market in the aftermath of the 2016 joint venture between Wind and H3G Italia. On May 2018, Iliad started an aggressive marketing campaign for mobile services, joining the fray with competitive operators such as Vodafone Italia SpA (Vodafone) and Telecom Italia SpA (Telecom).

In the media sector, in December 2017 the Ministry of Economic Development signed a new service contract with RAI, the concessionaire of the public broadcasting service in Italy. The new contract covers the years from 2018 to 2022, replacing the previous one, which originally should have covered only the years from 2010 to 2012.

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2 The 5G Action Plan of the European Commission, referred to in the Communication of 14 September 2016, COM (2016) 588 final, includes a series of steps aimed at coordinating the deployment of 5G networks in Europe. In particular, the aim of the Communication is to ensure the rapid deployment of 5G networks by 2018 and their progressive introduction on a large scale by 2020.
II  REGULATION

i  The regulators

Two main authorities are entrusted with regulating the IT, media and telecoms sectors in Italy:

\[ a \] AGCOM, established by Law No. 249/1997, is an independent administrative body empowered to regulate and supervise electronic communications, broadcasting and publishing in Italy. In 2012, Law Decree No. 201/2011 extended AGCOM’s powers to postal services. AGCOM’s activity follows two main directions: preserving fair competition among market operators by preventing the creation of monopolies; and protecting consumers by ensuring minimum standards of quality, pluralism and the provision of universal services; and

\[ b \] the Ministry of Economic Development, through its Department of Communications. In coordination with AGCOM, the Ministry manages the radio spectrum by approving the national frequency allocation plan and by issuing the related tender procedures. Upon request by operators, it also grants authorisations for the provision of networks and ECSs, as well as for the provision of television and radio contents.

The main sources of law in the TMT sector are:

\[ a \] Legislative Decree No. 259/2003 (Code), which implemented the comprehensive regulatory framework for ECNs and services adopted in 2002 at the EU level, including the Framework,\(^3\) Authorisation,\(^4\) Access\(^5\) and Universal Service Directives.\(^6\) In 2009, Directive 2009/140/EC, Directive 2009/136/EC and Regulation (EC) No. 1211/2009 were adopted to improve and update the 2002 regulatory framework, and the Code was amended accordingly.

The Code sets out the rules governing both public and private telecommunications services, including the provision of internet-based services;

\[ b \] Law No. 249/1997, which established AGCOM and set out its regulatory powers; and

\[ c \] Legislative Decree No. 177/2005 (the Consolidated Text on Radio and Audiovisual Media Services), which contains the regulatory framework concerning radio and television broadcasting.

ii  Regulated activities

Italian telecommunications law provides for a general authorisation regime set out in the Code. Pursuant to Article 25, Section 3 of the Code, any provider of networks or ECSs is required to obtain an authorisation from the Ministry of Economic Development. To this end, the provider must file a declaration of its intention to commence the provision of electronic communication networks or services.

Article 1 of the Code defines the notion of ECSs as those services, normally provided for remuneration, which consist wholly or mainly in the transmission of signals on ECNs (by cable, optical fibre, satellite and any other electromagnetic means).

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\(^3\) Directive 2002/21/EC.
\(^4\) Directive 2002/20/EC.
\(^5\) Directive 2002/19/EC.
\(^6\) Directive 2002/22/EC.
The provider can start to operate as soon as it has filed the declaration. However, no later than 60 days from the filing, the Ministry of Economic Development must verify that the conditions and requirements are met and grant the authorisation or, where appropriate, impose a ban on the activity. The authorisation is granted for a maximum 20-year period, is renewable and can be transferred to third parties.

The authorisation grants the provider the right to negotiate interconnection with pre-existing network providers and telecommunication services operators. It also entails the right to use RFs. See Articles 26 and 27 of Legislative Decree No. 259/2003.

The provision of media services is also subject to an authorisation regime, as set out in the Consolidated Text on Radio and Audiovisual Media Services.

## iii Ownership and market access restrictions

Italian law generally makes no distinction between Italians and foreign nationals concerning investment and ownership in the telecommunications sector. However, Article 25, Section 1 of the Code provides that restrictions on the general authorisation regime provided by law can be applied by the Ministry of Economic Development to non-EU or non-EEA citizens and enterprises.

Moreover, the Ministry of Economic Development can issue an authorisation to non-EU companies only if Italian entities would have a reciprocal right to enter the market in their country.

Access to the telecommunications sector is also affected by the general rules set out in Law Decree No. 21/2012, as implemented by Presidential Decree No. 85/2014, concerning the regulation of strategic operations in the communications sector, such as the installation of infrastructure and the provision of broadband services.

These rules give the government special powers when facing operations that could constitute a threat to national security and defence, namely, the possibility to:

1. impose additional requirements related to supply safety, data security and technology transfers;
2. impose a veto on the merger or demerger of a company, on its transfer or the transfer of its registered office abroad, as well as on the dissolution of a company; and
3. prohibit the purchase of shares by entities other than the government, Italian public bodies or entities controlled by them in the event that the purchase of shares would result in the purchaser holding a share of capital able to compromise the interests of defence and national security.

## iv Transfers of control and assignments

In the telecommunications sector, both AGCOM and the Italian Competition Authority (AGCM) enforce merger control rules. Pursuant to Article 1.6(c)(11) of Law No. 249/1997, AGCM must obtain a non-binding opinion from AGCOM on proposed decisions concerning communication operators.

Italian law also provides ownership restrictions to ensure external pluralism and competition in the media sector. Pursuant to Article 43 of the Consolidated Text on Radio
and Audiovisual Media Services, AGCOM exercises its control to prevent the creation of dominant positions and ensure that the anti-concentration limits provided by law are respected by companies operating in the integrated communications system (ICS).\(^8\)

To this end, undertakings operating in the ICS are required to notify a proposed merger to AGCOM, which can veto the merger if it would result in the creation of a dominant position capable of harming pluralism. Any merger concluded without prior clearance by AGCOM is null and void.

As stated in AGCOM’s Procedural Regulation adopted under Article 43 of the Consolidated Text on Radio and Audiovisual Media Services, AGCOM’s investigations on dominant positions are articulated in two subsequent stages: market identification and analysis.\(^9\)

### III TELECOMMUNICATIONS AND INTERNET ACCESS

#### i Internet and internet protocol regulation

Given the variety of internet-based services (e.g., email, mailing lists, social networks and web search engines), all attempts to provide a comprehensive internet regulation have been unsuccessful.

However, sector-specific regulation exists, for example, with regard to online piracy. The digitisation of communications has exponentially increased the ability to reproduce and distribute works online without the consent of the copyright owner. Pursuant to Article 182 bis and 182 ter of Law No. 633/1941 (Copyright Law), as amended by Law No. 248/2000, both AGCOM and SIAE, the Italian association of authors and publishers, are competent to prevent and detect online copyright violations.

In exercising its powers, through Resolution No. 680/13/CONS, AGCOM adopted the Regulation on the protection of copyright on ECNs, the first measure ever adopted in Italy to fight online piracy. The Regulation aims to protect online copyright through two complementary actions: support for the development of a legal offer of digital works, and fighting against piracy through effective, proportionate and dissuasive enforcement procedures. The Regulation is only addressed to intermediary service providers and not to end users. The Regulation ensures the provided protection only at the initiative of the copyright owner. If the owner has already filed a claim on the same matter before the judicial authority, AGCOM has to dismiss the matter.

To stop copyright breaches, AGCOM may adopt different measures. If the works that infringe copyright are on a server that is situated in Italy, AGCOM can order the hosting service provider to remove the works or to disable access to them. If the server is

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\(^8\) Pursuant to Article 2(g) of Law No. 112/2004, the ICS is ‘the economic sector that includes the following activities: newspapers and periodicals; electronic publishing including the internet; radio and television; cinema; external advertising; product and service announcements and sponsorship’.

\(^9\) See Articles 5, 6 and 7 of the Procedural Regulation adopted by AGCOM with Resolution No. 368/14/CONS. In the first phase, AGCOM issues a draft resolution identifying the relevant markets, which is submitted to public consultation for 30 days. On the basis of the consultation outcome, AGCOM issues a final resolution that indicates the market that will be subject to analysis in order to assess the existence of dominant positions or positions that could otherwise harm pluralism. In the second phase, after having acquired the necessary information, AGCOM issues a new draft resolution, which it also submits to public consultation, concerning the analysis of the relevant market. If, based on the analysis, AGCOM finds a dominant position, it must adopt measures aimed at removing it.
located abroad, AGCOM orders the mere conduit service provider to disable access to the copyright-infringing website. Moreover, AGCOM can enable redirection to a webpage whose content will be determined by AGCOM itself. All the measures taken by AGCOM may be appealed before the administrative judge.

Legislative Decree No. 3541/2017 entrusted AGCOM with the tasks of monitoring the adoption by collective management organisations of appropriate governance and financial standards in relation to rights holders and users, and the granting of multi-territorial licences for copyright on musical works for online use in order to promote their cross-border dissemination. Through Resolution No. 396/17/CONS AGCOM has adopted the regulation implementing the decree.

Finally, Law No. 167/2017 introduced new provisions in the field of copyright by entrusting AGCOM with the power of adopting precautionary measures for the protection of copyright, as well as measures preventing the reiteration of copyright breaches that have already occurred.

ii Universal service

The Universal Service Directive has been implemented in Italy by Articles 53–57 of the Code. These provisions state that all users on the national territory, regardless of their geographical location, shall be entitled to certain ECSs to be provided at a predetermined quality level.

Article 58 of the Code establishes that AGCOM may designate one or more undertakings as having a USO; AGCOM carries out an objective, transparent and non-discriminatory designation procedure, whereby no undertaking is *a priori* excluded from being designated; and until the designation, which to date has not been made by AGCOM, TIM Mobile SPA (TIM) is designated by law as having a USO.

The universal service in the telecommunications field currently includes the following services:

a. the provision of access at a fixed location to the public communications network, which allows users to make and receive calls, communicate by fax, send data and have functional access to the internet;

b. the supply of telephone directory services;

c. the provision of public pay telephones, which also allows for free access to emergency numbers; and

d. the supply of special conditions and options of service for disabled users.

In economic terms, the cornerstone of the universal service principle is the accessibility and flexibility of rates (i.e., the obligation to provide service even to unprofitable customers).

Although the concept of universal service has been extended over time to include a reference to functional internet access, it still does not include broadband services. However, through Resolution No. 113/16/CONS, AGCOM launched a preliminary investigation concerning the possibility to qualify the provision of broadband in the terms of the universal service. The results of the public consultation were summarised in June 2017 in Resolution No. 253/217.

AGCOM concluded that the EU requirements for the inclusion of broadband internet within the USO are met with reference to the 2Mbps internet connection speed, considering that such connection speed is used at a national level by at least half of all households and at least 80 per cent of all households having a broadband connection.
iii Restrictions on the provision of service

Network neutrality

Although there is no law in Italy that specifically regulates network neutrality, the latter has become a growing concern in AGCOM’s agenda. Network neutrality is the principle according to which there should be no discrimination in the treatment of internet data based on the content, device, application, origin and destination of the content. In 2011, AGCOM launched a public consultation entirely focused on net neutrality, the results of which were summarised in Resolution No. 714/11/CONS.11

Network neutrality is challenged by the spread of forms of traffic management, which implies the treatment of bytes transmitted over communications networks.

The respect of the net neutrality guarantees provided by European Regulation No. 2015/2120 is monitored by AGCOM. In particular, with Resolution No. 123/17/CONS, AGCOM issued a warning against Wind Tre regarding its zero-rating offers (i.e., offers that do not compute the traffic generated by, or directed to, particular services or applications, called zero-rated, for the purpose of achieving the consumption thresholds when a data cap is imposed). AGCOM concluded that Wind Tre discriminated between zero-rated traffic and the remaining traffic, and stated that such offers can be marketed on condition that, upon reaching the data ceiling, the same treatment is guaranteed to all types of traffic.

Liability of ISPs

As regards the liability of ISPs, pursuant to Article 17 of Legislative Decree No. 70/2003, ISPs are not subject to a general monitoring obligation with regard to content uploaded by their users that ISPs transmit or store; nor are they subject to a general obligation to actively seek facts or circumstances indicating illegal activity. However, when informed of any unlawful conduct or information provided by recipients of their service, they must promptly inform the competent judicial or administrative authority. In addition, upon request by the authorities, they must promptly prohibit access to illegal content. Failure to comply with this requirement may result in their civil liability.

Measures against unsolicited phone calls, faxes, emails and texts

Presidential Decree No. 178/2010 established a Public Objections Register. The Ministry of Economic Development – Department of Communications has entrusted the management of the Register to the Ugo Bordoni Foundation (FUB). Anyone, whether a natural or legal person, whose telephone number is listed in public telephone directories can subscribe free of charge to the Register to stop receiving unsolicited sales and marketing calls.

If, notwithstanding the subscription to the Register, an interested person still receives unsolicited calls, he or she can seek the intervention of the Authority for the Protection of Personal Data or a judicial authority.

10 For example, according to this principle, a service provider cannot reserve priority to its own audiovisual content over that released by its competitors or via YouTube.

11 The results of the consultation showed a widespread consensus on, inter alia, the following issues: the idea that applying forms of traffic management does not constitute per se a market failure or a reduction in the opportunities available to the end user; and the fact that pricing (for example, choosing between flat-rate pricing and usage-based pricing) considerably affects the use of internet-based services. The results are available at www.agcom.it/le-risultanze-delle-consultazioni-gennaio-2012-. 
Article 130 of Legislative Decree No. 196/2003 protects consumers against unsolicited advertising through email, fax or SMS (such as spam) by requiring their prior consent to the use of personal data for commercial purposes.

On 4 February 2018, Law No. 5/2018 entered into force, introducing new provisions on the functioning of the Public Objections Register. The main feature of the reform is the possibility to register in the Register also when using mobile numbers and landlines not registered in telephone directories.

iv Security

Homeland security

Law No. 43/2015 converted into law the Anti-Terrorism Decree. It contains urgent measures for the fight against international terrorism. To protect national security, the Law introduces measures to counter proselytising activities organised through the use of the internet. The use of IT tools is considered an aggravating circumstance for crimes related to terrorism or incitement to terrorism committed through IT tools. The Law also provides that the Italian Postal and Communications Police must constantly update a blacklist of websites that are being used for terrorist purposes in order to facilitate police investigation.

Self-expression

With regard to the limitations to self-expression on the internet, there is no criminal provision that specifically targets online defamation. Article 595 of the Italian Criminal Code contains the general provision on defamation. However, it does not refer to defamation committed through the use of the internet, not even as an aggravating circumstance.

Data protection, privacy and the right to be forgotten

The protection of personal data in electronic communications in Italy is regulated by GDPR, which entered into force on 25 May 2018, and the Privacy Code, as amended by Legislative Decree No. 101/2018. As a general rule, any operator in charge of collecting and processing personal data can do so only after obtaining the written consent of the person to whom the data relates or when one of the conditions set forth in Article 6 of the GDPR occurs (for example, when processing personal data is necessary to comply with a legal obligation of the controller; or to protect the vital interests of the data subject). To this end, the operator has to provide the user with any relevant information concerning the purpose of the data collection, including the rights of the user to access such data and to demand its modification or deletion.

Pursuant to Article 32 of the GDPR, network operators are subject to a general obligation of custody to reduce the risk of destruction, loss or unauthorised access to personal data.

12 Law Decree No. 7/2015.
13 Nonetheless, Italian courts often condemn online defamation under this provision.
15 Legislative Decree No. 196/2003.
16 Article 23 of the Privacy Code.
Traffic data, meaning data processed for the purpose of conveying a communication on an ECN, must be deleted by the network operator as soon as the communication is complete.\(^{17}\) However, the operator is allowed to store it for a longer period of time – but in any case not longer than six months – if this is necessary for invoicing purposes. Moreover, the operator must store traffic data for up to 24 months for the prosecution of criminal offences.

Pursuant to Article 126 of the Privacy Code, location data can only be processed when it is made anonymous (or with the prior consent of users, revocable at any time) and to the extent and for the duration necessary for the provision of the service requested.

Failure to comply with these requirements may result in the application of both administrative fines and criminal sanctions.\(^{18}\)

The operator processing the data has to inform AGCOM, the Italian Privacy Authority and the data subject about any risk of breach of network security, or about any breach of personal data that has occurred.

Privacy concerns also underlie the right to be forgotten, which is the right for individuals to have information about themselves deleted from the internet so that they cannot be found through search engines. This principle has been affirmed by the European Court of Justice in *Google Spain*,\(^{19}\) where the Court established that an online search engine such as Google is responsible for the personal data collected and therefore shall, upon request, remove from the list of results all the links to web pages containing information about that person.

At the national level, one of the most prominent judgments in this field was rendered by the Court of Cassation in *Google v. Vivi Down*,\(^{20}\) concerning the broadcasting on Google Video of a video showing some boys humiliating a fellow student suffering from Down’s syndrome, and also insulting the Vivi Down association. Google’s managers faced criminal charges for failing to prevent online defamation and for having unlawfully processed personal data concerning the health condition of the boy. However, in the end, they were acquitted of all charges.

The Court of Cassation specified the characteristics of the right to be forgotten in a case\(^{21}\) concerning the breach of such right by both the director and the publisher of an online newspaper due to the prolonged permanence online of an article on a criminal issue that had involved the plaintiffs in the past and was still pending. The Court specifically identified the unlawful processing of personal data in the maintenance of a direct and easy access to that article through the search engine, and not in the original methods of publication or in its archiving.

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\(^{17}\) Article 123 Section 1 of the Privacy Code. The exact moment of completion of the transmission of a communication depends on the type of ECS provided. For example, for a telephone call, the transmission will be completed when one of the users ends the connection. For an email, it will be when the recipient collects the message from the server of his or her service provider.

\(^{18}\) See Articles 162 and 167 of the Privacy Code.

\(^{19}\) Case C-131/12, *Google Spain SL, Google Inc v Agencia Espanola de Proteccion de Datos, Mario Costeja Gonzales*, 13 May 2014.

\(^{20}\) Court of Cassation, judgment No. 5107/14 of 17 December 2013.

\(^{21}\) Court of Cassation, judgment No. 13161 of 24 June 2016.
In a recent case, the Court of Cassation identified some balancing criteria aimed at settling the conflict between the right of an individual to be forgotten and the opposing right for the media to report news. The Court established certain conditions that legitimate a compression of the right to be forgotten, such as:

a. the contribution made by the news to a debate in the public interest;
b. reasons of justice, police matters, protection of rights, and scientific, educational or cultural freedom;
c. the status of the public person of the subject involved;
d. the truthfulness, actuality and continence of the news; and
e. the granting of the right of reply before the spreading of the news.

Following the judgment in *Google Spain*, Google has adopted a template to request the removal of search results deemed to be inappropriate, offensive or harmful to privacy. Alongside this measure, pursuant to Article 17 of the GDPR, data subjects have a right to obtain from the controller erasure of their personal data, *inter alia*, where the personal data is no longer necessary in relation to the purposes for which it was collected or otherwise processed, the data subject withdraws consent on which the processing is based or the personal data has been unlawfully processed.

According to Article 140 bis of the Privacy Code, these rights can be enforced before the Italian Privacy Authority or, alternatively, before the judicial authority.

**Interception of electronic communications**

Law No. 43/2015 modified Article 226 of the implementing provisions to the Code of Criminal Procedure. When it is necessary to acquire information concerning the prevention of crimes having, *inter alia*, terrorist purposes, committed through the use of electronic devices, the public prosecutor may authorise the interception of communications for a maximum of 40 days. The prosecutor can also authorise the storage of traffic data for up to 24 months and the acquisition of all useful information from telecommunications operators.

**Protection of children**

Pursuant to Article 34 of the Consolidated Text on Radio and Audiovisual Media Services, as amended by Legislative Decree No. 120/2012, it is in principle prohibited to broadcast programmes that, taking into account the time of the broadcast, could seriously harm the physical, psychological and moral development of children, especially if the programmes contain violent or pornographic scenes.

Nevertheless, such programmes can be broadcast upon the request of broadcasting companies provided that they include a parental control system. In particular, they must be marked with an audio and visual signal at the beginning of and during the broadcast.

Legislative Decree No. 203/2017 has entrusted AGCOM with the task of classifying (from the perspective of children's protection) video games and audiovisual works to be spread online. Through Resolution 186/18/CONS, AGCOM adopted the related regulation, which is currently undergoing public consultation.

In 2003, representatives of ISPs adopted the Italian Self-Regulation Internet and Underage Code, which contains specific provisions to target online child pornography. In

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22 Court of Cassation, judgment No. 6919 of 20 March 2018.
June 2017, the Parliament adopted Law No. 71/2017, the first specific law in Italy targeting cyberbullying,\textsuperscript{23} which introduces measures to prevent the cyberbullying phenomenon, especially by emphasising the role of schools.\textsuperscript{24} Moreover, a victim of cyberbullying or her or his parents can demand a website operator to remove or obscure any personal data from the internet. If the operator does not comply with the request within 48 hours, the victim can lodge a complaint before the Italian Privacy Authority.

**Cybersecurity**

Cybersecurity is a growing policy concern in Italy. The threats in cyberspace can take different forms such as cybercrime, cyberespionage and cyberterrorism. In 2013, the government strengthened the protection of Italian cyberspace by creating a three-layer structure.\textsuperscript{25} The first layer is embodied in the Inter-ministerial Committee for the Security of the Republic, which is in charge of elaborating general strategies for national security. On the middle layer, the Decree establishes the creation of a permanent body in charge of connecting all administrations and regulatory bodies involved in the pursuit of strategic cybersecurity objectives. Finally, the Inter-ministerial Centre for Situation Assessment and Strategic Planning coordinates the recovery of systems functionality after an attack.

The National Anti-Crime Computer Centre for Critical Infrastructure Protection is a branch of the Italian Police in charge of surveillance of the cybersecurity of infrastructure in sensitive areas, such as defence, telecommunications and energy.

In June 2016, within the framework of the National Conference on Cyber Warfare held in Rome, the creation of the first European Centre for Advanced Cybersecurity, based in Italy, was announced.

In 2017, the government adopted the national plan for cybersecurity based on 11 points that cover all aspects of individual, state, industrial and military security.

**IV SPECTRUM POLICY**

i Development

Radio spectrum is an essential resource for telecommunications networks. It is the basis for wireless communications, but it is also key in areas such as broadcasting, transport, defence, environmental protection and energy. Due to the increasingly urgent demand for this scarce resource, spectrum policy has become crucial at both European and national level.

The management of the Italian RF spectrum is entrusted to the Ministry of Economic Development and AGCOM. The Ministry elaborates the national frequency allocation plan, which divides radio spectrum into frequency bands and assigns each band to services and users.

\textsuperscript{23} Law No. 71/1017.
\textsuperscript{24} See Articles 2 and 4 of Law No. 71/2017.
\textsuperscript{25} The structure was created by the Decree of the President of the Council of Ministers 24 January 2013, Directive laying down the guidelines for cybernetic protection. Article 2 Section 1 of the Decree defines cybersecurity as ‘the condition under which cyberspace is protected by adopting appropriate measures of physical, logical and procedural security to face events, either voluntary or accidental, consisting of the undue acquisition and transfer of data, in its modification or unlawful destruction or in the damage, destruction or impairment of the smooth operation of networks and information systems or their components’. 

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On this basis, AGCOM adopts the national frequency assignment plan, which determines the location of radio stations and the frequencies assigned to each of them. The final allocation of frequencies and the granting of the related rights of use is made by the Ministry of Economic Development following a call for applications by network operators. Both the allocation and the assignment of RFs has to be based on objective, transparent, non-discriminatory and proportionate criteria.26

Through Resolution 290/18/CONS, AGCM adopted the national frequency assignment plan for frequencies to be allocated to DTTV (see Section VI).

ii Flexible spectrum use
Following the European trend,27 the Italian regulatory framework concerning spectrum use has become more flexible. The intention is to promote spectrum sharing, not necessarily limited to a particular frequency band, as a spectrum management tool.

In July 2015, the Ministry of Economic Development together with FUB started an experiment on the 2.3GHz band, comprising the full sharing of spectrum by licensed and unlicensed operators.

On the basis of the results of this experiment, through Resolution No. 121/16/CONS AGCOM launched a public consultation concerning the licensed shared access to radio spectrum. The consultation concerned the extent to which a public or private frequency owner should share the portion of the spectrum that is not being used with one or more licensees on a voluntary or mandatory basis, without the risk of interferences that could impair the normal operation of its systems. The outcome of the public consultation, summarised in a document published on AGCOM’s website in November 2016, showed that the participants considered the licensed shared access approach to be particularly convenient with regards to spectrum portions that cannot be quickly diverted from the use to which they are assigned or that cannot be easily released by current incumbents.

On this basis, AGCOM is currently evaluating innovative forms of spectrum sharing, such as the collective use of (unlicensed) bands under licensed assisted access.

Pursuant to Article 14-ter of the Code, owners of allocated frequencies can trade them or allow other entities to use them through a lease. The owner has to notify both the Ministry of Economic Development and AGCOM of the intention to trade such frequencies. The authorities can impose a ban on the intended transfer of frequencies if the rights to use them were obtained free of charge.

iii Broadband and next-generation mobile spectrum use
Following the Radio Spectrum Policy Programme elaborated at the EU level, AGCOM aims to boost the development of broadband services in Italy through efficient assignment of frequencies.

Through Resolution 18/15/CONS, AGCOM set out the rules and procedures for the assignment of the 1,452–1,492MHz frequencies (L Band), to be allocated to broadband

26 Article 14 Section 1 of the Code.
27 See COM (2012) 478 Final, 3 September 2012, ‘Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Promoting the shared use of radio spectrum resources in the internal market’. 

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and ultra-broadband mobile services with 4G technology. On this basis, the Ministry of Economic Development launched a public auction in September 2015, making Italy the second European country (after Germany) to allocate this band. 28

No new entrants were allowed to bid, because the portion of L Band allocated was meant to be used by MNOs as a supplementary downlink (i.e., to enable users to receive and download data more quickly and efficiently).

Considering the increasing market demand for wireless broadband services, AGCOM has also defined the rules for the assignment of the 3,600–3,800MHz band in Resolution No. 659/15/CONS. The Resolution establishes coverage obligations to meet the demand for high-speed connectivity services in order to implement the national strategy for ultra-broadband.

Following the European Commission’s call to make the 700MHz frequency available to mobile broadband to implement 4G and 5G technology across Europe, Law No. 205/2017 (Budget Law for 2018) regulates the process that will lead, in the four-year period running from 2018 to 2022, to the assignation of the 700MHz frequency to wireless broadband services (see Section VI).

iv Spectrum auctions and fees

The Italian regulatory authorities believe that competitive procedures, namely auctions, are the most appropriate means to assign RFs to interested network operators. The merits of auctions are their transparency and capacity to attract foreign capital, and the fact that they allow the legislator to set a certain threshold of financial gain.

Auctions are generally structured as an open procedure with a simultaneous multiple round-ascending mechanism. A large number of licences are simultaneously placed for sale, and potential buyers call prices up during each round.

Only one operator for each group of companies is allowed to participate in order to avoid any risk of collusion and anticompetitive hoarding of frequencies. Participation in the auction must also be secured by an appropriate security deposit. Auction procedures have been used in Italy to assign the right of use for the 3.5GHz, 800MHz, 1,800MHz, 2,000MHz, 2,600MHz, and 1,452–1,492MHz bands, and, more recently, for the 5G frequencies (694–790MHz, 3,600–3,800MHz and 26.5–27.5GHz).

V MEDIA

i Restrictions on the provision of service

The Consolidated Text on Radio and Audiovisual Media Services sets out the rules governing the Italian broadcasting system. This regulatory framework includes different provisions for network operators 29 and content providers. 30

28 The tendering procedure ended with the award of a portion of 20MHz each to TIM and Vodafone.

29 Article 2(1)(c) of the Consolidated Text on Radio and Audiovisual Media Services defines a network operator as ‘the holder of the right to install, provide and operate an electronic communications network via digital, cable or satellite on terrestrial frequencies and the right to provide installations for the transmission, multiplexing, distribution and dissemination of frequency resources that allow the transmission of programmes to users’.

30 Article 2(1)(d) of the Consolidated Text on Radio and Audiovisual Media Services defines content providers as ‘the person who has the editorial responsibility for the preparation of television or radio programmatic content’.
Network operators must obtain a 12-year authorisation granted by the Ministry of Economic Development. However, the authorisation does not entail the automatic allocation of RFs and the right to use them, which has to be obtained separately.

The provision of television and radio content is also subject to a 12-year authorisation granted by the Ministry of Economic Development. Television content providers are additionally required to fulfil the obligations established by AGCOM in Resolution 435/01/CONS.31

Private broadcasters have to comply with a number of limitations and obligations established by law to protect end users. They are required to organise programming based on issuer classification. Therefore, the nature of the authorisation determines the related obligations depending on whether the broadcaster has a commercial, social, information or teleshopping purpose. To this end, ICPs authorised to provide content at the national or local level are required to, inter alia, broadcast news and radio news daily, allow access to their programmes to all political actors on an equal basis, and broadcast certain events considered by AGCOM as having a major importance for society, on a free-to-air basis.32

More stringent obligations are imposed on RAI SpA, the concessionaire of the public broadcasting service, which has to be provided throughout the whole national territory (i.e., servicing not only lucrative urban areas but also rural areas).33 The new service contract between RAI and the Ministry of Economic Development was approved in December 2017 and covers the years 2018 to 2022, replacing the previous one (2010 to 2012).

In 2017, AGCOM adopted Resolution No. 41/17/CONS, which identifies the relevant markets in the audiovisual media services sector pursuant to Article 43(2) of the Consolidated Text on Radio and Audiovisual Media Services. The previous procedure concluded by AGCOM in the field of ICS dates back to 2010 (Resolution No. 555/10/CONS). The aim of the resolution is to identify, in a subsequent phase, any positions of dominance or positions likely to harm pluralism in the identified markets.

The Resolution identifies three relevant markets in the audiovisual media services sector: national free-to-air audiovisual media services; local free-to-air audiovisual media services; and national audiovisual media services for payment.

However, AGCOM has specified that the second phase will not take the local free audiovisual media services market into consideration because, following the entry into force of Law No. 9/14, this specific sector has undergone several changes owing to the need to reorganise the terrestrial frequencies.

As regards online distribution of audiovisual content, the Resolution also includes in market (c) above providers of audiovisual online services for payment, such as Netflix. This is because they are considered to be similar to the traditional pay TV providers, as both services are based on users’ subscriptions and offer premium content. On the contrary, the provision

31 For example, pursuant to Article 6 of the Regulation content providers are required to store the complete recording of television programmes for a period of three months following broadcasting. Pursuant to Article 10, they must also reserve at least 20 minutes per week for advertising European works.
32 See Article 7 of the Consolidated Text on Radio and Audiovisual Media Services and AGCOM Resolution No. 131/12/CONS.
33 See Article 45 of the Consolidated Text on Radio and Audiovisual Media Services.
of free audiovisual content through websites, social networks such as Facebook or Twitter, and search engines such as Google, is deemed to fall outside the market definition of audiovisual media services, because the providers of free online content appear to be competing not with the traditional free-to-air broadcasters but with the other internet operators.

ii Internet-delivered video content

In Italy, as high-speed broadband connections become more widespread, internet video distribution continues to grow. According to the 14th Report on Communication by Censis–UCSI in 2017, the different forms of TV over internet (such as WebTV, smart TV and IPTV) have a 26.8 per cent audience (+2.4 per cent).

All of the most important TV channels have developed on-demand services that allow users to watch TV programmes online after the original broadcast. In addition to this, many operators have started to provide IPTV services. IPTV allows users to access television broadcasting networks (both in live-streaming and on-demand mode) via an internet broadband connection by using a set-top box (and not via a PC, tablet or smartphone, which can be used for WebTV).34

Although there is no comprehensive law governing the delivery of video content over the internet, by Resolution No. 606/10/CONS and Resolution No. 607/10/CONS, AGCOM has adopted two regulatory measures concerning the provision of audiovisual and radio media services on other electronic media (WebTV, IPTV and mobile TV) and the provision of on-demand audiovisual media services, respectively.

VI THE YEAR IN REVIEW

i Relevant regulatory measures

Refarming the 700MHz frequency and Resolution 290/18/CONS

Implementing Decision (EU) No. 899/2017, the Budget Law for 2018 entrusted AGCOM with the definition of procedures to reassign the 700MHz frequency, currently used for DTTV broadcasting, to mobile broadband wireless services for the development of 5G (re-farming), and the adoption of a new frequency assignment plan for frequencies to be allocated to DTTV, in order to provide a new framework for the DTTV service.

Through Resolution 290/18/CONS, AGCOM adopted the new frequency assignment plan for frequencies to be allocated to DTTV. The plan indicates 15 new digital terrestrial networks: 10 national networks in the UHF band, four local networks in the UHF band and a regional network in the III VHF band.

Through Resolution 231/18/CONS, AGCOM established the procedures for the allocation and the rules for the use of the 5G frequencies; on this basis, in July 2018 the Ministry of Economic Development launched a national auction for the allocation of 5G frequencies. The list of companies admitted to the auction procedure was published on 6 August 2018.35 On 10 September 2018, the companies presented their initial economic

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34 In 2015, the most widespread WebTV, Netflix, made its debut on the Italian market.
35 These companies are Iliad Italia SpA, Telecom, Fastweb SpA, Vodafone, Wind 3 SpA, Linkem SpA and Open Fiber SpA. Only Iliad Italia SpA, as a new entry in the market, expressed interest in participating in the procedure for the batch of the 700MHz band.
offers; the auction was awarded on 2 October 2018, with offers amounting to €6.55 billion. Vodafone and Telecom have been awarded the generic batch of the 700MHz band, in addition to the reserved portion already awarded to Iliad as a new entrant in the market.

Implementing the Budget Law for 2018, through Resolution 182/18/CONS, AGCOM defined initial criteria for the conversion of the rights to use frequencies for the digital terrestrial services owned by network operators at the national level into rights of use of transmission capacity.

**Resolution 87/18/CIR**

In Resolution No. 623/15/CONS, AGCOM found that TIM held significant market power in the markets for wholesale access services provided at a fixed location. This entails an obligation for TIM to provide other licensed operators (OLOs) with wholesale access to the fixed network. In the same Resolution, AGCOM welcomed the use by TIM of discounted volume or long-term offers for wholesale services, that is, the use by the incumbent of offers characterised by the provision of discounts to operators requesting access or lower prices for predetermined purchase volumes. In this way, AGCOM allowed TIM to practice discounts on the price of the virtual unbundling line access (VULA) service upon notice to the same authority for approval. In April 2017, TIM communicated to AGCOM a commercial offer called Easy Fiber, targeting the OLOs interested into developing a multi-year migration plan to ultra-broadband using the TIM NGA network. In essence, the Easy Fiber offer intended to allow OLOs to take advantage of the NGA and VULA bitstream access at reduced prices compared to the standard price list included in the reference offers, in return for the advance payment of a certain percentage of the total value of planned purchases. Through Resolution 87/18/CIR, AGCOM decided not to approve the Easy Fiber offer and requested TIM to submit a new proposal.

TIM filed an appeal before the Administrative Court of Lazio for the annulment of Resolution 87/18/CIR. The case is pending,

**Resolution No. 481/17/CONS – market analysis of mobile network voice termination services**

Through Resolution No. 481/17/CONS, AGCOM submitted to public consultation the new market analysis concerning mobile network voice termination services. Compared to the previous market analysis, AGCOM proposes identifying a higher number of operators holding significant market power, adding five new operators to the list (Digi Italy, Fastweb, Iliad, Vectone and Welcome Italy).

### Relevant litigation

**Court of Milan – Sky/MediaPro**

On 5 February 2018, Lega Calcio (football league) awarded Spanish independent intermediary MediaPro Italia Srl (MediaPro) the auction concerning the audiovisual rights for the 2018 to 2021 seasons of the Italian Serie A. On 14 March 2018, the Italian Antitrust Authority (IAA) (acting upon an application filed by the Lega for approval of the award) found that the criteria and the outcome of Lega’s competitive procedure for the selection of an independent
intermediary were consistent with the provisions of the Melandri Decree.37 In its decision, however, the IAA discussed the features of the notion of independent intermediary, as well as the principles that its activity must comply with. The IAA emphasised that such operator is bound to provide services of intermediation of audiovisual rights by reselling the rights it is awarded to other operators downstream on fair, transparent and non-discriminatory terms. It cannot perform activities that may result in the establishment of competitive relationships with media operators; therefore, the independent intermediary should not perform activities involving vertical integration downstream, including the assumption of editorial responsibility that characterises the activities of providers of multimedia content.

On 6 April 2018, MediaPro launched a tender procedure to sublicense audiovisual rights to TV broadcasters by selling not only single matches, but complete audiovisual products lasting several hours before and after the matches, and including entertainment, comments and news content (live studio programmes) as well as advertising placed in the breaks programmed by MediaPro. Sky filed a request for interim orders with the Court of Milan, claiming that MediaPro’s call for tender was an abuse of dominance. Sky claimed that MediaPro was leveraging its freshly acquired monopoly on Serie A rights (which made MediaPro dominant in the relevant market for broadcasting rights of football matches involving Italian teams in yearly tournaments) to vertically integrate in the advertising and broadcasting markets downstream. In this way, MediaPro would in fact be exercising editorial responsibility, interfering with the media operators’ editorial and business freedom in the creation and the design of their own audiovisual products. Sky also claimed that MediaPro was unduly bundling its audiovisual products with the right to broadcast Serie A matches: operators interested in producing and broadcasting their own programmes to broadcast Serie A matches (e.g., with original live studio content and comments) were forced to buy in any event MediaPro’s programmes (including entertainment and advertising sold by MediaPro) and to pay for the right to refrain from broadcasting them.

On 16 April 2018, the Court of Milan adopted an interim order, ordering MediaPro to suspend the tender procedure to sublicense audiovisual rights. On 9 May 2018, the Court of Milan upheld its interim order of 16 April 2018. The Court found that Sky succeeded in establishing both its prima facie case (of abuse of dominance by MediaPro through the structure and design of its product packages) and urgency.

By an order issued on 11 June 2018, the Court of Milan rejected the appeal filed by MediaPro against the decision rendered on 9 May. According to the Court of Milan, MediaPro was violating its obligations as an independent intermediary to:

- refrain from carrying out activities involving publishing responsibilities;
- guarantee to sublicensees the widest entrepreneurial and publishing initiative in the packaging of audiovisual products, including the right to choose whether and to what extent to avail themselves of the services that MediaPro could offer; and
- licence audiovisual rights in a fair, transparent and non-discriminatory manner without imposing additional and unnecessary costs on the licensees.

According to the Court, MediaPro’s conduct also consisted of an abuse of its dominant position under Article 102 TFEU since, by leveraging its monopoly on the rights of Serie A, MediaPro required the operators to purchase the audiovisual products and sell their advertising space, also imposing additional costs on them to regain possession of: (1) the right to exercise their

37 Legislative Decree No. 9/2008.
publishing initiative (2) to commercialise advertising space autonomously, and also (3) to freely manage the times, methods of insertion and duration of their advertising space. The Court acknowledged that such acts also constituted unfair competition under Italian law.

**Administrative Court of Lazio (Rome)** – replicability of TIM Smart offers

The Administrative Court of Lazio partially annulled, on the grounds of lack of motivation, AGCOM’s decisions approving, after a price-squeeze test, the retail offers adopted by TIM, which holds significant market power in the wholesale access markets.

The judgment concerns a series of similar promotional offers (TIM Smart), reiterated by TIM over time and subject to a price test carried out by AGCOM to prevent price squeezes. AGCOM runs the price test through a double methodology: the discount cash flow (DCF) analysis, useful to assess whether the revenues from the offer allow the recovery of investments plus variable costs over time, based on the current value of expected cash flows during the entire duration of the offer; and the period-by-period (PbP) methodology, which is used to make sure that, during the entire duration of the offer and in each of the relevant periods in which such duration is split for purposes of the analysis, the revenues from the offer are higher than the variable costs. For certain types of promotion having a limited impact on market dynamics (such as those limited in time or capped at a limited economic value), the regulation allowed AGCOM to run the price test only based on the DCF method, while for all other offers AGCOM had to run both the DCF and the PbP test.

In this case, Vodafone claimed that AGCOM should have run both tests, as the TIM Smart promotions were allegedly capable of distorting competition.

The Court noted that in principle, AGCOM was right to run only the DCF test, because each TIM Smart promotion in itself was capped and had a limited impact on market dynamics. However, the Court found that AGCOM’s investigation was not complete, because AGCOM had failed to assess the cumulative impact on the market of all of the TIM smart promotions as a whole. According to the Court this was necessary, because TIM had launched a continuous series of different promotions over time.

**Court of Milan** – Telecom Italia v. Fallimento Voiceplus and Eutelia

On 2 February 2018, the Tribunal of Milan rejected a €730 million abuse of dominance damages claim brought by Eutelia and Voiceplus against Telecom.

First Eutelia and then Voiceplus (on Eutelia’s network) offered value-added services (VAS) to end users using non-geographic phone numbers (NGNs) starting with prefixes 899 and 0878. VAS in practice encompass all sorts of services that can be offered via phone for an additional price to that of normal phone services, and include horoscopes, weather forecasts, games and chats.

In this market, the payment collection system has a cascade structure: each phone operator includes the cost of calls to NGNs in the phone bills issued to its own subscribers. Through various possible contractual arrangements, these phone operators transfer the sums invoiced or collected (minus their agreed share for the origination of the calls) to other

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38 Judgment No. 10920/2017.
phone operators owning the NGNs called by users. The owners of the NGNs in turn retain their share of revenues and pay the remaining part of the sum to the service centres actually providing VAS.

According to the claimants, from 2005 until 2009, by falsely alleging the fraudulent origin of traffic directed from Telecom users to the plaintiffs’ NGNs, Telecom had stopped paying substantial amounts contractually owing to Eutelia and Voiceplus. In the claimants’ view, Telecom’s alleged monopoly on the upstream market for access to users allowed the company to abusively suspend payments to Eutelia and Voiceplus in order to throw them out of the market. According to the plaintiffs, Telecom only refused to pay for traffic directed to Eutelia’s NGNs, but regularly paid VAS providers for traffic directed to Telecom’s own NGNs, thus pushing the most important VAS providers to abandon Eutelia and choose Telecom as a contractual partner.

The Court rejected the plaintiffs’ claims. The judge found that Telecom had not provided proof of the alleged frauds for some of the payment suspensions. However, Eutelia and Voiceplus had not sufficiently identified the relevant market in which Telecom was allegedly dominant, nor consequently proven dominance. Furthermore, the plaintiffs had not demonstrated that Telecom had discriminated among service providers based on NGN ownership, and had not provided sufficient evidence of the alleged flux of important VAS providers from Eutelia and Voiceplus to Telecom. On the contrary, Telecom had supplied proof that in the relevant period it had suspended the payment of comparable amounts for alleged fraudulent traffic to its own contractual partners providing VAS services on NGNs belonging to Telecom itself. As a result, the Court dismissed the plaintiffs’ allegations of abuse of dominance under Article 102 TFEU.

**European Court of Justice joined cases C-54/17 and C-55/17**

In March 2012, the IAA found that Wind and Vodafone performed aggressive commercial practices by marketing SIM cards with pre-loaded and pre-activated functionalities, such as internet browsing services and voicemail services, the use of which was charged to the user if they were not deactivated at his or her express request, without that user having been informed in advance of their existence.

Wind and Vodafone appealed against those decisions before the Administrative Court of Lazio. By judgments of 18 February 2013, the Court annulled the contested decisions on the ground that the IAA lacked competence. It stated that such sanctions fell within the competence of AGCOM. The Court considered that the practices at issue were covered by special legislation (the Electronic Communications Code) that gave AGCOM exclusive powers to inspect, prohibit and issue fines with regard to electronic communication services.

AGCM lodged an appeal against the judgment before the Council of State. In February 2016, the Plenary of the Council of State affirmed that, under Italian law, the competence to sanction a mere infringement of information obligations in the electronics communication sector lay with AGCOM, while penalising a ‘commercial practice that is in all circumstances considered aggressive’ (such as, *inter alia*, the inertia selling at issue in the proceeding) fell within AGCM’s competence, even in the electronic communications sector.

The Sixth Chamber of the Council of State manifested doubts, however, as to whether Article 27(1-bis) of the Consumer Code (concerning the relationship between the IAA and AGCOM over unfair commercial practices), as interpreted by the Plenary of the Council of State, is compatible with EU law.
The Council of State asked the European Court of Justice (ECJ) whether the conduct of the telecommunications operators at issue could be characterised as inertia selling or, more broadly, as an aggressive commercial practice within the meaning of the Unfair Commercial Practices Directive, and whether EU law on electronic communications precludes national legislation under which inertia selling is covered by the Unfair Commercial Practices Directive with the result that the national regulation authorities are not competent to penalise such conduct.

The ECJ concluded that the conducts at issue constitute inertia selling and, therefore, according to the Unfair Commercial Practices Directive, an unfair commercial practice. In addition, the Court stated that EU law does not preclude national legislation from imposing an obligation to assess inertia selling pursuant to the Unfair Commercial Practices Directive. As a result, the national regulation authorities are not competent to penalise such conduct.

### iii IAA intervention regarding the TMT sector

**Cases A500A and A500B – TIM and Vodafone for abuse of dominant position**

On 13 December 2017, the IAA imposed two separate fines against Vodafone and Telecom and its subsidiary Telecom Italia Sparkle SpA for alleged abuses of dominant position in the wholesale market for SMS termination services on their own network, with effects on the retail market for the services of mass sending of corporate SMS.

In particular, the IAA concluded that Vodafone performed internal and external discrimination of a technical and economic nature capable of compressing the margins to the detriment of competitors that buy the termination of SMS to the Vodafone mobile network in the downstream market.

As regards Telecom, the IAA concluded that the company compressed the margins for an equally efficient competitor in the downstream market for the acquisition of the SMS termination to the TIM mobile network. In both cases, TIM and Vodafone, dominant in the respective upstream markets for SMS termination on their own network and vertically integrated, applied tariffs both on the upstream market and on the downstream market for mass sending of corporate SMS capable of making the potential margin for competitors in the retail market insufficient to cover the costs of providing such services to end users.

**Case I820 – initiation of proceedings for anticompetitive agreements concerning the changing of billing timing and the IAA’s interim order**

On 7 February 2018, the IAA initiated proceedings against TIM, Fastweb, Vodafone, Wind Tre and Asstel for allegedly coordinating to preserve an increase of the tariffs charged to end users. Starting from 2015, all the operators informed their customers that the billing and renewal of services provided would be carried out on a four-weekly basis (every 28 days) and not on a monthly basis. Subsequently, Law No. 172/2017 introduced the obligation for providers of ECSs to renew and bill the services provided to end users on a monthly basis, granting a period of 120 days to implement such provision.

According to the IAA, the alleged coordination between the parties led to the adoption of almost identical implementation methods of the provision of Law No. 172/2017. In fact, Fastweb, TIM, Vodafone and Wind Tre informed their customers that the billing of the services provided would be carried out on a monthly basis and no longer on a four-weekly basis, with the consequence that the total annual expenditure would remain unchanged but it would be distributed over 12 instalments instead of 13 (with an increase of each instalment of 8.6 per cent).
The alleged coordination between TIM, Vodafone, Fastweb and Wind Tre would be aimed at preserving the increase of the tariffs determined from the initial change of the periodicity (from monthly to four-weekly).

Within the proceedings initiated to assess the alleged coordination between the operators, on 21 March 2018, the IAA initiated a sub-proceeding to adopt interim measures. It imposed on the operators the duty to suspend, pending the proceeding, the coordination concerning the repricing of the tariffs communicated to their customers, and it required each operator to define the terms of its offers independently from its competitors.

This interim measure was adopted because, according to the IAA, the documentation acquired during the inspection confirmed the existence of coordination between operators, especially concerning the choice to apply, together with the return to monthly invoicing, an increase in monthly tariffs of 8.6 per cent.

This is the first interim measure adopted by the IAA in the context of anticompetitive agreement proceedings.

**Case I799 – commitments of TIM and Fastweb regarding an anticompetitive agreement**

On 1 February 2017, the IAA initiated a proceeding against TIM and Fastweb SpA for a possible infringement of Article 101 TFEU concerning the setting up of a joint venture, Flash Fiber Srl, aimed at deploying ultra-broadband network infrastructure in 29 Italian cities.

The IAA raised concerns regarding the potential anticompetitive implications of the agreement, which were capable of restricting competition in the markets for wholesale access provided at a fixed location and in the market for retail broadband and ultra-broadband services. According to the IAA, the agreement could involve significant coordination between the two main vertically integrated competitors concerning access conditions to the joint-venture networks and price fixing to end users.

Fastweb and TIM argued that any potential anticompetitive effect resulting from the agreement would be offset by the positive effects produced by the same, pursuant to Article 101(3) TFEU, considering that it would promote technical progress for the benefit of consumers. Moreover, the competitive pressure ensured by Open Fiber SpA would secure downstream efficiencies in the form of price reductions for consumers.

On 28 March 2018 the IAA closed the proceedings by accepting the parties’ commitments. Inter alia, the companies committed to:

- set up the FTTH network in the 29 cities affected by the agreement within strict deadlines;
- reduce the duration of Flash Fiber to what is strictly necessary to ensure the recovery of the investments made;
- negotiate agreements with third parties requiring reciprocal access to the respective infrastructures in terms of the transfer of the indefeasible right of use for up to 30 years; and
- oblige Flash Fiber to adopt suitable measures to prevent the transfer between the companies of any commercially sensitive information and an antitrust compliance manual, and to put a person in charge of supervising compliance with the compliance manual.
VII CONCLUSIONS AND OUTLOOK

According to AGCOM’s annual report, in 2017 the Italian TMT sector grew by 0.9 per cent, after having recorded a continuous contraction between 2006 and 2015. The main focus of the regulators remains the growing demand for broadband and ultra-broadband networks. The national auction concerning the 5G frequencies was awarded on 2 October 2018 for a record amount of €6.55 billion. Compared to those auctions held in Finland, Ireland, Spain and the United Kingdom, the Italian auction was the most expensive in Europe. Vodafone and Telecom have been awarded the generic batch of the 700MHz band, in addition to the reserved portion already awarded to Iliad as a new entrant in the market.

The competitive dynamics of the mobile sector also changed in 2018 due to the entry into the market of Iliad: the offers of the other main operators have suffered a drastic drop in prices and at the same time the amount of gigabytes and SMS offered by telecom companies has increased.

As regards litigations, 2018 saw the dispute between Sky, Lega Calcio and the Spanish independent intermediary MediaPro concerning the auction of the audiovisual rights for Italian Serie A for the 2018 to 2021 football seasons.
Chapter 13

JAPAN

Hiroki Kobayashi, David Lai and Takaki Sato

I OVERVIEW

The media and telecommunications environment in Japan has continued its rapid development throughout 2017 and the first half of 2018. While the country has already achieved a broadband penetration rate of 100 per cent, numerous measures have been (and continue to be) implemented to prepare the nation’s telecommunications networks and regulatory regimes for hosting the 2020 Olympic Games in Tokyo. To accommodate the increased number of foreign visitors that will attend the Olympic Games, both the government and private mobile service providers have focused their efforts on the expansion of free Wi-Fi accessibility. Concurrently with this increase in free Wi-Fi availability, longstanding restrictions on the use of foreign mobile devices in Japan have been liberalised, with the result that overseas visitors may temporarily bring and use their personal devices without registration.

The government and the three main mobile services providers have announced their intent to offer next-generation 5G cellular data services by 2020. In furtherance of this goal, NTT DOCOMO and KDDI, two of the three providers, began testing 5G networks in May 2017 and publicised the results in March 2018. We expect Japan to continue to develop its telecommunications networks, services and technologies in the coming years in anticipation of the Olympic Games.

The government is also increasingly prioritising the expansion of market access and competition within the Japanese telecommunications industry, with the ultimate goal of reducing mobile device charges for Japanese consumers. Recent regulations and policy guidelines issued by Japan’s Ministry of Internal Affairs and Communication (MIC) have led to a significant increase in the number of active MVNOs, which has also resulted in a number of major Japanese companies, such as Rakuten, entering the MVNO sector. The increase in MVNO service availability has served to both further increase pressure on Japanese regulators to facilitate fair competition within the telecommunications industry, as well as incentivise the major telecommunications companies to reduce prices.

While the MIC and other government authorities have taken steps to eliminate various business practices considered by many to be anticompetitive, such as SIM card locking and automatically renewing two-year service contracts, there remain a number of hurdles that have not yet been fully addressed. For example, the government has not yet implemented an auction process for determining broadcast spectrum allocations, despite criticism that the current allocation process lacks transparency and favours content broadcasters over mobile

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service providers. Nevertheless, the MIC and other governmental agencies remain committed to improving high-quality telecommunications network access and reducing associated costs for consumers, and we foresee significant regulatory reforms on the horizon to accomplish these goals.

Recently, the Intellectual Property Strategy Head Quarter of the Cabinet Office (IPSHQ) has expressed significant concern about the growing number of websites promoting and enabling the piracy of media content in Japan, which the IPSHQ views as harmful to its ‘Cool Japan’ policy. To combat issues of piracy, in April 2018 the IPSHQ issued an order encouraging private ISPs to voluntarily take measures to block certain well-known piracy websites. This order was met with a backlash from the Japan Internet Providers Association and private citizens, who view the suggested measures to be in violation of Japanese laws protecting the secrecy of communications. Nevertheless, the IPSHQ has announced its intent to adopt more concrete regulations directed at the blocking of piracy websites in 2019, which we anticipate will be the subject of significant debates.

II REGULATION

i The regulators

The MIC’s broad authority to regulate in the telecommunications and broadcasting spaces is derived from a series of statutes, which are the ultimate source of law in these sectors in Japan. The core statutes conferring this authority include:

- the Wire Telecommunications Act, which governs facilities for wired signal transmission, such as wired telephony, wired broadband networks and cable television;
- the Radio Act, which governs facilities for wireless signal transmission, such as mobile phones, terrestrial and satellite television broadcast infrastructures, and high-powered Wi-Fi networks;
- the Telecommunications Business Act, which regulates telecommunications and media businesses; and
- the Broadcast Act, which regulates the content that telecommunications and media businesses carry or provide.

The Broadcast Act and the Radio Act were amended in November 2010 to provide a more streamlined regime for the review and granting of broadcast licences, which included the separation of broadcasting licences from transmission licences, which had previously been a single licence, in order to make the process of receiving a licence easier for applicants.

Prior to this amendment, general broadcasting licences, cable radio broadcasting licences, CATV broadcasting licences and licences to broadcast content through third-party facilities were granted by the MIC under different statutes using different procedures that had developed over time as the underlying technologies were developed and implemented. The statutory licensing provisions for these activities were consolidated into the amended versions of the Broadcast Act and Radio Act, under which broadcasting activities have been divided into two major licensing categories: main broadcasting, consisting of both terrestrial broadcasting and broadcasting through broadcasting and communication satellites located over 110 east longitude; and regular broadcasting, covering broadcasting through all other satellites, CATV and IPTV.

Prior to the amendment, terrestrial broadcasting licences were granted only to broadcasters that both provided their own broadcast content and operated the wireless
transmission facilities used for its distribution. Under the amended Broadcast Act and Radio Act, broadcasters are now able to distribute their programming through third-party terrestrial wireless transmission facilities, just as they already were permitted to distribute their programming through third-party satellites and third-party cable television providers.

These reforms have lessened the regulatory burdens on telecommunications and broadcasting companies to provide flexibility as to the management of those companies and to open up competition by decoupling the ownership of broadcasting facilities from the production of broadcasting content.

ii  Regulated activities
The MIC exercises its statutorily conferred regulatory power in numerous ways. For one, it has the authority to grant broadcasting licences (for facilities such as television and radio stations that produce or broadcast media content), wireless transmission licences (for mobile phones and facilities such as mobile phone base stations and satellites) and telecommunication business licences (for traditional wired communications as well as mobile phone providers and ISPs), and monitors the businesses conducted with such licences.

The MIC is also charged with allocating radio spectrum to licence holders, and has adopted detailed regulations to monitor and establish technical standards applicable to spectrum users and their licensed facilities and businesses. The process through which the MIC exercises this decision-making authority has often been criticised as opaque and arbitrary. For example, the allocation of radio spectrum frequencies to private sector users is based on the overall judgement of the MIC, and not on any clear set of factors, leaving applicants unsure as to what elements are being considered and opening the MIC to accusations of favouritism or political manipulation. Spectrum policy in Japan is further discussed in Section IV.

The Broadcasting Act requires licensed broadcasters to stay politically neutral and report the truth. In February 2016, the Minister of the MIC made a statement during a legislative session that caused major controversy. As an example of an action that would materially deviate from the requirements of the Broadcasting Act, the Minister stated that a broadcaster would be in violation of the Broadcasting Act if it repeatedly broadcasted lengthy content supporting a particular political view and not reporting on other political views. In the case of such a breach, the Minister indicated that the MIC could issue an order to suspend such broadcaster’s business. This statement was criticised for potential chilling effects on freedom of speech.

iii  Ownership and market access restrictions

Restrictions on foreign investment
Foreign ownership and management of broadcasting licence holders, wireless transmission licence holders and Nippon Telegraph and Telephone Corporation (NTT), a semi-privatised national telecommunications service provider, is restricted by statute.

As discussed in Section II.i, the Broadcast Act and the Radio Act, each amended in 2010, now divide broadcasting activities into two categories: main broadcasting and regular broadcasting. Under the amended Broadcast Act, no foreign national, foreign entity or Japanese entity that has either a non-Japanese director or 20 per cent or more of its voting shares directly owned by one or more foreign nationals or entities may hold or receive a licence for main broadcasting. Further, the indirect foreign ownership of 20 per cent or more of a licence holder’s voting shares through a domestic subsidiary or affiliate is not permitted for terrestrial (non-satellite) main broadcasting licences. If foreign nationals or entities acquire
20 per cent or more of the voting shares of a main broadcasting licence holder, the licence will be cancelled. To avoid cancellation of its licence, any main broadcasting licence holder whose shares are traded on a stock exchange is permitted by statute to refuse to recognise a transfer of its shares if the transfer would cause it to violate the foreign ownership restrictions. In contrast, foreign investment in regular broadcasting licence holders is not restricted. As a result, several foreign-owned broadcasters now broadcast into Japan through cable television and third-party satellites. In March 2018, reports surfaced that the government was considering the abolishment of the foreign ownership restrictions and foreign management restrictions in entities holding a main broadcasting licence. While abolishment of these ownership and management restrictions was not included in the regulatory plan published by the government in June 2018, the government is reportedly continuing to consider potential future abolishment.

Restrictions on cross-ownership
Ownership of multiple broadcast outlets is restricted by the Broadcast Act and related regulations. This restriction on the concentration of ownership is intended to support press freedom and the diversity of speech in broadcasting. The restriction includes limits on the simultaneous ownership of shares in, and board seats of, multiple main broadcasting licence holders, as well as aggregate upper limits on the use of satellite transponder capacity for owners of multiple main broadcasting licence holders. However, in response to worsening business conditions for radio broadcasters, the MIC amended its regulations in 2011 to relax restrictions on the cross-ownership of radio broadcasting licence holders, now allowing entities to simultaneously control up to four licence holders. Cross-ownership of newspapers and broadcasters has not been restricted in Japan. Newspaper companies often hold large ownership stakes in broadcast companies; in fact, each major private television broadcast network in Japan is affiliated with a major newspaper.

Transfers of control and assignments
In addition to foreign ownership and management, and cross-ownership limits, MIC approval is required for mergers and acquisitions that result in a new entity holding a main broadcasting or wire transmission licence. Therefore, a statutory merger pursuant to which a licence holder will not be the surviving company, or the divestiture of a business conducted under such licence, each generally require MIC approval. The MIC’s review process primarily involves a determination as to whether the proposed transferee of a licence would have been eligible to independently qualify as a new licensee.

Further, the Telecommunications Business Act was amended in May 2015 to require the major telecommunications companies to renew their respective telecommunications business registrations when such companies engage in mergers or share acquisitions. The telecommunications industry in Japan is monopolised by three major private telecommunication companies – NTT DOCOMO, KDDI and SoftBank – and this

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2 These renewal requirements apply to any fixed line provider with greater than 50 per cent market share and any mobile provider with greater than 10 per cent market share.

3 NTT DOCOMO is publicly traded, but NTT Corporation holds approximately 66.64 per cent of its outstanding shares. NTT Corporation is 34.45 per cent owned by the Japanese Ministry of Finance as of 31 March 2018.
amendment allows the MIC to review the potential anticompetitive effects of any proposed merger or share acquisition on business operations and fair trade. The amendment came into effect in 2016.

In addition, pursuant to Japan’s Foreign Exchange and Foreign Trade Act, certain acquisitions of shares in broadcasting licence, wireless transmission licence and telecommunication business licence holders by non-Japanese parties are subject to prior filing and waiting periods. Ordinarily, this is a pro forma requirement where no national security concerns are present.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation
The MIC regulates internet and IP-based services (such as high-speed internet and VoIP), along with wired telephony and mobile phones, under the Telecommunications Business Act. The Act and the regulations thereunder emphasise protection of the secrecy of communications and the reliable and non-discriminatory provision of telecommunications services.

The Act not only regulates service providers that operate their own network facilities, but also service providers that facilitate telecommunications between users but do not operate their own network facilities (such as dedicated hosting services on which clients can operate an email server). Internet-based services that are not designed to facilitate telecommunication, such as internet banking and internet-based newsletter and media subscriptions, are not deemed to be telecommunications and therefore are not regulated under the Act.

ii Universal service
Under the Telecommunications Business Act and the NTT Act, the NTT group is required to provide wired telephony services (analogue or IP over optical fibre), pay phone services and emergency call services to all areas of Japan. NTT East and NTT West provide services to depopulated areas, and a telecommunications trade association comprised of each of the major telecommunications companies in Japan, then reimburses NTT East and NTT West for any cost deficits incurred by the NTT group’s provision of such service. National law requires each telecommunication service provider connecting its network with that of NTT East or NTT West to pay a small fee (approximately ¥2 to ¥8, varying from year to year) per landline and mobile phone number (customer), which costs are typically passed along to individual users in connection with their monthly telephone service bills.

There is no similar law requiring universal broadband service. However, as of 2015, the broadband infrastructure (3.5G, satellite internet, 3.9G, DSL, optics fibre/FTTH, etc.) penetration rate in Japan had already reached 100 per cent, and super-broadband

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4 Regulated transactions include an acquisition of 10 per cent or more of the shares of a licence holder whose shares are traded on a stock exchange or over-the-counter market; and an acquisition from a Japanese party of any shares in a licence holder whose shares are not traded on a stock exchange or over-the-counter market.

5 NTT East and NTT West are subsidiaries of NTT (Nippon Telegraph and Telephone Corporation), which is itself 34.45 per cent government-owned. NTT was initially a single consolidated conglomerate that conducted all of the activities now conducted by the individual NTT group companies. In 1999, the NTT conglomerate was forced to split into multiple smaller companies for antitrust purposes.
infrastructure (optics fibre/FTTH, 3.9G and other infrastructure with data transmission speed over 30Mb per second, including DSL, FWA, satellite, BWA, etc.) penetration rate had similarly reached 99.98 per cent.

Public Wi-Fi access

According to a questionnaire to foreign visitors conducted by the Japan Tourism Agency in 2017, lack of free public Wi-Fi was ranked the third-highest inconvenience during their visit.

The MIC has been planning and implementing improvements to public Wi-Fi services in an effort to increase the number of foreign visitors to Japan. In particular, the MIC has been managing the implementation of the SAQ26 JAPAN Project since June 2014. The goals of the SAQ2 JAPAN Project include:

a increasing the number of free Wi-Fi hotspots and improving the accessibility of these hotspots to the public;

b facilitating the availability and installation of Japanese SIM cards for foreign mobile phone users in Japan;

c reducing international roaming fees applicable to foreign mobile phone users in Japan; and

d implementing multi-language interpretation systems (i.e., translation applications).

In November 2013, an NTT group affiliate began providing a smartphone application called Japan Connected-free Wi-Fi, which allows users to connect to approximately 170,000 public Wi-Fi access points, including those at airports, train stations, convenience stores and tourist spots, across Japan with a one-time new user registration. The smartphone application accommodates 16 languages, including English, French, German, Spanish, Italian, Chinese, Korean, Thai and Bahasa Indonesia. This NTT group affiliate also continues to install additional Wi-Fi access points.

In preparation for hosting the 2020 Olympic Games in Tokyo, in February 2016, the MIC issued a policy statement encouraging the adoption of a simplified and unified authentication protocol with the goal of increasing foreign visitors’ access to free public Wi-Fi services. In furtherance of this goal, the MIC is conducting field tests to prove the workability of a unified authentication protocol using smartphone applications and is disseminating this protocol to local municipalities to aid in the revitalisation of local economies through increased tourism. On behalf of the MIC, Gateway App Japan, a non-profit organisation, publishes a smartphone application called the Omotenashi app with the cooperation of KDDI and SoftBank, the primary competitors of the NTT group. It has yet to be decided whether the two smartphone applications (Japan Connected-free Wi-Fi and the Omotenashi app) will be consolidated or made compatible. Even some private companies have started to render free Wi-Fi services for foreign visitors, such as Travel Japan Wi-Fi by Accenture and FREE Wi-Fi PASSPORT by SoftBank.

Tokyo Metro, a railway company owned by the national and Tokyo local governments that operates many of the subway lines in Tokyo, provides public Wi-Fi access points at

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6 This application was prepared primarily for foreign visitors’ use, but Japanese residents are also able to use the application.

7 SAQ is an acronym for selectable, accessible and quality.

8 As of October 2018.

9 Omotenashi means hospitality.
nearly all stations. In 2017, Tokyo Metro announced that it would equip all of the subway trains it operates with Wi-Fi by 2020. Both Japan Connected-free Wi-Fi and Travel Japan Wi-Fi will be available on these trains.

Commencing in January 2019, the government will begin imposing a ¥1,000 departure tax, called the international tourist tax, on all foreign visitors, which tax will only be allowed to be used for the improvement of tourism, including partially for enhancement of the Wi-Fi infrastructure in Japan. The Japan Tourism Agency expects that public investments funded by the international tourist tax will improve the tourism experience and contribute to an increase of foreign visitors’ consumption in Japan and the number of visitors.

Separately from the above free Wi-Fi service improvements, major Japanese mobile phone service providers have established an emergency disaster service set identifier (SSID): 00000JAPAN. This SSID enables each Wi-Fi user to use all Japanese mobile service providers’ Wi-Fi networks during natural disasters regardless of the provider to which they are currently subscribed. This SSID was made available for the first time during a two-week period following an earthquake in the Kumamoto area in April 2016. More recently, this SSID was activated following flood disasters in the Hiroshima and Osaka areas in July 2018 and September 2018, respectively, as well as following a large earthquake in Hokkaido in September 2018. During the 2018 Hokkaido earthquake, however, the Wi-Fi access points were rendered unusable due to widespread electricity outages. In light of growing security and privacy concerns, the MIC recently issued a warning that communications sent through this SSID are intentionally unencrypted to prioritise accessibility, and therefore subject to interception by third parties.

Use of foreign mobile devices

As a general rule, the use of mobile devices in Japan that do not meet Japanese technology standards with respect to the emission of radio waves, and for which the manufacturer has not obtained authentication from the government, is prohibited by law. Therefore, until relatively recently, many foreign visitors’ use of their personal mobile devices in Japan was technically illegal, although there are no known cases of any foreign visitor being charged with Radio Act violations for the use of a personal mobile device. Commencing in August 2016, an amendment to the Radio Act took effect that permits foreign visitors to Japan to use their personal mobile devices (even if not authenticated in Japan) for up to 90 days, so long as the devices have been certified by the Federal Communications Commission in the United States or the CE certification in the European Economic Area using standards equivalent to those imposed upon Japanese technology. This Radio Act amendment was implemented to encourage foreign tourists to visit Japan in anticipation of the Olympic Games in 2020. While there had previously been concerns that devices not authenticated in Japan could adversely affect the radio use environment, the MIC eventually concluded that the likelihood of non-authenticated foreign devices adversely affecting the radio use environment is minimal.
Proliferation of the IoT

To address the rapid increase in the number of IoT devices, which could exhaust the number of available mobile phone numbers, the MIC in January 2017 amended its regulations on the assignment of phone numbers to assign the designation ‘020’ to M2M data connection devices, keeping them separated from standard mobile numbers designated with ‘090’, ‘080’ and ‘070’. It is expected that M2M data connections conducted through mobile networks will initially be used primarily for telemeters (e.g., remote management of water and gas meters, vending machines and elevators) and telematics (e.g., information services equipped in cars) and will eventually cover connected cars and other IoT devices. NTT DOCOMO, KDDI and several MVNOs commercially launched M2M data connection services in October 2017.

IP network

In November 2015, NTT announced a plan to switch from the use of fixed-line PSTN to IP telephony. According to NTT’s proposed implementation plan, NTT will commence work on the switch to IP telephony in January 2021 with planned completion in January 2025. As the existing PSTN is a fundamental telecommunications infrastructure, the MIC is paying close attention to what kind of IP telephony will emerge as well as the process through which NTT will transition away from PSTN. In light of the importance of PSTN to the existing infrastructure, in February 2016 the MIC asked the Telecommunication Council to identify potential issues that could arise from the switch to IP telephony. To mitigate a number of the concerns identified by the Council (such as consumers’ ability to retain existing telephone numbers), the MIC presented a proposed amendment to the Telecommunications Business Act to the Diet in March 2018, which was subsequently enacted in May 2018.

Restrictions on the provision of service

The telecommunications industry in Japan is dominated by NTT East and NTT West and by three major private telecommunication companies: NTT DOCOMO, KDDI and SoftBank. Because existing providers can become dominant to the exclusion of new entrants once their network or technology standard has been adopted by a critical mass of users, the MIC and the Japan Fair Trade Commission (JFTC) have jointly adopted guidelines to regulate anticompetitive practices by providers that have high market shares. For example, the guidelines state that the Fair Trade Commission would raise antitrust issues if a telecommunications service provider, such as a mobile phone carrier, with a high market share were to contractually restrict its customers from switching to another service provider or to charge an excessive cancellation fee for doing so.

Pricing restrictions

Under the Telecommunications Business Act, prices charged to end users by NTT East and NTT West for wired telephony and payphone services are subject to caps to be determined by the MIC. These caps are intended to prevent these companies from abusing their near-monopoly over these fundamental services and to encourage them to improve efficiency. Prices to be charged by NTT East and NTT West for optical data services, and prices to be charged by KDDI, NTT DOCOMO and SoftBank for mobile services, must all be submitted to the MIC for review before being implemented. If the MIC finds a pricing scheme inappropriate, either because it is anticompetitive or is otherwise significantly unreasonable, the MIC may
require the carrier to change its pricing scheme. Otherwise, prices charged to end users of telecommunications services and the other terms of service are not regulated. However, Prime Minister Shinzo Abe and other government officials have recently begun putting pressure on the major telecommunications companies to reduce prices for mobile phone services.

As a general rule, all telecommunication business licence holders must provide access to any other carrier that seeks to interconnect with their network. However, prices for and the methods of interconnection have been areas of both public controversy and regulatory scrutiny. Telecommunications companies have pressed for greater access to NTT’s infrastructure, including its optical fibre network. NTT only provided access to its fibre-optic network on a bulk basis until 1 February 2015, when NTT East and NTT West respectively launched programmes offering single-line fibre optic wholesale to other carriers, including to non-traditional telecommunication companies such as Sohgo Security Services (ALSOK) and Tsutaya, a rental video company. These fibre-optic wholesale programmes are designed to improve fibre optic use by reducing fees for fibre-optic services at the end user level and, as of December 2017, approximately 690 operators had commenced utilising such fibre-optic wholesale services.

Prior to the commencement of NTT’s fibre-optic wholesale programme, there had been competition concerns regarding NTT group companies’ fibre-optic services, which stemmed from the confidential nature of NTT East’s and NTT West’s contracts with secondary retailers providing fibre-optic wholesale services. At such time, other major telecom service providers such as KDDI and Softbank expressed concern that NTT East and NTT West provide their fibre-optic wholesale services to NTT group companies at lower prices than to unaffiliated companies, which, in turn, enables NTT group companies to provide fibre-optic services to end users at lower prices. In response to these concerns, the MIC prepared guidelines with regard to the provision of fibre optic wholesale that prohibit the unfair treatment of specific service providers and also provide for potential enforcement mechanisms by the MIC. A survey conducted by the MIC shows NTT DOCOMO and NTT Communications (a data communication company of the NTT group) obtained approximately 60 per cent of the fibre-optic wholesale service market by offering large fee discounts on their respective mobile services to users. This wholesale market share concentration is prominent, and other fibre-optic service providers have argued that the discounted fees charged by NTT DOCOMO and NTT Communications are anticompetitive in nature. To address these concerns, the MIC decided in May 2016 to launch investigations into NTT DOCOMO’s business practices. In its preliminary report, which was issued for public comment in 2018, the MIC concluded that the discounted fees charged by NTT DOCOMO and NTT Communications did not constitute anticompetitive practices. During its investigation, however, the MIC found that the description on NTT DOCOMO’s website of the terms and conditions applicable to its pricing discount was misleading to customers. NTT DOCOMO voluntarily modified this description, but in June 2018 the MIC nonetheless issued an administrative direction to NTT DOCOMO to prevent future occurrences of misleading marketing.

**MVNOs**

Along with the introduction of a fibre-optic wholesale services, in recent years mobile line wholesale services (MVNOs) have begun expanding in Japan. While MVNOs have existed in Japan since 2001, until recently the number of service providers and subscribers had been few in number. In 2007, the MIC’s guidelines regarding MVNOs were amended to clarify the relative rights and obligations between MVNOs and MNOs, and a formalised dispute
settlement procedure was established. After this amendment, the number of MVNO service providers using MNOs’ mobile lines or WiMAX lines increased. In 2014, the guidelines for the operation of Type II designated telecommunication facilities were amended, which included a change in the calculations for mobile line wholesale pricing. These calculation changes have reduced mobile line wholesale prices to the benefit of MVNOs. More recently, in 2017 the guidelines regarding MVNOs were amended twice to, among other things, clarify that if an MNO discriminates against MVNOs with respect to providing access to the MNO’s network, the MIC may issue it business improvement orders.11

The aforementioned guideline amendments have spawned a recent increase in MVNO activity. In FY 2013, only 22 MVNOs provided data communication services or voice communication services in Japan. However, as of March 2018 the number of active MVNOs has increased to 886. Correspondingly, there were 18.40 million MVNO subscribers by March 2018, up from 7.17 million in December 2013. However, despite this recent increase in MVNO activity, MVNO service subscribers still only constituted 10.6 per cent of all mobile service subscribers as of March 2018. In September 2017, Rakuten, a major online shopping platform also operating an MVNO business, announced its acquisition of Freetell, a financially distressed MVNO business operated by an equally financially distressed manufacturer of mobile terminals. This acquisition contributed to Rakuten’s grasping the largest market share in the MVNO market, which was 15.4 per cent as at 30 June 2018.

Anticompetitive business practices

One of the reasons MVNO penetration remains low stems from the common practice by MNOs of permitting subscribers to purchase new mobile devices on monthly instalment plans, while often simultaneously offering discounts on monthly subscription fees equal to or greater than the amount of such monthly instalment payments. MNOs advertise this instalment and discount programme as rendering subscribers’ new devices effectively free. In contrast, the vast majority of MVNOs do not have the financial resources to permit subscribers to pay for new mobile devices in instalments. Instead, MVNO subscribers seeking a new mobile device must often pay its entire purchase price upfront. This resource disparity has made it difficult for MVNOs to compete with MNOs for new subscribers.

Recognising the high barriers to entry created by effectively free mobile device programmes, in December 2015, the Minister of the MIC informally requested NTT DOCOMO, KDDI and SoftBank to reconsider their respective use of effectively free new mobile device programmes. Further, in March 2016, the MIC issued guidelines affirmatively compelling MNOs to decrease the size of their mobile device discounts, such that subscribers are required to make reasonable payments toward their new devices, with the intended result that competition would be bolstered and, eventually, subscription fees would be reduced. In October 2016, the MIC issued official warnings to NTT DOCOMO, KDDI and SoftBank for attempting to subvert the March 2016 amended guidelines by distributing coupons to subscribers and potential subscribers in lieu of discounts.

11 The MIC, as part of its regulatory enforcement powers, has the authority to issue business improvement orders to telecommunications companies to the extent it deems their activities to significantly disrupt the sound development of telecommunications services.
The MIC has also made efforts to address the issues of SIM locking and requiring subscribers to enter into two-year service contracts with automatic contract renewal, in each case to facilitate competition between MNOs and MVNOs and reduce consumers’ mobile expenses.

Since the MIC’s adoption of guidelines in 2010, it has been encouraging mobile service providers to provide SIM unlock options for customers’ mobile devices, as it believes that the practice of SIM locking prevents consumers from freely choosing mobile service carriers and causes competition stagnation. However, these guidelines did not initially include a direct or indirect obligation of mobile service providers to implement SIM unlock policies and, as a result, NTT DOCOMO was the only operator that implemented a SIM unlock option at that time. Several amendments to the 2010 guidelines have been implemented over the past few years to improve customers’ access to SIM unlocking services, but certain restrictions still remain. However, following an August 2018 amendment to the guidelines, mobile service providers will be required to honour SIM unlocking for all mobile devices effective as of 1 September 2019, including devices purchased on second-hand markets, other than mobile devices for which the purchase price is being paid in instalments (in which case, SIM unlocking requests must still be honoured 100 days after the purchase).

While there has been gradual and significant advancement in Japan with respect to SIM unlocking policies, there has been little progress toward the abolishment of automatically renewing two-year service contracts. MNOs often require customers enjoying the benefits of their effectively free mobile device programmes to enter into two-year contracts under which customers are required to pay approximately ¥10,000 for early termination, plus an accelerated payment of the purchase price of a smartphone that would otherwise be paid by instalments during the two-year term. The two-year contract system, in conjunction with the effectively free mobile device practice, has been identified as reducing customers’ freedom of choice in mobile service carriers.

In July 2015, a council of advisers to the MIC raised the issue of automatic contract renewal as a concern. In response, KDDI and SoftBank started offering two-year contracts without automatic renewal but with additional monthly fees of ¥300. However, these new contracts have been criticised by the JFTC as failing to substantially work as an option for consumers, since they are even less consumer-friendly than the original automatically renewing two-year contracts in that they effectively impose an early termination penalty of ¥7,200 (¥300 per month over 24 months) even if customers do not terminate (or if they properly terminate the contract in the 25th month). NTT DOCOMO has started to offer an option to, at each renewal, choose to continue with an additional two-year term, receive additional customer reward points or convert to a month-to-month contract, which scheme has been deemed as ‘inducing consumers to use the automatically renewing two-year contract system’ by the JFTC. However, despite its anticompetitive findings, the MIC has not completely prohibited two-year contracts with automatic renewal.

In June 2018, the MIC finally issued an administrative direction to request NTT DOCOMO, KDDI and SoftBank to abolish automatically renewing two-year contracts. Specifically, the MIC requested the three operators to allow customers to terminate their automatically renewing two-year contracts without paying a penalty fee at any time during the term. The JFTC also announced that automatically renewing two-year contracts would

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12 However, NTT DOCOMO required customers to pay a fee of ¥3,000 for SIM unlock requests, and the SIM unlock provided was incomplete.
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violate antitrust law if the purpose of such contracts is just to bind customers for two years and has no particular reasonable justification, and the four-year instalment programme with the waiver of remaining instalments would violate antitrust law if such programme frustrates the switching of carriers such that it effectively deprives customers’ freedom to choose carriers. Further, in August 2018, the MIC amended its guidelines to require carriers to give an express explanation on such programme to waive remaining instalments.

Despite this, the three carriers have not agreed to abolish automatically renewing two-year contracts. In response to the MIC’s Administrative Director, in August 2018, each of them announced that they will amend their programmes to permit termination without charge for the period running from the 24th month to the 26th month following commencement. This clearly would just expand the window for termination without charge, and would not address the fundamental issue of automatically renewing two-year contracts. The MIC has not taken any action against these announcements.

The MIC has also recently begun analysing the state of competition between MVNOs. In particular, the MIC has expressed concern that MNOs might favour MVNOs that are their affiliates and, in turn, discriminate against non-affiliate MVNOs by providing them slower data traffic speeds. The MIC did not mention any MNOs by name, but it has been widely thought that the MIC was referring specifically to KDDI (and UQ Communications, an MVNO that is 32 per cent-owned by KDDI) and SoftBank (and Y!Mobile, a low cost mobile service provided by SoftBank). In September 2018, the MIC announced its intent to amend its regulations to effectively prohibit discrimination with respect to data traffic speeds. The MIC also amended the enforcement regulations under the Telecommunication Business Act in 2017, in furtherance of fair trade regarding MVNOs. In light of the increasing number of customer complaints regarding this kind of service, the amended regulations have added MVNO voice communication services to the list of services for which customers may exercise a cooling-off period right within eight days of receiving their written contract.

Unsolicited communications

Separate regulations exist in Japan restricting unsolicited texts and emails and unsolicited phone calls. With respect to unsolicited texts and emails, the Act on Regulation of Transmission of Specified Electronic Mail prohibits:

- the transmission of emails using false sender information as a means of advertisement for the sender’s own or another person’s sales activities;
- the transmission of emails to persons who have not opted in to receive such specified emails; and
- even where the recipient has opted in to receive emails from the sender, the transmission of an unreasonably large number of emails for the purpose of corroborating or promoting the sender’s own or another person’s sales activities.

Violators of these prohibitions on unsolicited texts and emails may face penalties of up to one year’s imprisonment or a fine of up to ¥1 million. Regulations pertaining to unsolicited phone calls are handled at the local prefectural level. Accordingly, each local prefectural government has established a local ordinance prohibiting the making of unsolicited phone calls. For example, the Metropolitan Government of Tokyo has implemented an anti-nuisance ordinance prohibiting continued unsolicited phone calls and facsimiles, and offenders may be penalised with up to six months’ imprisonment or a fine of up to ¥500,000.
Security

Protection of Personal Information

In keeping with Japan’s constitutional protection of freedom of speech and secrecy of communication, the Telecommunications Business Act prohibits ISPs from censoring or infringing on the privacy of communications passing through their networks.

As a general matter, the Law Concerning the Protection of Personal Information (Privacy Act) protects personal information or data that can be used to identify specific living persons. Under the Privacy Act, such entities handling such information are required to publish a ‘purpose of utilisation’ regarding its use. Personal information incorporated into a database must be kept accurately, and necessary and proper measures to maintain its security must be instituted. Any person whose personal data is kept in a database for more than six months has a right to request access to the data, and add to, modify or delete it. In August 2015, the Privacy Act was amended to strengthen the protection of personal information, including through expanded protection of sensitive personal information, restrictions on the transfer of personal information outside Japan and the establishment of protocols for the use of anonymised data to facilitate big data analysis.

Further, the MIC has issued Privacy Act guidelines that are specific to telecommunications businesses. As these guidelines are structured to reflect the requirements under both the Privacy Act, which generally applies to all businesses handling personal information, and the Telecommunications Business Act, which provides protections relating to the secrecy of communication (a constitutional right), they are considered even more stringent and robust than the Ministry of Economy, Trade and Industry guidelines, which solely reflect Privacy Act regulations. Under the MIC’s Privacy Act guidelines, information related to persons making or receiving communications, such as their usage history, identity and user location, may only be disclosed to third parties in very limited circumstances, such as pursuant to a search warrant. In addition, the MIC’s Privacy Act guidelines were amended on 2 November 2011, allowing telecommunications business providers to provide users’ locational information to third parties only if they have the user’s consent, a search warrant or other valid justification; and to obtain a user’s locational information pursuant to law enforcement agencies’ requests only if a warrant is issued. The MIC’s Privacy Act guidelines also require telecommunications businesses to establish internal regulations regarding the length of time they may retain communication log records, and to delete this information after the expiry of such period. In June 2015, the MIC amended the guidelines again to set out a suggested length of time during which communication log records may be retained (six months to a year, depending on the business reasons for retaining such information).

In response to amendments to the Privacy Act, in April 2017 the MIC amended the guidelines to, among other things, require telecommunications business operators to publish privacy policies regarding their collection and use of private information and, in particular, the collection of information through smartphone applications. Telecommunications business operators are particularly likely to transfer personal data across borders, which is subject to certain restrictions under the Privacy Act when a business operator processing personal data in Japan transfers such personal data from Japan to third parties located in foreign countries. Even foreign business operators (not processing personal data in Japan) should pay attention to extraterritoriality, which is triggered when they collect personal data from a data subject located in Japan in connection with their supplying goods or rendering service to him or her. In an effort to facilitate the international exchange of information, in July 2018 the Personal Information Protection Committee and the Commissioner for...
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Justice, Consumers and Gender Equality of the European Commission mutually recognised each other's personal data protection regimes as equivalent. Once Japan and the EU complete their respective internal procedures, the current restrictions on the cross-border transfer of personal data between Japan and the EU will be exempted. It is expected that these internal procedures will be complete by the autumn of 2018.

**Treatment of infringing content**

ISPs are not currently required to proactively delete content that infringes upon the intellectual property rights or privacy of others. However, the Internet Provider Liability Limitation Act, enacted in 2001, provides a safe harbour for ISPs that delete such content. Under this safe harbour, no ISP may be held liable for the deletion of content on its network if the ISP reasonably believes that such content infringes the intellectual property rights or privacy of others, or a third party alleges such infringement and the sender of the content does not respond to the ISP's inquiry within seven days. The Internet Provider Liability Limitation Act further shields ISPs from tortious liability for failing to delete infringing content. In reliance on this statutory defence to liability, ISPs generally do not take steps to monitor the content passing through their networks. The Act does, however, authorise persons whose rights are infringed by content delivered over the internet to demand information regarding the sender of the content from ISPs so that legal action may be taken against the sender. However, as a practical matter, it is often not possible to identify the original sender of such infringing content where content passes through multiple networks. In recent years, the government has paid close attention to piracy issues affecting Japanese businesses, in particular those piracy activities that target the types of media relevant to its Cool Japan policy (e.g., manga and animation).

In April 2018, the IPSHQ took what many viewed to be an aggressive step by issuing a policy called Urgent Countermeasures against Piracy Sites directed at piracy issues. Under this policy, the IPSHQ declared that it is appropriate for private ISPs to voluntarily block access to three major piracy websites: Manga-mura, Anitube and Miomio. The policy does not legally oblige ISPs to block access to these sites, but the IPSHQ nonetheless expects ISPs to voluntarily comply. Notably, there has been strong backlash against the policy from the Japan Internet Providers Association, which has argued that blocking access to these sites violates the laws protecting the secrecy of communications. According to the IPSHQ, the policy is simply a temporary measure that is intended to bridge the gap until the government passes more permanent legislation concerning piracy websites (currently slated for 2019). The IPSHQ has established a council comprising experts on this issue for the purpose of drafting such legislation, with an initial plan to issue an interim report in September 2018. Nevertheless, there has been strong disagreement even among the council’s members concerning the legitimacy of blocking, and thus they failed to issue the interim report within such time frame. The final meeting of the council in October 2018 closed without scheduling another meeting, and the council may discontinue any further discussion, according to reports. We anticipate that concrete legislation on this matter will remain the subject of further significant debate.

**Protection of minors**

A statute for the protection of minors from harmful internet content, known as the Youth Internet Environment Act, became effective in April 2009. The statute directs government bodies to improve internet safety for juveniles (under the age of 18) by encouraging ISPs to
use technologies that limit juvenile access to harmful content. The statute targets content glorifying crime or suicide, obscene sexual content, and other depictions of extreme violence or cruelty. The statute further exhorts parents to monitor their children's internet use, and to limit access to inappropriate content by using filtering software and other measures.

The statute requires mobile network service providers to filter internet content for customers that are juveniles, except where a parent has expressly requested that filtering not be used. Under the Act, commencing in April 2010, manufacturers of devices with internet connectivity (other than mobile phones) became required to pre-install filtering software or otherwise facilitate the use of third-party filtering software or services. Initially, the Act did not impose any filtering-related requirement on mobile phone use outside the mobile network (e.g., on Wi-Fi) partly because only 1.5 per cent of juveniles owned smartphones in 2010. However, as of 2017, 63.2 per cent of juveniles owned smartphones, and only 44 per cent of those juvenile smartphone users utilised filtering software. This means that a large population of juveniles could have been exposed, or at least had access, to inappropriate content in an unfiltered manner. In June 2017, the Act was amended to include smartphones within the scope of mobile network service providers' obligations to filter internet content and manufacturers' obligations to pre-install filtering software. The amended Act also requires mobile network service providers (i.e., MNOs and MVNOs) to confirm whether each new subscriber is a juvenile, and if so, to explain filtering to such juvenile and activate filtering. The amended Act became effective in February 2018.

Cybercrime

In Japan, cybercrime has long been an area of public concern. In recent years, law enforcement has focused its efforts on combating cybercrime related to computer hacking through the unauthorised use of IDs and passwords, and other attacks on security holes; the distribution of computer viruses, and the input of data and unauthorised commands that can cause damage to computers and data; and other types of crimes facilitated through the internet, such as drug trafficking, prostitution, fraudulent internet auctions and child pornography.

Combating the distribution of child pornography has been an area of particular scrutiny and public interest. The Act on Punishment of Activities Relating to Child Prostitution and Child Pornography and the Protection of Children, originally passed in 1999, prohibits the distribution of child pornography. This Act was amended in 2004 to outlaw the uploading and distribution of child pornography over the internet, and was further amended in 2014 to criminalise the simple possession of pornographic images featuring minors and to require ISPs to block such pornographic material.

To combat increasing cybersecurity threats, the Basic Act on Cybersecurity was enacted in November 2014. The Act prescribes the concept of cybersecurity and defines the roles and responsibilities of the government. In January 2015, the Cybersecurity Strategic Headquarters (Headquarters) and National Center of Incident Readiness and Strategy for Cybersecurity were established to facilitate programme planning, policy formulation and overall coordination for cross-cutting cybersecurity measures. In July 2017, the Headquarters issued a policy statement on cybersecurity focusing on 2020 and beyond, which lists the actions the government intends on taking, including the formation of a cybersecurity incident response team for the 2020 Olympic Games.

With respect to government authorities’ ability to monitor the content of telecommunications, law enforcement authorities were previously only permitted to utilise wiretapping during criminal investigations of organised crime for murder, drug-related
crimes, arms possession or stowaway smuggling by obtaining a wiretap warrant pursuant to the Act for Wiretapping for Criminal Investigation (Wiretapping Law). However, in April 2016, the Wiretapping Law was amended to permit wiretapping to be used in criminal investigations underlying a broader scope of organised crimes, including those involving the use of explosive materials, kidnapping, fraud, theft and child pornography.

The MIC has expressed particular concerns that the IoT is vulnerable to malware that could render networks ‘zombies’ subject to manipulation by a cyberattacker. The MIC has stressed that to implement countermeasures against cyberattacks, it is essential to have specific information relating to servers used for cyberattacks and infected networks. However, it was difficult for telecommunications business operators to share such information with one another in light of legal obligations to protect the secrecy of communications under the Telecommunications Business Act. In May 2018, the Telecommunications Business Act was amended with the goal of establishing a legal framework to permit such information sharing among telecommunications business operators. Under the amended Telecommunications Business Act, a third-party organisation designated by the MIC will act as a hub through which the relevant information will be shared among telecommunications business operators without violating the secrecy of communications. ICT-ISAC Japan, a cyber-security research organisation, will act as such hub based on the MIC’s designation. In addition, the Act on National Institute of Information and Communications Technology (NICT) has been amended to authorise the NICT to assess networks and identify those lacking appropriate password configurations. The NICT will identify the specific networks and convey the particular IoT-specific information to telecommunications business operators via the designated third-party organisation so that they can warn the network owners of any password configuration deficiencies.

IV SPECTRUM POLICY
i Development
The need for access to the radio spectrum has steadily increased with the proliferation of new technologies utilising wireless data transmission. The number of licensed wireless stations and devices increased from 3.8 million in 1985 (a majority of which were attributable to amateur radio stations and handheld two-way radios) to 234 million as of March 2018 (99 per cent of which were attributable to mobile devices).

The MIC holds broad discretion to determine how the radio spectrum is allocated in Japan and describes its decision-making process as open and collaborative – including consultations with the public, scholars and industry experts. However, the MIC’s decision-making has been criticised by some as arbitrary and opaque. This has led to some calls for the implementation of spectrum auctions as a fairer method of allocation. Despite such criticism, the MIC has yet to establish a system that provides transparency over spectrum policy and spectrum allocation decisions. While there was some movement toward implementing a spectrum auction system, and a bill that would have implemented such system was submitted to the legislature in March 2012, the bill lost momentum following a December 2012 change in the controlling political party in Japan, and the bill has since been rejected.

Many critics point to the MIC’s issuance, in December 2014, of 3.5GHz 120MHz bandwidth spectrum licences to each of NTT DOCOMO, KDDI and SoftBank as prime examples of its discretionary authority when allocating spectrum. This was the first spectrum allocation since the MIC amended its policy restricting submissions of multiple licence
applications from companies that operate their spectrum as a group. Prior to the amendment, companies that held more than one-third of the voting rights of another company were restricted from submitting licence applications together with such affiliate companies. However, to reduce multiple applications by de facto group companies and facilitate greater entry into the spectrum market, the MIC expanded this restriction on multiple licence applications by group companies to take into consideration additional factors in determining what companies constitute a group, including their non-voting capital structures, decision-making authority and the business relationships between companies. Due to this amended restriction, YMobile, a company in which SoftBank held an ownership stake but that had not previously been considered a SoftBank group company, was now considered a member of SoftBank’s group and unable to submit a spectrum allocation application, which resulted in applications being accepted from NTT DOCOMO, KDDI and SoftBank only.

As the MIC planned to allocate 40MHz of the 120MHz available to each of the three applicants, it was always clear that each would receive an equal allocation. However, there was some competition in the individual allocations across the available 120MHz in which the MIC exercised discretion. The 120MHz bank is divided into high, medium and low components. While NTT DOCOMO’s first choice was the low component, both KDDI and SoftBank preferred the high component. The MIC determined that it would grant Softbank the high component because KDDI failed to specify in its application when they would be able to start operation of speeds of more than 1Gbit/second.

In November 2017, the MIC announced the allocation of 1.7GHz 80MHz bandwidth and 3.4GHz 80MHz bandwidth. Each of NTT DOCOMO, KDDI and SoftBank applied for allocation of 60–120MHz bandwidth. In addition, this time Rakuten, a major online shopping platform that has the largest MVNO market share, applied to become the fourth MNO. Pursuant to the MIC’s policy in favour of new entrants, Rakuten obtained 1.7GHz 40MHz bandwidth and announced the launch of its MNO services in October 2019. Each of NTT DOCOMO, KDDI and SoftBank also obtained 40MHz bandwidth.

ii Flexible spectrum use

Originally, the Radio Act required the MIC to grant bandwidth licences that specified the specific purpose for which the bandwidth could be used. This inflexibility was criticised as an obstacle to the efficient use of bandwidth. The Radio Act was amended in 2010 to facilitate the flexible use of spectrum and allowed the MIC to grant licences covering multiple uses. For example, a terminal on a train can now be licensed for transmission of data for operation of the train (use for operation of public services) and voice data over a pay phone equipped in the train (use for telecommunication). As of 2016, the MIC had granted 1,500 licences permitting multiple uses, and the MIC expects that the number of such licenses will continue to increase.

iii Broadband and next-generation mobile spectrum use

The MIC annually reviews spectrum usage and revises a spectrum allocation plan to reflect spectrum needs for new technologies and services.

By 2015, LTE networks operated by NTT DOCOMO, KDDI and SoftBank achieved 99 per cent coverage of the national population. LTE is technically categorised as 3.9G, even though the International Telecommunication Union permitted commercially calling it 4G. In March 2015, NTT DOCOMO was the first among the major Japanese mobile phone companies to launch its LTE-advanced next-generation mobile communication service, called
PREMIUM 4G, which uses carrier aggregation technology and is technically categorised as 4G. PREMIUM 4G’s maximum transmission speed reached 788Mb per second in limited areas. KDDI (au) and Softbank, the other major mobile phone companies in Japan, have also begun implementing the same service.

NTT DOCOMO, KDDI and SoftBank each plan on launching the next-generation mobile communication service, 5G, which will enable data transmission speeds of up to 10Gb per second, some time in 2020. Both NTT DOCOMO and KDDI started field testing 5G technologies in May 2017 and publicised their results in March 2018. The MIC similarly started its study of 5G spectrum allocation in October 2016, taking world trends into consideration. The MIC aims to allocate 5G spectrum by the end of 2018 based on a report issued by the council in September 2017.

To address growing spectrum needs for broadband services, the MIC announced its policy to promote the development of technologies using higher frequencies (over 20GHz), particularly for non-mobile use of bandwidth, and to reallocate bandwidth currently used for non-mobile purposes to mobile equipment. In addition, in September 2017, the Cabinet’s council for the relaxation of regulations suggested the reallocation of bandwidth that has been allotted to, and has not been efficiently used by, public organisations to private companies to implement 5G and other new technologies. The council raised ideas to facilitate such reallocation, such as imposing higher spectrum fees on public organisations and setting a quota for the amount of bandwidth to be reallocated to private companies.

The MIC monitors the development of new technologies and their need for spectrum. For example, the MIC has facilitated the development of intelligent transport systems through its spectrum policy by allocating appropriate bandwidth among each of vehicle information and communication systems, electronic toll collection systems and car-mounted radars. The MIC also formed a study group to promote the development of connected cars.

Additionally, in November 2017, the Tokyo Organising Committee of the Olympic and Paralympic Games announced the Basic Spectrum Plan for the 2020 Games pursuant to which the Committee grants permits to use radio devices during the Games, including wireless microphones, transceivers, wireless cameras and wireless measurement equipment.

iv Spectrum auctions and fees

The MIC imposes spectrum usage fees on broadcasters, mobile phone carriers and other businesses that use radio spectrum, as provided for in the Radio Act. The formulae used to establish the usage fees have been criticised as unfairly favouring broadcasters at the expense of mobile service providers. Until 2005, fees were determined, in the case of broadcasters, on a per-broadcaster basis, and in the case of mobile phone carriers, by the number of base stations and mobile devices connected to the respective network. Notwithstanding a series of changes in 2005, 2011 and 2014, the formulae continued to favour broadcasters, satellite operators and other vested rights holders. No changes have been made to the usage fee formulae even after a further change in 2017 involving the formation of the Council of Spectrum Policy 2020, which discussed potential changes to the usage fee formulae but eventually concluded that no change should be made. The total amount of spectrum fees the MIC imposed for the fiscal year ending March 2015 was approximately ¥74.7 billion (up from ¥68 billion in 2010), 74 per cent of which was paid by mobile phone carriers and only 8.9 per cent of which was paid by broadcasters, which has raised concerns since the bandwidth of spectrum occupied by mobile phone carriers is actually narrower than that occupied by broadcasters. This gap existed because the discounted usage fees applying to broadcasters were less than
those applying to mobile phone carriers on the grounds that broadcasting is of a public nature. In light of the 99.9 per cent mobile phone penetration rate, the MIC announced a plan in May 2018 to discount usage fees imposed on mobile phone carriers to match those imposed on broadcasters. The MIC plans to lay the relevant amendment to the Telecommunications Business Act before the legislature in 2019.

While spectrum fees are purportedly charged to cover spectrum administration costs, such as monitoring illegal spectrum use, the MIC has been criticised for using the fees to pay for miscellaneous expenses that appear to have little connection to spectrum administration. In August 2010, an MIC committee charged with exploring spectrum usage fee reform announced a policy to strengthen the link between the amount of spectrum usage fees charged to licence holders and the bandwidth of spectrum they occupy, and to more efficiently use the spectrum usage fees collected. In May 2011, a bill to amend the Radio Act to implement the revised spectrum usage fee scheme was passed.

An action plan published in November 2010 by the MIC committee charged with studying spectrum allocation recommended that the MIC consider the introduction of spectrum auctions as a way to allocate spectrum licences more efficiently and transparently. However, the plan also warned that the transition would raise questions of fairness between existing licensees who did not pay for their licences at auction, and future licensees who would bear this additional auction-related cost. The committee also raised related concerns that the cost of auction fees could ultimately be passed along to consumers by way of increased service fees.

From March 2011 to December 2011, the MIC held 15 meetings led by scholars for the purpose of considering the implementation of spectrum auctions, and in March 2012 a bill was submitted to amend the Radio Act to include spectrum auctions. The amended Act would have established a mechanism through which the MIC could conduct auctions to grant licences to applicants offering the highest bid price. The spectrum auction was envisaged to be first used for the licensing of the 3.5GHz band, which was planned to be used for 4G mobile phones starting in 2014. However, discussions regarding the bill were put on hold in anticipation of a change in the controlling political party from the Democratic Party of Japan (DPJ) to the Liberal Democratic Party (LDP), which took place in December 2012. In January 2013, the Minister of Internal Affairs and Communications under LDP Prime Minister Abe announced that the LDP government would not resubmit the bill for spectrum auctions. The DPJ subsequently resubmitted the bill, but it was voted down. However, the DPJ was able to obtain the LDP’s consent to adopt a non-binding resolution by a committee of the legislature acknowledging that spectrum auctions have benefits and detriments and should be reviewed through public hearings. Efforts to implement spectrum auctions as a method to provide greater transparency into the MIC’s spectrum allocation process have effectively returned to square one. The MIC formed a study group in November 2017 to improve the effectiveness of spectrum use. In July 2018, the study group submitted for public comment a draft report focusing on reform of the spectrum allocation system. This report discusses the feasibility of an auction system but does not take an affirmative position, instead concluding that the matter requires further analysis in the future.
V MEDIA

i Restrictions on the provision of service

While freedom of broadcasting is an underlying premise of the Broadcast Act, the Act includes certain content requirements, including:

- an obligation to be politically impartial;
- a prohibition on reporting ‘manipulated facts’;
- an obligation to present diverse opinions on controversial issues; and
- an obligation to provide closed captioning, audio commentary or other forms of aid for the hearing-impaired and visually-impaired where possible.

Main broadcasting licence holders are also required to provide a balance of entertainment, news and educational programming.

ii Internet-delivered video content

The internet and dedicated networks are widely used to deliver video content. Internet television services available in Japan vary widely, from simultaneous transmission of terrestrial and satellite television broadcasts, to exclusive IPTV channels with programming provided by domestic and foreign third-party programme providers, to VOD services. The methods of video delivery vary from free video-sharing sites (such as YouTube), to membership-based video-sharing sites (such as Nikoniko Douga), to partially fee-based video delivery sites (such as Gyaol!) and to full fee-based video delivery sites (such as Hulu and Netflix). Many traditional television stations (i.e., Nippon Hoso Kyokai (NHK), a public broadcaster formed under the Broadcasting Act, and commercial television broadcasters) also offer VOD services, and are streaming broadcast programmes through personal computers and smartphones. A survey published in December 2017 indicated that there were 14.4 million fee-based video delivery service users in 2017, and the number was expected to increase to 20.1 million by 2020.

The Supreme Court has ruled that services that record and forward Japanese television programmes and those that provide real-time streaming of Japanese TV programmes via the internet breach the originating television station’s copyright. Therefore, third-party recording or streaming of Japanese television programmes without a licence constitutes a breach of Japanese copyright law.

For regulatory purposes, the MIC has taken the view that video delivery over the internet is not a broadcast under the Broadcast Act and, consequently, the content restrictions under the Act discussed in Section V.i do not apply. While the term broadcast is defined in the Broadcast Act as the ‘transmission of telecommunication for the purpose of being directly received by the public’, the MIC’s position is that video delivery over the internet does not fall within this definition because content is not transmitted until a specific user makes a corresponding request, such that the broadcast is not being made to the public. This interpretation allows ICPs to distribute multimedia offerings without being regulated as traditional broadcasters. However, the MIC’s technical distinction has been criticised as resting on shaky ground, and calls have been made for clearer legislation clarifying that content restrictions will not apply to internet broadcasts.
VI  THE YEAR IN REVIEW AND OUTLOOK

Throughout 2017 and early 2018, Japan has continued to show its commitment to further improving its telecommunications infrastructure and developing new telecommunications and media technologies to be implemented in future years.

Looking ahead, the MIC is targeting the implementation of infrastructure to broadcast the 2020 Tokyo Olympic Games in 4K and 8K ultra-high-definition formats. In furtherance of this goal, the MIC in January 2017 granted broadcasting licences covering 4K broadcasting via broadcasting and communication satellites located over 110 east longitude to NHK and 10 commercial television broadcasters. At the same time, the MIC also granted broadcasting licences for 8K broadcasting to NHK. 4K and 8K broadcasting are scheduled to launch on 1 December 2018.

In addition to its ongoing objective of expanding access to free public Wi-Fi, the MIC has also announced its vision to have 5G mobile technology in place ahead of all other countries in anticipation of the 2020 Olympic Games. The public and private telecommunications sectors in Japan are working together as an ‘All Japan’ platform to achieve this lofty goal, and major telecommunications providers are already actively field testing 5G technology.

The development of media and telecommunications policies and technology in Japan has seen a resurgence over the past several years, and further significant progress is likely in the near future.
Chapter 14

LATVIA

Andris Tauriņš and Madara Meļņika¹

I OVERVIEW

ICT is one of the driving forces of the Latvian economy. In 2016, 603 companies with 31,801 employees² contributed to 4.1 per cent of national GDP,³ while in the first part of 2018 the export of computer and IT services generated €223 million in revenue.

With a focus on the safety of the informational space, internet development, data protection and the effectiveness of the regulatory institutions, in 2018 the Parliament, Cabinet of Ministers and regulatory organisations adopted many documents addressing the requirements of the sector. For the period running from 2018 to 2022, the National Media Strategy for the Electronic Media Sector envisages the withdrawal of public media from the advertising market and promoting the impartiality and accuracy of the news. Another important long-term project is Cabinet of Ministers Order No. 102 ‘On the Electronic Communications Sector Policy Plan 2018–2020’, signed on 12 March 2018, which outlines the actions necessary to reach the goals of the EC communication 5G for Europe – An Action Plan.

In comparison to the situation 10 years ago, the players in the Latvian ICT field are now clear. However, 2017 and 2018 have seen significant mergers in the TMT sector, which trend raises questions about the future of competition in this sector.

II REGULATION

i The regulators

The field is mainly regulated by two institutions: the Public Unities Commission and the National Electronic Mass Media Council. Likewise, the state stock company Electronic Communications Office (ECO) plays an important role.

Electronic communications

The Public Utilities Commission (Regulator)⁴ is an autonomous body that, inter alia, regulates business activities in the electronic communications sector and protects users’ rights

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⁴ See https://www.sprk.gov.lv/.
from a technological perspective. The Regulator’s actions are based on the Law On Regulators of Public Utilities\(^5\) (LORPU), which came into force in 2001, as well as other legal acts covering specific regulated sectors.

In the field of electronic communications, the Regulator monitors the services provided by electronic communications companies, including voice telephony, transmission of data and electronic messages, leased lines, internet access, broadcasting of radio and TV programmes, and access to networks, infrastructure and interconnections.\(^6\) To do this, the Regulator assigns usage rights (licences) of scarce resources: RF spectrum and numbering.\(^7\) Additionally, it registers ECS providers, evaluates draft tariffs submitted by providers,\(^8\) acts as an out-of-court body to resolve disputes where providers are involved\(^9\) and carries out other tasks provided by law.

However, in accordance with the Electronic Communications Law\(^10\) (ECL), ECO is mainly responsible for the administration of the RF spectrum and numbering resources.\(^11\) ECO provides electromagnetic compatibility, assigns RFs for the operation of radio equipment, and undertakes other tasks as provided by law.\(^12\)

**Media**

The other main regulator, the National Electronic Mass Media Council (NEMMC),\(^13\) is also an autonomous institution. It analyses the legality of the content of electronic mass media.

On the basis of the Electronic Mass Media Law\(^14\) (EMML), the NEMMC, *inter alia*, maintains a register of the issued broadcasting and retransmission permits, analyses suggestions and complaints submitted by consumers regarding the operations of the electronic mass media, monitors the electronic mass media, and approves the list of the television programmes distributed to end users via digital terrestrial broadcasting free of charge.\(^15\) Additionally, it develops and approves the National Development Strategy of the Electronic Mass Media Sector.\(^16\)

The NEMMC has considerable powers regarding the public electronic mass media. Upon consultation with the public electronic mass media, it develops and approves annual plans for programmes.\(^17\) Additionally, it develops and approves the statutes of the public electronic mass media,\(^18\) determines the allocation of the state budget subsidy and the

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7. Article 9(1(4)) of the LORPU.  
8. Article 19(2) of the LORPU.  
9. Article 32(1) of the LORPU.  
11. Article 4(2) of the ECL.  
12. Article Section 6(1) of the ECL.  
15. Article 60(1) of the EMML.  
16. Article 60(3) of the EMML.  
17. Article 62(1) of the EMML.  
18. Article 62(4) of the EMML.
resources granted in the annual Budget,\textsuperscript{19} and appoints and dismisses the boards\textsuperscript{20} of the public electronic mass media. Finally, it can also make decisions regarding the termination of the activities of the public electronic mass media, and the reorganisation thereof, and make changes in equity capital.\textsuperscript{21}

**ii Regulated activities**

As stated in the LORPU, licences must be issued only to providers of public utilities that are specifically named by the Cabinet of Ministers or the Regulator. The operations of providers of public utilities must be regulated, but the special laws and regulations of the regulated sectors do not provide for licensing or other registration, and such operators can start providing public utilities if they are registered on the register of providers of public utilities.\textsuperscript{22}

**Electronic communications**

Providers of ECSs do not need a licence, but only a general authorisation.\textsuperscript{23} This regulation follows the Access Directive.\textsuperscript{24}

In accordance with Decision of the Council of the Public Utilities Commission No. 1/32 'Regulations on the registration of electronic communications merchants and the list of electronic communications networks and services' of 30 November 2017 (Regulations on Registration), providers must send a notification prior to the provision of:

- a fixed ECN;
- a mobile ECN;
- voice telephony services;
- public data and electronic message services;
- leased line services;
- public internet access services;
- access services; and
- interconnection services.

On the basis of the notification, a general authorisation is issued, and the rules thereunder must be followed by providers. All registered providers are recorded in a public register\textsuperscript{25} available on the website of the Regulator.\textsuperscript{26}

RF spectrum can be utilised for radio equipment operations after the receipt of a RF assignment use permit from ECO or in accordance with a common RF assignment use permit.\textsuperscript{27}

\begin{itemize}
  \item Article 62(3) of the EMML.
  \item Article 62(5) of the EMML.
  \item Article 62(7) of the EMML.
  \item Article 181(1) of the LORPU.
  \item Article 32 and following of the ECL.
  \item Access Directive (2002/19/EC).
  \item Article 18.1(3) of the LORPU.
  \item Available at https://www.sprk.gov.lv/lapas/komersantu-pakalpojumis67.
  \item Article 50 of the ECL.
\end{itemize}
**Broadcasting and retransmission**

Broadcasting rights are granted on the basis of an application. If an electronic media operator requires a RF resource, the broadcasting rights are awarded on a competitive basis.\(^{28}\) The basic criteria for evaluation are the creative, financial and technical provisions of a broadcast’s concept and the amount of the state language used during the broadcasting period.\(^ {29}\)

Upon payment of a state fee, a broadcasting permit is issued to the winner of the tender for 10 years. Upon expiry, a new broadcasting permit is issued to the electronic media operator without a competition if there has been no court judgment regarding violations of the ECL during the previous year.\(^ {30}\)

The retransmission and distribution of programmes on public ECNs requires the consent of the holder of the retransmitted programmes and the permission of the NEMMC.\(^ {31}\)

### iii Ownership and market access restrictions

Generally, Latvian law does not distinguish between Latvian nationals and foreigners with regard to investments.

However, a connection to a specific country, if supplemented by other factors, can be one reason to deny market access. For example, in 2015 the Register of Enterprises of Latvia refused to register the Russian state news agency Russia Today in the register of Latvian representative offices because the application did not comply with the Constitution of Latvia and other regulatory enactments.\(^ {32}\)

The market can only be accessed if the service provider has a permission or relevant licence. Competition is also restricted due to the limited nature of the radio spectrum. Additionally, mergers and acquisitions are stringently controlled to avoid market concentration and abuse of dominance.

### iv Transfers of control and assignments

In Latvia, the licences are issued on an individual basis. The Regulation Regarding the Licensing of Public Utilities states that the service provider is not entitled to transfer the licence to other persons.\(^ {33}\) Likewise, permissions and rights to broadcast\(^ {34}\) cannot be transferred.

However, companies can merge, and the general Latvian merger control framework applies to the TMT sector. The provisions on market participant mergers can be found in the Competition Law.

The Competition Council must be notified about every merger. Within the meaning of the Competition Law, mergers are considered to be transactions that result in the acquisition of influence in another undertaking, or even only the assets of a company or the right to use them.\(^ {35}\)

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\(^{28}\) Article 15(4) of the EMML.

\(^{29}\) Article 17(1) of the EMML.

\(^{30}\) Article 18(6) of the EMML.

\(^{31}\) Article 19(1) of the EMML.


\(^{33}\) Clause 16 of the Cabinet of Ministers Regulation No. 664 Regulations Regarding the Licensing of Public Utilities of 30 August 2005.

\(^{34}\) Article 15(2) of the EMML.

\(^{35}\) Article 15(1) of the Competition Law of 4 October 2001, last amended on 5 October 2017.
Notification is required prior to a merger if the total turnover of the merger participants in the previous financial year in the territory of Latvia constituted at least €30 million, and the turnover of at least two of the merger participants in the previous financial year in the territory of Latvia constituted at least €1.5 million each. Additionally, within 12 months from a merger’s implementation, the Competition Council is entitled to request that the participants submit a notification on an already implemented merger that does not conform to the above-mentioned provisions in the following circumstances: in the relevant market, the aggregate market share of the participants exceeds 40 per cent and there is a suspicion that the merger might result in or strengthen a dominant position, or competition in the relevant market might be notably reduced.

Mergers that create or strengthen a dominant position, or that may significantly reduce competition in any relevant market, are prohibited. However, such mergers can be permitted if the Competition Council imposes binding provisions on the relevant market participants, thus preventing negative consequences.

If a notification has not been given in the cases specified in the law on or an unlawful merger has occurred, the Competition Council can impose a fine on the new market participant or on the acquirer of a decisive influence. The fine amounts up to 3 per cent of the participant’s or acquirer’s net turnover in the last financial year.

During 2017, politicians and specialists in the field debated on the possible merger of mobile telecommunications operator Latvijas mobilais telefons (LMT) and Lattelecom, a telecommunications, technology and entertainment company that provides internet and electricity services. In November 2017, the government decided that the merger would not take place, and a memorandum of mutual understanding on the further development of these companies was signed in July 2018. Nevertheless, some players in the field still believe that the merger of these companies is inevitable.

Another topic of considerable discussion is the merger of public media companies.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation
The ECL, adopted on 28 October 2004, regulates, *inter alia*, both traditional telephony services and the internet and IP-based services. In addition, the Regulations on Registration regulate all types of electronic communications.

Specific regulations cover, for example, rules regarding public internet access service providers storing data and the liability exemption regime.

36 Article 15(2) of the Competition Law.
37 Article 15(21) of the Competition Law.
38 Article 16(3) of the Competition Law.
39 Article 17(1) of the Competition Law.
42 Information available at https://bnn.lv/i-baltcom-i-nakotne-lmt-i-lattelecom-i-apvienosana-ir-nezibegama-293481.
ii Universal service

The regulations regarding universal services obligations have been implemented in Latvia through the ECL and the 17 November 2016 Decision of the Council of the Public Utilities Commission No. 1/24 ‘Provisions on universal service in the electronic communications sector’.

These Provisions state the duty of the universal service provider to provide access to a public ECN for voice telephony calls and the transmission of fax and data messages at data rates that are sufficient to provide internet access all over Latvia. Currently, Lattelecom is the official provider of the universal service. Its tasks also include the duty to provide special services to persons with disabilities, such as discounts on such subscribers’ telephone lines, domestic calls, installation fees for broadband internet access services and subscription fees for broadband internet access services.

In accordance with the Next Generation Broadband Electronic Communications Network Development Strategy for 2013 to 2020, broadband coverage is being improved in the rural regions of Latvia. This means that the quality of the universal service will also be raised. Additionally, free internet, which is directly financed by the state budget, has already been available in all libraries, including those in the rural regions, for more than 10 years.

iii Restrictions on the provision of service

Restrictions on tariffs

Tariffs are strictly controlled by the Regulator.

Article 20 of the LORPU states that tariffs are to be set to the extent that payments made by users cover the economically justified costs of public services and ensure the profitability of public services, unless special laws on the field provide for other tariff setting principles. If factors affecting tariffs (such as profitability) change, the Regulator may propose a tariff review. The Regulator may apply tariff regulation measures to ECS who have a significant market power.

Prerequisites for providing services

To receive permission to provide services, providers must comply with the general rules regarding the electronic communications field. These general rules include, for example, data protection requirements, the duty to carry out any planned scheduled maintenance at the lowest possible hourly load and the duty to protect the ECN from unauthorised access. They can be seen as general restrictions on the provision of service, especially as in cases of repeated violations the Regulator can suspend the activities of a violating provider for a period up to five years.
Theoretically, service providers are free to choose which services they provide. However, the ECL regulates the minimal content of contracts between providers and users. There are also some norms in the general rules that apply specifically to service provision: for example, providers must comply with the restrictions on the transmission of illegal content specified in regulatory enactments. Providers must also not facilitate access to information on the internet the distribution of which is prohibited in accordance with regulatory enactments. Specific obligations and duties, such as those regarding transparency, equal treatment, accounting separation, tariff regulation and cost accounting, can be imposed by the Regulator upon ECS providers with significant market power.

Rights and duties of providers

ECS providers who provide public data and electronic message transmission or public internet access services with temporary storage of transmitted information, provided that the information is not stored longer than necessary for its transmission, are responsible for the content transmitted if such provider proposes the transmission of information, chooses the transmitted information recipient, and chooses or converts the broadcast information. All other ECS providers are not obliged to monitor the transmitted information or search for circumstances indicating the transmission of illegal content.

The exact terms and conditions of the provision of ECSs depend on a contract concluded between the user and the provider. Nevertheless, the general licence terms state the cases when the provider has the right to suspend provision of the service:

- the end user uses unauthorised access to the operator’s ECN;
- the end user, without the consent of the ECS provider, uses the end user connection for business in the electronic communications sector;
- the end user does not comply with the terms of use of the services; and
- in cases of usage contrary to those specified in the contract between the user and the provider on the use of the ECSs, the rules for the use of ECSs or regulatory enactments.

End-users and subscribers have equal rights to receive ECSs, and they have the right to choose several ECS providers simultaneously. The ECL also specifically provides that a service provider who offers digital television and digital radio services must ensure that the services provided do not limit subscribers’ rights to a free choice of service supplier, and interoperability with other ECS providers’ services. Owners of private ECNs have a duty to ensure the interoperability of their network if such private network is connected to the public ECN. Additionally, the Regulator has the right to fairly, proportionally and with equal treatment impose obligations regarding access and interconnections upon ECS providers to

51 Article 22(3) of the ECL.
52 Section 18 of the General licence terms in the electronic communications sector.
53 Section 19 of the General licence terms in the electronic communications sector.
54 Section 20 of the General licence terms in the electronic communications sector.
55 Section 21 of the General licence terms in the electronic communications sector.
56 Section 17 of the General licence terms in the electronic communications sector.
57 Articles 23(1) and 23(2) of the ECL.
58 Article 67(1) of the ECL.
59 Article 26 of the ECL.
ensure the access necessary to end users. The Regulator has the same right regarding the obligation on public ECN operators to ensure access to application software interfaces and electronic programme guides.

iv Security

Decisions on the basis of national security

On 28 June 2018, amendments to the Electronic Media Act (EMA) were adopted to strengthen Latvia’s information space. The general rules for creating media programmes were amended with the addition of the principles of neutrality and accuracy, and the imposition of a prohibition on presenting facts in informative documentaries and news in a deliberately misleading way. Additionally, the law requires media owners to disclose the true beneficiaries of electronic media in order to ensure transparency. The functions of the NEMMC have also been widened regarding the prohibition on hate-inciting television programmes.

The NEMMC generally also plays an active part in the field of security. For example, on 16 May 2018, together with the European Commission it discussed restricting the freedom of reception of Rossiya RTR, a television programme, in the territory of Latvia owing to content that allegedly incited hatred. Following a recurrence of the violation in August 2018, the NEMMC considered a full prohibition on the reception of this programme. Additionally, the NEMMC criticised the state media regarding the purchase of materials (photographs, etc.) from the Russian ‘propaganda agency’, Sputnik. However, both Latvian Radio and Latvian Television have rejected those accusations, noting that their use of the photographs is insignificant or the only way to show some events in Russia.

Cybersecurity

The Law on the Security of Information Technologies (LSIT) was adopted in 2010. It sets out the most important requirements for the security of information technologies for state and local government institutions and private legal entities. The law imposes some obligations on the providers of private entities that provide critical infrastructure, such as the duty to monitor and eliminate security loopholes.

On the basis of the LSIT, the Information Technology Security Incident Response Institution, CERT.LV, was established in 2011. Its main tasks are to maintain information on IT security threats, provide support in the case of IT security incidents, advise government

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60 Article 36(1) of the ECL.
61 Article 36(2) of the ECL.
67 Ibid.
institutions and organise informative and educational activities. CERT.LV is also in charge of security throughout the Latvian electronic information space and under the TLD.lv top level domain.

The National Guard Cyber Defence Unit, established in 2013, and the Military Information Technology Security Incident Recovery Team (MilCERT), established in 2016, also have a key role in ensuring cybersecurity. Additionally, on the basis of the National Security Concept, the National Information Technology Security Board was established on 28 May 2018 by appointing representatives from various ministries, the State Revenue Service, the Bank of Latvia, CERT.LV, MilCERT and other institutions. 70

In addition to aforementioned regulations, the Latvian Cybersecurity Strategy for 2014 to 2018 Guidelines were adopted by the Cabinet of Ministers. However, only the summary of the Guidelines is publicly available. Due to their secrecy, it is possible that some cybersecurity developments have been introduced without the public’s knowledge. It can be assumed that the Guidelines for the following years will be adopted at the beginning of 2019.

All of these activities are specifically important due to serious suspicions that the Parliamentary elections of 2018 might be subject to a cyberattack. 71

Article 9 of the LSIT states the duties of ECS providers, such as:

a ensuring the integrity of the network;

b drawing up an action plan for ensuring the continuous operation of the network, indicating therein the technical and organisational measures implemented to appropriately manage the risks posed to the security of the network and the provision of services;

c informing the relevant institutions regarding breaches of security or integrity that have had a significant impact on the operation of the ECN or the provision of services;

d upon the request of the relevant institutions, organising a security audit to be carried out by a qualified body governed by public law if essential breaches of security and integrity have been detected; and

e upon the request of the relevant institutions, disconnecting an end user from the ECN for a short period of time if such end user significantly endangers the rights of other users or the information system, or the security of the ECN.

To implement Directive 2016/1148, 72 the Cabinet of Ministers supported a draft law on amendments to the LSIT on 3 May 2018. 73 The draft law stipulates the obligation of basic service providers and digital service providers to comply with certain IT security requirements and to report security incidents. Certain tasks are set for CERT.LV, the Digital Safety Monitoring Committee, the Ministry of Defence and ministries monitoring individual sectors.

In 2018, one of the most popular cyberattacks, the DDoS, was directed against several objects at once: the national news agency LETA, 74 the State Revenue Service, the e-health

70 Prime Minister Order No. 146 of 28 May 2017 On the National Information Technology Security Board.
System and the government.\textsuperscript{75} Systems against such attacks provided by the State Radio and Television Centre\textsuperscript{76} and the Digital Economic Development Centre (DEAC)\textsuperscript{77} are becoming more and more popular.

**Criminal law measures**

Unauthorised access to automated data processing systems is prohibited by Article 241 of the Latvian Criminal Code,\textsuperscript{78} while Article 243 stipulates liability for interference with the operation of automated data processing systems and illegal actions with information included in such systems. The Criminal Code also prohibits illegal operations with devices that could influence automated data processing systems,\textsuperscript{79} violation of the safety provisions of information systems\textsuperscript{80} and other TMT-connected crimes.

**IV SPECTRUM POLICY**

**i Development**

For many years, a fee for the usage of spectrum existed. An important change was its revocation in 2014. The respective amendments were made due to the fact that the ECL provided (and still provides) that ECO collects a fee for provided public paid services, including a monthly payment for the provision of the electromagnetic compatibility of radio equipment.\textsuperscript{81} The Parliament concluded that, practically, the charge for an electromagnetic compatibility service is, in fact, a fee for use of the RF spectrum. Additionally, ECS providers must pay a state fee for the regulation of public utilities.\textsuperscript{82}

The procedures for granting the spectrum use rights are set out in the 16 June 2011 Decision No. 1/7 of the Board of the Public Utilities Commission ‘Regulations Regarding the Rights of Use of the Radio Frequency Spectrum’ (Regulations on the Spectrum Use), which were last amended on 6 August 2018. These amendments, *inter alia*, widened the list of cases when the Regulator can refuse to grant the rights to use RFs and set new regulations for the evaluation of applications. These were the first amendments to the Decision since 2013.

From 2021, the spectrum in the 700MHz frequency bands will be used solely for the provision of 5G services in Latvia.

**ii Flexible spectrum use**

An ECS provider cannot transfer the right to use the RF spectrum if it has not paid for the acquisition of this right.\textsuperscript{83} All other limitations in law apply regarding the transfer of the

\textsuperscript{75} Information available at https://www.lsm.lv/raksts/zinas/latvija/kiberuzbrukumi-tikusi-versti-ari-pret-vid-un-valdibu.a265890/.

\textsuperscript{76} See https://www.lvrtc.lv/aizsardz299ba-pret-ddos-uzbrukumiem.html.


\textsuperscript{78} Latvian Criminal Code of 17 June 1998, last amended on 26 April 2018.

\textsuperscript{79} Articles 244 and 2441 of the Latvian Criminal Code.

\textsuperscript{80} Article 245 of the Latvian Criminal Code.

\textsuperscript{81} Articles 6(1(2)) and 6(4) of the ECL.

\textsuperscript{82} Article 12 of the ECL.

\textsuperscript{83} Article 47(31) of the ECL.
right to use numbering. Thus, it can be presumed that the flexible transfer of the use of radio spectrum is generally encouraged. This encouragement is proven also by the Regulator’s duty to ensure that RFs are used efficiently to promote competition and the harmonised transfer of RFs. The Regulator assesses the necessity of transferring the right of use of the RFs taking into account the competition.84

Additionally, commercial activities without a Regulator’s permit for the right to use the RF spectrum can be carried in RF spectrums or channels for which a sharing RF allocation use permit has been specified.85

However, no specific developments to enable new uses of spectrum (terrestrial use of satellite spectrum, mobile use of spectrum previously licensed for fixed use, etc.) have been observed.

**Broadband and next-generation mobile spectrum use**

In 2016, 4G coverage reached 91 per cent of households in Latvia.86 Similarly, a large part of internet coverage in Latvia is ultrafast broadband (88 per cent of households), in which regard Latvia, as recognised in the Digital Economy and Society Index, stands far above the EU average.87 Latvia is also named as one of the top OECD countries for mobile data usage.88

However, in 2012 there still were 363 white territories that needed the development of the optical network.89 Thus, and in line with the Europa 2020 strategy, in 2014 Latvia adopted the Next Generation Broadband Electronic Communications Network Development Strategy for 2013–2020.90 It was amended in 201691 and will be valid until 2020.

In accordance with the strategy, broadband coverage will be improved for the rural regions of Latvia with the help of state aid through the development of next-generation ECNs. Private providers have to deliver the last-mile connection. Within this project, between 2012 and 2015 a 1,800km-long optical line with more than 177 access points was developed.92 It is planned that this project will allow 83,000 new households to access the internet. The long-term NGA aims are 100 per cent coverage with 30Mbps and 50 per cent household penetration with 100Mbps by 2020.93

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84 Article 47(61) of the ECL.
85 Article 47(51) of the ECL.
On 12 March 2018, the Cabinet of Ministers signed Order No. 102 ‘On the Electronic Communications Sector Policy Plan 2018–2020’. The Order, *inter alia*, confirms Latvia’s readiness to reach the goals noted in the EC communication 5G for Europe – An Action Plan. The tasks include the release and reprogramming of the 700MHz band for mobile communications. An informative report on this issue, which outlines plans for the release of the 700MHz band from January 2022, was reviewed by the government in August 2018.94 The implementation of this project will take place two years later than demanded by the EU, as Lattelecom has the right to provide pay-TV services in the band until 31 December 2021.95

Guidelines for the introduction of 5G will also be developed during 2018. Operators have already actively set up suitable base stations:96 for example, in August 2018, LMT had more than 100 of them.97 Thus, the Baltic and Scandinavian countries could be among the first when it comes to 5G internet being accessible for commercial use.

Finally, in September 2018, Riga hosted 5G Techritory, a worldwide forum on the implementation of 5G broadband in the Baltic sea region.98

**Spectrum auctions and fees**

The right to use radio spectrum bands is acquired via auctions. Since 2009, nine auctions have taken place, and only one of them ended without result.99 In August and September 2018, an auction took place for the allocation of rights for use of the 3,550MHz–3,600MHz spectrum band.100 There are also auctions to sell radio spectrum bands that can be used for 5G services.101 For example, on 27 November 2017, LMT acquired two 5G bands for €500,000.102 Since 2014, no spectrum fee exists.103 It does not seem likely that any fee will be created again, as the monthly payment for provision of electromagnetic compatibility of radio equipment, collected by the ECO, fulfils the same goal. Licensed operators also contribute to the financing of the universal services.

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97 Information available at https://www.lsm.lv/raksts/dzive--stils/tehnologijas-un-zinatne/lmt-5g-tikls-latvija-nakama-gada-jautajums.a289574/.
100 Ibid.
102 Ibid.
103 Amendments in the Law on Taxes and Duties of 19 December 2013.
V  MEDIA

i  Restrictions on the provision of service

Network operators and content providers are regulated separately. While network operators are mainly regulated by the Regulator in accordance with the ECL, content providers are governed by the NEMMC in line with the EMA.

Many restrictions on the provision of service were included in the 2018 amendments to the EMA (see more in Section VI). In addition, the EMA stipulates that the electronic media cannot include in their programmes:

- stories highlighting violence;
- pornographic material;
- encouragement of incitement to hatred or a call to discriminate against a person or group of persons;
- a call to war or a military conflict;
- an invitation to violently overthrow the state’s power or violently change the state machinery, to crush territorial integrity or to commit another crime;
- scenes that discredit Latvia’s statehood and national symbols.  

Providers must respect human rights and defend the idea of a democratic and independent Latvia. All television broadcasts in foreign languages, with specific exceptions, must be provided with subtitles in Latvian, while films must have either an audio translation or subtitles. If a public electronic medium creates and distributes television news broadcasts in a foreign language, a summary must be provided in the form of a line in the national language. European audiovisual works must occupy a minimum of 51 per cent of broadcast time, with the exception of news, sports events, games, advertisements and television stores.

The retransmission of an electronic media audiovisual programme from another EU Member State or EEA country can be restricted if its provider has unequivocally, seriously and materially violated specific provisions of the EMA at least twice during the previous 12 months.

ii  Internet-delivered video content

Latvian television provides access to many of its programmes on the Latvian Public Media portal. The same practice is evolving in some other television stations. However, here the distribution has not moved from television to the internet: rather, both are offered in parallel to cover Latvians living abroad, as well as people who do not have television at home. Due to the plans on universal services, as well as the accessibility of the internet in libraries, this has a positive impact on consumers.

104 Article 26 of the EMA.
105 Article 24(2) of the EMA.
106 Article 28(4) of the EMA.
107 Article 28(3) of the EMA.
108 Article 28(5) of the EMA.
109 Article 32(1) of the EMA.
110 Article 21.1(1) of the EMA.
111 See: https://www.lsm.lv/.
112 See: https://tvplay.skaties.lv.
Many smart-television options are also offered to consumers in Latvia. However, neither of the ways of providing internet-delivered video content have any special regulations; only general rules, such as protection of copyrights, apply.

Since 2018, the NEMMC has the rights to limit access to websites that provide audiovisual content illegally (see Section VI).

VI THE YEAR IN REVIEW

In 2017 and 2018, Latvia’s ICT policy has undergone several developments.

First, the Law on Electronic Media was amended on 12 July 2017. The amendments stipulate that all TV distribution service providers must increase the number of TV channels included in block programming. Now block programming must include at least four more programmes that are created in Latvia or another EU Member State in the official language of the state.\footnote{Articles 19(12) and 19(13) of the EML.}

Secondly, on 12 April 2018, the NEMMC unanimously adopted the National Media Strategy for the Electronic Media Sector for 2018 to 2022. The new strategy envisages the creation of a single public media and the creation of prerequisites for the Parliament to decide on the withdrawal of public media from the advertising market. The strategy supports the creation of an electronic media ombudsman, demands the accuracy and impartiality of messages, and specifies a number of other tasks and goals.\footnote{Information available at https://NEPLPadome.lv/lv/sakums/padome/padomes-sedes/sedes-sadalas/apstiprina-nozares-attistibas-nacionalo-strategiju-2018.-2022.gadam.html; https://NEPLPadome.lv/lv/assets/documents/Normativie%20Akti/Strategija/EPL%20strate%CC%84g%CC%A7ija_120418.pdf.}

Thirdly, vital amendments to the EMA came into force on 12 July 2018. To provide transparency, the new amendments require the electronic media to disclose their true beneficiaries. The new rules also state that facts and events in broadcasts must be reflected with due accuracy and neutrality.

Most of the policy changes at their core are aimed at strengthening the Latvian information space and thus also actively protect democracy. One of the reasons for this is the publicly available data that states that Russian narratives and messages spread in the Latvian information space are more supported by the part of the audience that regularly uses Russian media.\footnote{Information available at http://www.saeima.lv/petijumi/Krievijas_ietekme_Latvijas_informativaja_telpa_elektroniski.pdf.}

Another focus is on the protection of content providers. This goal is reached by the newly acquired right of the NEMMC to restrict access to such websites that retransmit audiovisual programmes without permission. In addition, new state positions have been created for the State Police to fight more successfully against providers of illegal television.\footnote{Information available at https://www.lsm.lv/raksts/za

As a result, in 2017, the State Police examined the activities of 20 cable operators, suspended the operation of two major illegal TV programme streaming services and initiated seven...
criminal proceedings, limiting the amount of households that use illegal content providers from 100,000 to 77,000.\(^{117}\) The Association For Legal Content, which unites the largest ECS providers in Latvia, also notes that there should be liability for users of illegal services.\(^{118}\)

Additionally, the amendments to the Regulations on Spectrum Use facilitate and accelerate decisions regarding RFs, thus supporting the activities of both service providers and the Regulator. The same goal is reached by Regulator Decision No. 1/11 of 7 June 2018 on ‘Rules for the allocation of radio frequency spectrum usage rights by auction’.

i  **Mergers, acquisitions and licensing**

In 2018, the key TMT field merger was between SIA Bite Latvija, SIA Stream Networks and SIA LATNET SERVISS.\(^{119}\) Bite Latvija is a public mobile operator, while the core business of Stream Networks and the LATNET group is the provision of telecommunications and IT services over the fixed network.

No other important mergers took place in the market in 2018. However, Bite was involved also in the biggest merger of 2017, when Bite Lietuva (the owner of Bite Latvija) gained control over the producers and distributors of the TV programmes SIA TV3 LATVIA and AS Latvijas Neatkarīgā Televizija; AS VIASAT AS Latvia, a pay-TV operator and distributor; the SIA Star FM radio station; and SIA Smart AD, an agency service provider for advertising in the media.\(^{120}\) As the merger could significantly reduce competition in some of the specified markets, the Competition Council allowed it by imposing certain duties on Bite.

ii  **Sector trends**

When analysing sector trends, focus should be directed at the security issues regarding both cybersecurity and the information space. Those issues were highlighted, for example, in discussions regarding the Rossija RTR channel, amendments of the EMA, and many declarations by the Security Police, Central Election Commission and other institutions regarding the Parliamentary elections.

Also noticeable are the disagreements between NEMMC and the public media\(^{121}\) regarding issues of media independence.

**VII CONCLUSIONS AND OUTLOOK**

International cooperation is very important for most of Latvia’s policy issues, especially on cybersecurity and the fight against fake news, as well as current election issues. Such cooperation should cover states and international institutions as well as social networks. The latter puts these talks within a not-yet-known dimension. However, the Corruption Prevention and Combating Bureau of Latvia has already made the first steps in this field.


\(^{119}\) Decision of the Competition Council No. 6 of 29 March 2018.

\(^{120}\) Decision of the Competition Council No. 22 of 6 October 2017.

Additionally, Latvia must strike a careful balance between protecting its own information space and avoiding accusations about censoring the Russian media.

In the field of media, the actual implementation of a decision that the public media will exit the advertisement market from 2021 is being eagerly discussed. This decision will cost millions from the state budget. In addition, a media ombudsman's council is being developed to better govern questions regarding media ethics and arguments in the field.
Chapter 15

LITHUANIA

Stasys Drazdauskas

I OVERVIEW

An effective innovation system, which would encourage the growth of an innovative economy, is seen by the Lithuanian government as a strategic objective. Lithuania is focused on the development of high-level scientific knowledge, scientific research, experimental development, as well as fostering innovative business, intersectoral business cooperation and technology transfer.

Lithuania is particularly strong in the health and biotechnology area (worth about 1 per cent of the GDP), where the government is continuously committed to provide support. Photonics is another advanced area in Lithuania, where 700 specialists are employed in the laser industry. In fintech, with the support of the Lithuanian Bank, Lithuania is experiencing the emergence of many new pilot projects, such as the Fintech Sandbox, Blockchain Sandbox, Open Banking Sandbox and Energy Sandbox.

Advancement in the aerospace field, particularly driven by the successful launch of the first Lithuanian nano satellites, inspired the government to adopt the Aerocosmos development programme for 2016–2020.

Information technology sector production in Lithuania is close to €2 billion, which to a large extent is driven by software engineering, programming and consulting services, where over 31,000 IT specialists (18,100 software developers) are employed (about 2.3 per cent of the total workforce in Lithuania). Business service centres established by Barclays, Daskebank, WesternUnion, SEB, skandia, Paroc, Swedbank, and Euromonitor international account for a large portion of the IT workforce in Lithuania.

Electronic communication market revenue grew by 1.48 per cent in 2017. At the end of 2017 there were 4.3 million active mobile communication subscribers (149 per cent of the total Lithuanian population). The internet is used by almost 80 per cent of the population, and average broadband speeds are 50MB/s with fast public WiFi.

1 Stasys Drazdauskas is a counsel at Sorainen.
The use of electronic governance services in Lithuania grew to 48 per cent of the total residents. In the area of electronic governance Lithuania ranked in 11th place in Europe in 2017.8

II REGULATION

i The regulators

Electronic communications is one of the most regulated technology areas in Lithuania. The Law on Electronic Communications (LEC)9 transposes the EU regulatory framework for electronic communications. On the basis of the LEC further government regulations have been adopted to regulate certain more technical or more detailed issues of the framework.

The Communications Regulatory Authority10 is the main regulator in the electronic communications area, and is also responsible for adoption of a number of delegated legal acts, as well as supervisory measures (market review, imposition of measures for entities with significant market power, etc.).

The LEC applies to electronic communication services, the definition of which is equivalent to the EU Framework Directive, public communication networks, universal services, as well as governance of electronic communication resources (frequencies, numbering plan). The law also contains provisions on privacy in electronic communications, transposing the e-Privacy Directive.

Information society services are regulated by the Law on Information Society Services,11 transposing the Directive on electronic commerce, which is based on non-discrimination, technological neutrality, functional equivalency and other principles. Liability exemptions for transmission service, caching service, and hosting service providers are established, without imposing a general obligation for providers to monitor stored or transmitted information.

Media services are regulated by the Law on Provision of Information to the Public (LPIP).12 The law establishes the procedure for collecting, producing, publishing and disseminating public information and the rights, duties and liability of producers and disseminators of public information, their participants, journalists and institutions regulating their activities. The law establishes licensing and notification requirements for broadcasting (TV, radio) organisations, limitations on ownership, requirements for media content, programme composition, language, advertising restrictions, ethics, etc.

The media area is supervised by an independent regulatory authority – the Radio and Television Commission (RTC).13 The RTC is responsible for licensing of radio and television broadcasting and rebroadcasting activities, notification procedures, approval of ownership transfers, monitoring and supervision of content control, and advertising requirements.

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9 Latest English version: https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/05cd4e020f0a11e7b6c9f69dc4ecf19fjfwid=502q00eth.
10 Website: https://www.rrt.lt/en/.
11 https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.277491/FGVmSopPwK.
13 Website: https://www.rtk.lt/en/.
Other regulatory bodies that may exercise supervision over ECS providers pursuant to their competence include (not exhaustively) the State Consumer Rights Protection Authority, the State Data Protection Inspectorate, the Competition Council, and the Inspector of Journalist Ethics.

ii Regulated activities

Under the LEC, the provision of public communication (fixed, mobile and over electricity networks) networks or services, as well as public satellite communication networks and services is subject to a prior notification obligation. The notification form is publicly available on the website of the CRA.14

All public communication service providers who engage in the provision of public communication networks and services, dedicated lines, internet access, data transfer services, television (satellite, cable, multi-channel microwave, digital terrestrial, IPTV) services, cable radio services, optical fibre network services, and TV and radio transmission services are subject to quarterly reporting obligations. The reporting form is publicly available on the website of the CRA,15 which can be submitted electronically.

There is no requirement for communication service providers to be established or registered locally.

RFs are assigned by the CRA in accordance with the approved national plans. They can be assigned directly to the applicant, or by way of a public auction (e.g., in case of mobile communications networks). Telephone numbers are distributed according to the national numbering plan.

The RTC is responsible for licensing of radio and TV broadcasting and rebroadcasting activities. Licences are required for radio and TV broadcasting via terrestrial stations or networks, cable networks, multi-channel microwave networks, and networks the main purpose of which is not radio or TV broadcasting. Broadcasting via websites or web portals is not subject to licensing. Other broadcasters or subscription media service providers are subject to notification requirements.

iii Ownership and market access restrictions

In Lithuania, there are no general ownership restrictions for communication services providers. However, where national radio spectrum is allocated via public auction, participants usually are required by the CRA to comply with European and transatlantic integration criteria (i.e., entities must be established in countries of the EEA, EFTA, OECD or NATO).

The Law on Companies having Strategic Importance for National Security16 recognises information technology and telecommunications and other high technologies as economy sectors having strategic importance for national security. When an investor in this sector acquires ownership of more than one-quarter of the entity of the strategic sector, this acquisition must be notified to the Commission on Coordination of Security for Objects of Importance for National Security.

Radio and TV broadcasting licence holders may be owned by entities, who comply with certain restrictions. Licence holders cannot be owned by state or municipal institutions,

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governmental organisations, companies owned by the government or municipalities, banks, and political parties. Licence holders must also comply with reputation requirements (i.e., absence of criminal convictions for management or owners). Licence holders can be owned only by entities established in the EU or NATO, and which had no relations with entities or governments outside the EU or NATO that would pose a threat to national security.

Local and regional public information disseminators (newspapers, journals) must report their ownership to the RTC.

The telecommunication, media and technology sectors are also subject to general concentration controls from the perspective of competition law. In certain cases, an acquisition transaction may require notification and approval from the Competition Council.

In general, Lithuanian law does not limit market access, except for the limitations specified above.

iv Transfers of control and assignments

Telecommunication service providers are usually not subject to ownership change notifications or approvals.

A change in the ownership of at least 10 per cent in the radio or TV broadcasting licence holder requires prior consent from the RTC. Prior to the ownership change, the licence holder has to apply to the RTC for consent and provide all information required to prove the reputation and origin of the new owner. Consent is granted usually within one month. In the event a concentration permit is required from the Competition Council, the consent is only issued after the permit is granted by the Competition Council.

The Commission on Coordination of Security for Objects of Importance for National Security reviews notifications regarding compliance of the investors with the restrictions of the Law on Objects having Strategic Importance for National Security and must adopt its conclusions within 15 days after receipt of notification.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

The LEC does not contain rules dedicated specifically to internet or IP-based services. Certain electronic communication services, which are based on IP technology (e.g., VoIP), are subject to the same regulatory regime as other public access telecommunication services. For example, services that include inbound and outbound call services qualify as equivalent to public access telecommunication service, and the same legal and regulatory regime applies to such services. Call services provided via PSTN, ISDN based on IP, coaxial based on IP, STP or UTP based on IP, FTTP based on IP, GSM technology based fixed line services all qualify as substitute services by the CRA.

The CRA is supervising the implementation of Regulation (EU) 2015/2120 on open internet access and the BEREC Guidelines on the Implementation by National Regulators of European Net Neutrality Rules.17

Information society services (other than electronic communication services) are subject to the regulation of the Law on Information Society Services, which is based on the principles

of technological neutrality and non-discrimination. Information society service providers are required to provide the following directly and permanently accessible information to the recipients of the service:

a. the name of the service provider;
b. the service provider’s registered address;
c. contact details, including the electronic mail address;
d. the register, where the service provider is registered, and registration number;
e. supervisory authority; and
f. VAT payer code.

If reference is made to the fee charged for the service, information on whether the fee includes taxes and delivery charges must be provided.

Information society service providers who engage in information transmission (mere conduit), caching and hosting service provision are exempt from liability for the information transmitted. Additionally, such information society service providers are not required to monitor information upon the mere transmission thereof or provision of access thereto, temporary storage thereof in cache memory or storage thereof at the request of the recipient of the service, nor is the service provider obligated to actively seek facts or circumstances indicating illegal activity. However, these information society service providers are required to remove illegal content once they are notified by the right holders or those affected by the illegal information.

ii Universal service

In Lithuania, universal electronic communication services include provision of a subscriber line, internal calls and foreign calls, and call-box stations. Universal services are provided by Telia Lietuva, AB, a fixed line communication service provider.

iii Restrictions on the provision of service

Price regulation

In Lithuania, the CRA has imposed price limitations to certain providers for universal services, for call termination in public access telephone services, wholesale line rental services, wholesale local fixed access services, wholesale central access for massive market products, mobile call termination services, and broadcasting transmission services.

Access

Communication network service providers have to provide access to their infrastructure in cases where the user of infrastructure cannot implement its right to electronic communication infrastructure, or where the costs of such implementation would be disproportionately high. The network operator is required to conclude the agreement with the user of the infrastructure following the principles of non-discrimination and transparency.

Contracts with consumers

The Lithuanian Civil Code (Article 6.161) qualifies public communication service contracts as public contracts (i.e., public communication service contracts have to be concluded with any customer who applies for the services, where it is technically possible to provide the
Service providers may not refuse to conclude contracts or to provide discriminatory terms to certain groups of customers. Standard terms on electronic service contracts are controlled by the general contract law provisions as well as specific terms in the LEC.

**Net neutrality**

Regulation (EU) 2015/2120 laying down measures concerning open internet access is directly applicable in Lithuania. Thus all communications service providers in Lithuania are under the obligation to treat all traffic equally, when providing internet access services, without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used.\(^\text{18}\) Observeance of net neutrality and open internet access is supervised by the CRA.

**Unsolicited phone calls, faxes, emails and texts**

Lithuania has implemented the e-Privacy Directive 2002/58/EC\(^\text{19}\) in the LEC. The LEC provides the same requirements regarding marketing communications for natural as well as legal persons. Under the LEC, the use of electronic contact details of a natural or legal person for direct marketing is allowed only with the person’s prior consent (opt-in).

If a communications service provider obtains the electronic contact details (email, phone number) of a customer, who is a natural or legal person, in connection with selling a product or providing a service, such contact details may still be used for direct marketing of its similar products to the customer if the customer is given, upon the initial collection of electronic contact details and each time when the buyer’s electronic contact details are used for direct marketing, a clear and distinct opt-out opportunity free of charge and in an easy manner; and the customer is allowed to exercise its right to refuse over an ECN.

The exemption described above does not apply to voice calls, or calls placed with automated calling machines.

iv **Security**

Lithuania adopted the Law on Cyber Security in 2014,\(^\text{20}\) which was recently amended to implement EU Directive 2016/1148 (the NIS Directive). The law provides for the requirements for the maintenance of network and information systems essential for the functioning of society and state and local authorities’ network and information systems, liability and supervision as well as the bases for the prevention and resolution of cyber incidents.

The LEC provides the obligation for network service providers to retain certain electronic communication data for at least six months, for the purpose of investigation of serious crimes.

Since 25 May 2018, the General Data Protection Regulation (GDPR) became applicable in Lithuania. This was also of extreme importance in the communications sector,

\(^{18}\) Articles 3 and 4 of Regulation (EU) 2015/2120.


as the general rules set out in the GDPR are also applicable in the communications sector. In addition to the GDPR, Lithuania still has the Law on Legal Protection of Personal Data\(^{21}\) as amended to comply with the GDPR.

In addition to the GDPR and the Law on Legal Protection of Personal Data, some data protection requirements are also set out in the LEC, in particular related to e-Privacy Directive implementation.

Minors are protected by the Law on Protection of the Underaged from Negative Impact of Public Information, which applies to TV, radio content, as well as advertising, trademarks, computer games and other public information.

IV SPECTRUM POLICY

i Development
The CRA has approved a number of plans for development of radio spectrums (3410–3600GHz, 380–385MHz, 390–395MHz, 220–2,300MHz, 2,500–2,690MHz, 2,300–2,400MHz, 3,600–3,800MHz, 790–862MHz).

There is a list of spectrum approved by the CRA, which can be used without authorisation.

Recently the government decided to open the spectrum at 700MHz, which will be used for 5G communication.

The 4G network was developed in Lithuania from 2014.

ii Flexible spectrum use
There is a list of spectrum approved by the CRA, which can be used without authorisation.

iii Broadband and next-generation mobile spectrum use
Spectrum for mobile networks is traditionally made available by auction to three operators.

Recently the government decided to open the spectrum at 700MHz, which will be used for 5G communication. It is expected to be launched by 2020.

iv Spectrum auctions and fees
The latest spectrum auction was held in 2015 for 880–915MHz, 925–960MHz, 1,710–1,785MHz, and 1,805–1,880MHz, where the frequencies were assigned to three MNOs in Lithuania.

The next auctions for developing 5G are likely to be for spectrum around 700MHz.

V MEDIA

i Restrictions on the provision of service

Censorship
Censorship of public information is prohibited in Lithuania. In order to ensure freedom of information, the LPIP prohibits exerting pressure on the producer or disseminator of public information, their participant or a journalist, compelling them to present information in the

\(^{21}\) https://www.e-tar.lt/portal/lt/legalAct/TAR.5368B592234C/VCRzrdZydD.
media in an incorrect and biased manner. The producer, disseminator of public information, their participant or a journalist shall have the right to keep the confidentiality of the source of information and not to disclose it, except where a court orders such disclosure.

Restriction

The LPIP prohibits publication in the media of information that:

a. incites to change the constitutional order of the Republic of Lithuania through the use of force;
b. instigates attempts against the sovereignty of the Republic of Lithuania, its territorial integrity and political independence;
c. spreads war propaganda, instigates war or hatred, ridicule, humiliation, instigates discrimination, violence, physical violent treatment of a group of people or a person belonging thereto on grounds of age, sex, sexual orientation, ethnic origin, race, nationality, citizenship, language, origin, social status, belief, convictions, views or religion;
d. disseminates, promotes or advertises pornography or propagates or advertises sexual services and paraphilias;
e. promotes or advertises addictions and narcotic or psychotropic substances;
f. is slanderous and offensive to a person or degrades his or her honour and dignity; or

g. violates the presumption of innocence and impedes the impartiality of judicial authorities.

Language requirements

The LPIP requires public information to be produced and disseminated in the state language. Radio or television programmes that are broadcast in a language other than Lithuanian must be translated into Lithuanian or shown with Lithuanian subtitles, except for educational, occasional, special, music and rebroadcast foreign radio or television programmes or parts of programmes as well as programmes produced by broadcasters of radio or television programmes intended for the ethnic minorities of Lithuania. Broadcasters of television programmes are prohibited from showing audiovisual works that have been translated from an official EU language into a non-EU language. When rebroadcasting television programmes, rebroadcasters or other persons providing services of dissemination of television programmes or individual programmes via the internet for Lithuanian users must give priority to the official EU languages.

EU content

Broadcasters of television programmes must, where possible, reserve more than half of the television programme time remaining after deducting the time allocated for news, sports events, games and advertising programmes, teletext services and teleshopping for European works. Broadcasters of television programmes must, where possible, reserve at least 10 per cent of the television programme time remaining after deducting the time allocated for news, sports events, games, advertising programmes, teletext services and teleshopping for European works created by independent producers not earlier than within the past five years.
Advertising restrictions
Advertising and audiovisual commercial communications must be decent, correct and readily recognisable. It is prohibited to publish in advertising and audiovisual commercial communications information that degrades human dignity, promotes any discrimination based on race, sex or ethnic origin, nationality, citizenship, religion or belief, disability or age, or contains manifestations or promotion of sexual orientation, is offensive to religious or political convictions or promotes behaviour prejudicial to health or safety or behaviour grossly prejudicial to the protection of the environment.

Advertising of tobacco and alcohol products and audiovisual commercial communications intended for advertising of tobacco and alcohol products is prohibited.

The total time of television advertising spots and teleshopping spots within a given hour must not exceed 20 per cent.

ii Internet-delivered video content
Besides television services, on-demand audiovisual media services are becoming increasingly popular. On-demand audiovisual media services do not require a licence, but do require a notification to be submitted to the RTC.

Most of the biggest TV channels in Lithuania have started their own video distribution services. Internet news portals are also including video publications as part of their service.

VI THE YEAR IN REVIEW
The most important changes in the legislation concerning the ICT sector in 2017 and 2018 are the GDPR and the Law on Cyber Security.

The GDPR became applicable on 25 May 2018, and required companies to adjust their data processing and gave people a greater control over the use of their personal data.

The Law on Cyber Security was updated to implement the Networks and Information Security Directive 2016/1148.

Significant recent transactions include the acquisition of previously Viasat-owned TV channels (TV3, TV8).

In March 2017 it was also announced that the Swedish media holding Modern Times Group had signed an agreement to sell its Baltic businesses to the US Providence Equity Partners. The value of the transaction was approximately €115 million. The transaction concerned the sale of three TV channels in Lithuania (TV3, TV8 and TV6), five TV channels in Latvia and three in Estonia. The sold entities form the third-largest commercial television operator in the Baltic region, nationwide commercial radio stations, digital assets and an online advertising consultancy operating across the Baltic region.

VII CONCLUSIONS AND OUTLOOK
Generally, Lithuania follows the European policies and has successfully implemented the various pieces of EU legislation into national law.

It is likely that the government will continue its policy of supporting key technology areas.

In the telecommunications sector, the most important development in upcoming year should be the development of the 5G network.
Chapter 16

LUXEMBOURG

Linda Funck

I OVERVIEW

The Luxembourg TMT sector has evolved from being predominantly a provider of voice services into a diverse, competitive and interconnected industry using terrestrial, satellite and wireless transmission systems. Today, Luxembourg has first class infrastructures and telecommunication networks and is counted among the top locations for electronic communication services and infrastructures. The 2017 edition of the Global Competitiveness Report (GCR Report) published by the World Economic Forum, Luxembourg is listed first out of 137 countries with regard to technological readiness, and Luxembourg’s steady upward trend relating to its overall score is recognised.²

The ICT development index 2017, when analysing the introduction of ICT and the potential for ICT-related development, ranked Luxembourg ninth out of 176 countries.³ Luxembourg ranks fifth out of the 28 EU Member States in the last edition of the Digital Economy and Society Index (DESI) published in May 2018 by the European Commission (EC), and is considered to be a high-performing country.⁴

Traditionally, the sector was limited to a very few players. Telecommunication and postal services were operated for several decades as a public monopoly of the state-owned Entreprise des Postes et Télé communications (EPT).⁵ The radio and television sector was controlled and developed from its early years by a privately owned company. Indeed, the first radio broadcasting in Luxembourg was initiated by the founders of the current broadcaster, CLT-UFA. The privately held operator was ensured a leading role in the national and international development of the radio and television sector, and today RTL Group ranks as the top television and radio broadcaster in Europe. Luxembourg has also been a pioneer in non-terrestrial communication technology. SES-Astra (SES), a Luxembourg-based company created in 1985, was Europe’s first private satellite operator, and today SES has global standing.

The presence of important market players in the TMT and TMT-related sectors in Luxembourg and the related know-how and experience have led the government to make efforts to maintain, create and further develop its electronic telecommunication technologies with the aim of being among the best places in Europe and abroad to do business within the sector and being a hub for e-services in Europe. This aim has been constantly pursued

1 Linda Funck is a partner at Elvinger Hoss Prussen.
4 ec.europa.eu.
5 The new commercial name is Post Luxembourg.
and reaffirmed by the government since 2010 until 2018. The government together with a
group of private investors has set up a fund dedicated to ICT 6 start-ups named the Digital
Tech Fund. The GCR Report confirms the success of these efforts, as Luxembourg is in
fourth position in relation to its goods market efficiency. According to the DESI of the
EC, Luxembourg is ranked second among all European Union countries with regard to its
connectivity and fifth with regard to its human capital.7

Luxembourg combines many features that are beneficial to the development of an ICT
sector, including the diversity and multilingual skills of the population and workforce, a
geographical location in the centre of Europe and an important financial industry in need
of high-performance communication technologies. In addition, Luxembourg has gradually
developed state-of-the-art digital infrastructure, international telecommunication connections
(offering fast and reliable connectivity to other European cities at very low latency rates),
efficient national communication networks, performant data centres, a comprehensive,
evolving and innovative legal framework, cutting edge research, and safety and security, all
of which contribute to Luxembourg’s increasing attractiveness to technology organisations
and electronic communication services, but also to financial institutions, companies active
in biotechnology and medicine, and other e-businesses. Luxembourg figures among the top
locations for ICT infrastructure (data centres, high-speed connectivity and internet traffic,
low latency internet) and it offers specialised expertise to keep data safe.

The presence of regulated ICT support professionals of the financial sector, who are
subject to the same confidentiality obligations as banks, provides considerable comfort and
security to clients in the financial sector in areas such as the outsourcing of IT functions.

More recently, Luxembourg has been focusing strongly on the development of the
FinTech industry, for which Luxembourg is very attractive as it combines a huge range
and variety of financial services, performant and innovative technology and open-minded
regulators, public authorities, private players and associations who are ambitious to follow
and develop a sector that is evolving rapidly and that is omnipresent in the overall global
economy. Luxembourg as a hub for financial services offers an ideal environment for FinTech
companies to develop their services and expand their business. In fact, many start-ups have
chosen Luxembourg to develop FinTech activities from compliance and risk management,
through blockchain and cryptocurrency, security and authentication, automated investment
services, Big Data analytics, to mobile and e-payments.8

The quality of the communication infrastructure has led numerous actors in the gaming
sector (online video games) and gambling sector to set up their headquarters in Luxembourg.9
Global brands in the media and internet world such as Amazon, eBay, PayPal, Vodafone
Procurement, Intelsat, RTL Group, Milicom, Fanuc (robotics and computer numeric
control) and Skype all have European headquarters or major operations in Luxembourg.

The presence of Level 3 in Luxembourg (one of the most important operators of
telecommunication services at the level of the backbone internet) confirms Luxembourg as
a centre of excellence in the internet sector. Luxembourg is also attractive to a number of
e-payment and e-money services institutions and can be considered as Europe’s e-payment

6 Information and communication technologies.
8 http://www.inspiringluxembourg.public.lu/fr/outils/publications/finance/LFF-fintech-2015/fr-LFF-
9 Big Fish Games, Bigpoint, Innova, Valve.

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hub, with brands including Digicash, Amazon Payments, Mercedes Pay SA, Yapital, Six Payment Services, Rakuten, Wordline and Mangopay all based in Luxembourg. Several software giants including Microsoft, Symantec and Open Text also have places of business in Luxembourg.

Luxembourg also has a strong reputation for service availability, security and data protection, and responsive and open-minded authorities.

The CSSF, Luxembourg’s financial sector supervisory commission, has granted Bitstamp a payment institution licence, and has made the company the first nationally licensed Bitcoin exchange. There are many other companies active in the virtual currencies sector that want to establish themselves in Luxembourg and that are currently trying to obtain their licence, confirming once more the attractiveness and open-mindedness of Luxembourg for ICT businesses.

Luxembourg has a longstanding official policy of welcoming pan-European companies in addition to creating the appropriate framework for the development of local businesses, and offers multiple opportunities to start-ups by creating an environment that allows existing market players to come into contact with young entrepreneurs. For example, the House of Start-Ups is hosting the Luxembourg city incubator, a project conducted by the Luxembourg Chamber of Commerce, and currently supports a large number of innovative start-ups in a variety of industry sectors. In 2018, the House of Start-Ups is hosting the Luxembourg House of Financial Technology, the City of Luxembourg Incubator, the Hub@Luxembourg, the Nyuko Accelerator and the International Climate Finance Accelerator Luxembourg.10

In 2017, the proportion of employees in the ICT sector in relation to the total number of employees is 4.1 per cent, which constitutes the fifth-highest proportion in the European Union (the average in the European Union is only 3.7 per cent).11

Efforts are also being made in ICT research, with a focus on the security, reliability and trustworthiness of ICT systems and services. In the context of increasing the influence of digital technologies in every aspect of our lives and throughout all business areas, and with the further and constantly evolving development in cloud computing and e-archiving, digital security is a key element of the success of the digital economy. Important improvements are being made to the legislation in order to adapt the national legal framework to overcome barriers related to the use of new technologies.

Luxembourg joined forces with other European countries and started planning in 2016, in cooperation with the EC, France, Spain and Italy, an European super-calculator, allowing private and public players access to top-notch software tools. The declaration of European cooperation in the context of high performance computing (HPC) was signed by Luxembourg Minister of Economy on 23 March 2017, which marked the official start of the collaboration between the signatory countries (Luxembourg, Germany, Spain, Italy, Portugal, France and the Netherlands). These countries have joined forces to implement the strategy of a European HPC network, of which the Grand Duchy is the initiator. In the context of the HPC, Luxembourg has been given a leading role in the Driveless cars: The Future Smart Mobility made possible by High Performance Computers project.14

10 http://www.host.lu/.
12 Interdisciplinary Centre for Security, Reliability and Trust (SnT), Computer Science and Communication.
Luxembourg is highly present at European-level discussions and negotiations and stout in its defence of its position in the global process of harmonisation and liberalisation, while supporting the direction of European regulation. At a national level, research and development in the ICT sector is conducted by a number of government-promoted institutions. In developing its communication networks in the context of the investment realities and opportunities in the telecoms and media sector, the challenge is to direct investment in a way that ensures that the right type of network is built and that public investment works in cooperation with the private sector so as to promote a more competitive telecoms environment. The government has actively taken part in the discussions regarding the Data Protection Regulation (GDPR) adopted on 14 April 2016, which came into force the 25 May 2018. In addition, separate national legislation been adopted in August 2018 in relation to the entering into force of GDPR.

The development of the information society is one of the key priorities of the government. In addition to the aforementioned policies, it has created an action plan called e-Luxembourg with the ultimate goal that Luxembourg administrations, corporations, education personnel and individuals may efficiently use and have access to electronic communication means to help improve their quality of life. Today, many filings, registrations and requests to public administrations (such as those of the tax, social security and energy sectors) can be made online. In 2017, the government launched administrative online platforms such as eHealth to facilitate the possibility of carrying out administrative procedures electronically via online applications.

The government has adopted a GED system (electronic document management) and banned the use of paper with the aim of streamlining internal government structures so as to become more cost-effective. Luxembourg has also introduced electronic identity cards. The government is very keen to actively assist and encourage Luxembourg small and medium-sized companies to develop and enhance the digitalisation of their businesses and operations, and to familiarise them with such digitalisation so as to increase the productivity, competitiveness and sustainability of their enterprises. In that context, a Digital Skill Bridge Programme has been created to enable businesses and their employees to get support regarding the possibilities that digitalisation may offer. To promote Luxembourg as a European logistics hub, a Single Window Logistic Programme has been introduced that shall simplify and digitalise relations between all actors in the logistic chain and thus increase efficiency and competitiveness.

In 2014, the Council of Government announced the launch of a new strategy, Digital Luxembourg, which focuses on developing high-level ICT infrastructures, facilitating the regulation and flow of data, promoting digital competences, modernising online administration and creating an innovative ecosystem. The Digital Luxembourg platform aims to assemble private players and public institutions and foster inter-sectoral and cross-sectoral interaction. Recognising the continual need for a workforce with strong IT skills, Luxembourg has implemented the Digital (4) Education strategy. The first WebForce3 school, which aims to train people in a very short time to allow them to become qualified for a developer or junior integrator job, has been implemented. The school is part of the Fit4coding initiative

15 For instance, the Luxembourg Institute of Science and Technology (LIST).
18 Fit 4 Innovation financed by the Ministry of Economy is one of the initiatives.
launched by the government and co-financed by the European Social Fund. Other initiatives such as Start to code, Open Class Room and the House of Training assist in education and providing digital skills in technology.

In the context of Digital (4) Education and the effort to raise awareness of the importance of technologies at a very early stage, high schools innovating in ICT have been able to use the Future Hub label since 2017. The aim is to make students aware that technologies will be an integral part of their future whatever sector they might be working in and to raise interest in those subjects. A Luxembourg Tech School has also been launched. The Ministry of Education, Children and Youth is currently also updating the infrastructure of all high schools to provide high-speed internet through fibre.

Luxembourg is also aware of the need for skills from outside Luxembourg, and in a view of recruiting IT skills from abroad, the government has adapted its legislative framework so as to facilitate the obtaining of residence permits for highly skilled individuals.

Luxembourg strongly encourages the development of a Digital Single Market, as it will strengthen Luxembourg’s position within the European area. The government is involved through various organisations in the discussions and adoption of regulations and directives at EU level, such as notably the Single Digital Getaway, electronic cards for services and the Single Market Information Tool.

In addition, the government is fully aware of the fact that the continuance of the success and the competitiveness of Luxembourg’s financial sector will depend, inter alia, on the availability of cutting edge services based on FinTech. A FinTech working group has been established with representatives from different associations active in the financial and technological sectors, and it aims to solve and answer specific problems and questions related to FinTech. A House of Financial Technology been officially launched on 25 April 2017 as an initiative of Luxembourg for Finance. It is a public–private partnership that established Luxembourg as a European FinTech centre by offering start-up incubation and co-working spaces.

In January 2017, the Secretary of State of the Economy presented the new Creative Industries Cluster Luxembourg, which aims to support the economic development of the sector, and includes activities such as architecture, crafts, visual arts, design, styling, the games industry, marketing and communication, literature, publishing, the performing arts and new media.

Convergence has been achieved by creating rules and regulations, regulatory authorities and consulting entities at the national, European and international levels that embrace the diversity, interconnectivity and interrelatedness of the various industries and players. The increasing convergence between telecommunications, information technology and media has led to the adoption of the regulatory framework that was introduced into Luxembourg law by two laws of 27 February 2011 (Telecoms Package). The Telecoms Package is designed to provide for one set of rules for all electronic communication services and networks. The continuing development of the ICT sector constantly calls for adjustment of the current legislation and regulations at the national and European levels (see Section II).

As a result of convergence, it is extremely important that interconnectivity and free access to all operators and service providers within the TMT sector are ensured in an equal
manner. The use of one infrastructure for different types of services is of particular importance, and it is crucial that the operators and owners of the infrastructure or networks make these available to the other participants in the TMT sector. This is particularly true in Luxembourg because of the small size of the market. Constant efforts are made to ensure competitiveness among the players in the TMT sector. Ensuring Luxembourg’s international connectivity is at the top of the agenda for future years, with the aim being ensuring the lowest latency rates with major capitals, the lowest prices and the presence of the most important carriers.

Importantly, the government supports the principles of network neutrality (i.e., keeping a free architecture, open and non-discriminatory terms, guaranteed access without unjustified conditions on ECNs), and has pushed for the adoption of EU Regulation 2015/2120, laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users’ rights relating to ECNs and ECSs, and Regulation (EU) No. 531/2012 on roaming on public mobile communications networks within the European Union, which was finally adopted on 25 November 2015 during Luxembourg’s presidency of the European Union Council. This Regulation is seen as major achievement for the Digital Single Market.

Competition among incumbent operators and alternative operators remains an important element for e-industry players.

II REGULATION

TMT services cover an extremely wide scope of technology and services, with different laws and regulations applicable that entail various regulatory authorities to supervise different services and related technology. The competent ministry in Luxembourg for the telecommunication and media industry is currently the Ministry for Communication and Media.

i Regulators and regulated activities

The Law of 1997 created the Luxembourg Institute of Telecommunications (ILT), whose duty is to supervise and regulate the telecommunications sector. In 2000, the tasks of the ILT were widened to encompass the Luxembourg energy sector and postal services and, as a consequence of the Law of 1997, it was renamed the Luxembourg Institute of Regulation (ILR). The scope of the ILR’s tasks has been modified on several occasions, and for the last time by the Laws of 27 February 2011 and 26 July 2011. The ILR is an independent regulator and is not funded by public state funds paid for by taxpayers, but is rather financed by the operators of the sector supervised and regulated by the ILR.

The Electronic Communication Law and the Spectrum Law clarify the allocation of competences between the Minister for Communication and the ILR in different sectors. The ILR is entitled to set rules in accordance with European directives and national law. Additionally, it controls the efficient use of infrastructure for the benefit of consumers. It is entitled to determine the fees and conditions under which communication networks are operated and services rendered so as to allow the formation of a competitive market. It also has the authority to draw up reports and proposals, which it must submit to its board and the government. It gives advice, and prepares statistics and regulations.

22 www.ilr.lu.
The ILR is competent to receive notifications, and to grant authorisations or licences in relation to the provision or operation of electronic communication network services, and assists the competent minister in the allocation of licences for radio spectrum. It is also in charge of establishing the plan for frequencies and updating the public registers required by law for the various TMT sectors. It has the power to issue administrative sanctions against operators that breach laws or regulations. It may also act as a dispute settler between competing operators, and as mediator between customers and operators.23

The ILR is not empowered to monitor and regulate abuses of dominance. It is, however, responsible for ensuring that dominant players do not exclude other competitors from the sector, and it may take measures and issue rules to ensure a competitive market if, in its opinion, proper competition is no longer possible.

Regarding media, the Media Law (as defined hereafter) was amended by the Law of 27 August 2013. The government commissions existing under the former law (i.e., Communication Media Service, Independent Radio Broadcasting Commission and the National Programming Council (CNP)) have been replaced by one single authority: the Luxembourg Independent Audiovisual Authority. Its main responsibilities are to:

a. ensure service providers’ compliance with the law;
b. grant or withdraw broadcast permits;
c. ensure access to audiovisual programmes for persons with a visual or hearing disability;
d. stimulate on-demand audiovisual media service providers to promote and distribute European works;
e. encourage audiovisual media service providers to elaborate codes of conduct concerning the broadcast of inappropriate content; and
f. impose sanctions on non-compliant service providers such as fines, withdrawal of permits, warnings and suspension of transmission.

The National Commission for Data Protection (CNPD), initially created by the Law of 2 August 2002 on the protection of individuals with regard to the processing of personal data (repealed following the entering into force of GDPR) and governed by the Data Protection Law, is the authority in charge of the supervision of the electronic communication market as far as data protection issues are concerned.

The CNPD controls the processing of personal data in Luxembourg and ensures compliance with the data protection regulations, in particular those relating to the confidentiality and security of processing operations. In addition, it has advisory competence towards the government. Although the CNPD is a public institution, it enjoys independence in carrying out its mission.

It has investigative competence that allows it direct access to data of processing operations. As an investigative body, the CNPD is allowed to issue administrative sanctions. Since the entry into force of the GDPR in 2018, the CNPD is responsible for monitoring its application to protect the fundamental rights and freedoms of natural persons in relation to processing and to facilitate the free flow of personal data within the Union.24 The CNPD’s powers have been enhanced and it is, inter alia, able to impose fines of up to 4

per cent of a company’s worldwide turnover, and derives powers from both the GDPR and Luxembourg-specific legislation for residual matters (e.g., the recently adopted Luxembourg Data Protection Law).

The TMT sector is extremely broad and diversified. Due to the specifics of the various industries on the one hand and their interrelatedness on the other, it appears that laws and regulations apply to more than one specific service within the TMT sector, resulting thus in a large amount of applicable legislation and regulations.

The main laws are as follows:

- the Law of 11 April 2010 on freedom of expression in electronic media, amending the Law of 8 June 2004 (as amended) on the freedom of expression in the media sector;
- the Law of 27 February 2011 on electronic communication services and networks (Electronic Communication Law), abrogating the Law of 30 May 2005 on electronic communication services and networks (Former Electronic Communication Law) as amended for the last time by a law of 7 June 2017;
- the Law of 30 May 2005 as amended by the Law of 27 February 2011 on organisation and management of radio spectrum (Spectrum Law);
- the Law of 30 May 2005 regarding the organisation of the ILR as amended (most recently by a law of 19 June 2015);
- the Law of 30 May 2005 on the specific provisions regarding the protection of individuals as to the processing of personal data in the electronic communication sector and amending Articles 88-2 and 88-4 of the Criminal Instruction Code, as amended;
- the Law of 14 August 2000 on electronic commerce as amended (Electronic Commerce Law);
- the Law of 18 April 2001 on copyrights as amended (Copyright Law);
- the Law of 1 August 2018 on the organisation of the CNPD and the general data protection regime (Data Protection Law);\(^{25}\)
- the Luxembourg Constitution;
- the Law of 11 August 1982 on privacy (Privacy Law);
- Article L222-12 to L222-23 of the Consumer Code regarding distance contracts on financial services, abrogating the Law of 18 December 2006 on distance selling of financial services;
- Article L222-2 to L222-11 of the Consumer Code;
- general laws are applicable to all aspects not specifically regulated by specific laws or regulations, and in particular the provisions of the Luxembourg Criminal Code (LCC) (e.g., in relation to pornography, discrimination, racism, violence, theft and piracy) and the commercial code with the amended Article 567 (See Section VI.i);
- the Law of 18 July 2014 on cybercrime;\(^{26}\)

\(^{25}\) The GDPR harmonises the applicable data protection law and the Luxembourg legislator has adopted relevant legislative texts to cover matters where Member States retain a certain level of autonomy.

\(^{26}\) See Section III.iv, Cybersecurity.
the Law of 25 July 2015 on electronic archiving as amended by the Grand-Ducal Regulations of 21 September 2017 on the execution of Article 4 Section 1 of the Law and on the dematerialisation and conservation of the documents (Electronic Archiving Law);

the Law of 22 March 2017 on measures to reduce the cost of deploying high-speed electronic communications networks;

the Law of 7 June 2017 on electronic communication services and networks;

the Law of 22 February 2018 on the exchange of personal data and information in policy matters;

Bill of Law No. 6763 modifying the Criminal Procedure Code and Electronic Data Protection Law;

the Law of 1 August 2018 relating to the protection of individuals as to the processing of personal data in criminal matter and for national security measures; and

Bill of Law No. 7314 relating to the implementation of the Directive on security of network and information systems (NIS Directive).27

In addition, a large number of Grand-Ducal regulations and other regulations (particularly from the ILR) have been adopted in relation to the implementation of the various laws.

ii Ownership and market access restrictions

Luxembourg rules and regulations do not, in principle, impose ownership restrictions within the TMT sector, except for in certain specific sectors. Regarding telecommunications services, the previous authorisation regime has been replaced by a less stringent notification regime.

There are no ownership restrictions for being granted a concession to operate Luxembourg satellite systems or broadcast a Luxembourg programme via satellite or cable except that for the latter, a broadcasting licence may only be granted to a legal entity incorporated under Luxembourg law.

Because spectrum is considered a rare resource, its management and use is reserved to the state. Licences to use spectrum may, however, be granted to third parties subject to the conditions of national legislation, related regulations, or international or European agreements and treaties.

There is no specific national regulation on cross-ownership of media companies. However, general laws on competition still apply.

iii Mergers and acquisitions

There is no specific Luxembourg authority regulating mergers and acquisitions in the TMT sector. The ILR’s competences are to guarantee competitiveness on the Luxembourg TMT market, and as such it will monitor acquisitions and mergers in the sector so as to evaluate their position on the market ex post.

The Law of 23 October 2011 on competition, which prohibits restrictive agreements and abuses of dominant position, provides for an independent authority, the Council for Competition Matters (CCM), which is in charge of investigating cases, consultative missions and sectoral inquiries (or investigating types of agreement). The Investigation Division for Competition Affairs has been abolished. The CCM is also a decision-making body and exercises various powers for the execution of its mission (i.e., finding and sanctioning

27 The Directive on security of network and information systems (EU) 2016/1148.
legal violations, drafting opinions, undertaking market studies, gaining information about companies and executing missions allotted to the CCM). Decisions by the ILR in relation to regulation of competition must be taken in agreement with the CCM. None of the relevant authorities has \textit{ex ante} powers; nor may they prevent mergers or acquisitions.

III \hspace{1em} \textbf{INTERNET AND IP-BASED SERVICES}

i \hspace{1em} \textbf{Internet and internet protocol regulation}

Internet services were regulated, prior to the Electronic Communication Law, by the Law of 21 March 1997 relating to telecommunication services and the operation of telecommunications networks (Law of 1997).

Even though the Law of 1997 did not provide for specific internet or internet protocol regulations, but covered telecommunications services and networks more generally, in the absence of the express exclusion of internet services and in light of the definition of telecommunication services and networks, internet services were considered to be governed by this Law.

The Electronic Communication Law introduced certain changes, widened the scope of existing regulation to a larger range of communication technologies, and introduced the definitions of electronic communication network and electronic communication services, as opposed to telecommunication services. The new terminology reflects the increased scope of the services and networks that are regulated. Express reference to internet services is made.

Neither the Law of 1997 nor the current Electronic Communication Law provide for any specific rules applicable to internet services or IP-based services as opposed to traditional telephony services, except that due to the specific nature of the telephony services, certain additional rules apply to the provision of telecommunication services that are offered to the public. The Electronic Communication Law provides for certain specific obligations applying to publicly available telephony services and public telephone networks. These specific regulations are to ensure a universal service to the resident population and apply only to traditional telephony.

As previously noted, the ILR is the competent regulator in charge of the supervision of the services rendered both in relation to internet services and traditional telephony services. The operation or provision of electronic communication services or networks is subject to notification to the ILR. No distinction as regards the notification requirement is made between traditional telephony and internet or IP-based services, other than details on the differences of the various services notified. To the extent the definition of electronic communication services can be broad, there are circumstances where a follow up might be of interest, as certain case-by-case exemptions do apply. Although no licence is required, notified entities are subject to a certain number of formalities and filings, and have to pay an administrative fee.

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28 The abrogated Law of 1997 provided for a definition of telecommunication services and telecommunication networks, with telecommunication having been defined as ‘each transmission, issue or reception of signals, images, sounds or data of any nature, by wire, radio, by optical or by electromagnetic means’.

29 Articles 11 and 12 of the Electronic Communication Law.

30 Article 5 of the Electronic Communication Law.
The Electronic Communication Law provides for a global legal framework applicable to all electronic telecommunication services and networks, with certain specifics depending on the type of service or network, ensuring however that the whole sector is consistently governed by the same legislative and regulatory national framework.

ii Universal service

The development of communication infrastructure in Luxembourg is among the top priorities of government programmes in the information and communication technology field. The government has been developing the broadband infrastructure services for approximately 10 years.

Since the end of 2011, Luxembourg has had 100 per cent standard (fixed) broadband coverage (DSL up to 25Mbps) available to all Luxembourg households. Similarly to neighbouring countries, there is a trend of increased use of fixed lines provided via IP and a reduction in the number of standard fixed lines. Operators in France have decided to provide for a withdrawal of standard fixed lines, and it is very likely that this might also happen in Luxembourg. By the end of 2017, NGA reached 95 per cent (compared to a European Union average of only 80 per cent of the households), and 4G broadband availability in Luxembourg reached around 98 per cent in urban and rural areas. Luxembourg residents are very connected (96 per cent are internet users).

The installation of the optical fibre has made constant progress since 1997, and Luxconnect, the city of Luxembourg and EPT are joining the efforts to cover the whole territory with optical fibre. FTTH, using fibre optic cable, is further progressing, and 57 per cent (+6 per cent since 2016) of all Luxembourg households are connected to FTTH per statistics of the ILR as of 30 June 2017. In addition to work being carried out on the deployment of optical fibre throughout the country, efforts are also being made on the existing networks to increase the broadband speed. The Grand Duchy is connected thought 27 different fibre routes to the main internet exchange hubs in Europe: Frankfurt, London, Paris, Brussels, Amsterdam and Strasbourg, with particularly low-latency rates between 4 and 8 milliseconds.

The ILR statistical report confirms the continuing trend of Luxembourg’s population to subscribe to high-speed broadband. According to an analysis of OpenSignal, Luxembourg ranks on sixth in the world in terms of performance: the average speed in the country is 36.56Mbps.

31 Luxembourg 2011 Telecommunication Market and Regulatory Developments.
32 NGA (VDSL, data over cable service interface specification 3 cable and FTTP).
36 Luxconnect was created at the initiative of the government.
In Luxembourg, a notable market trend towards bundled offers (broadband mobile or fixed telephony and TV) continues. At the end of 2017, 81.8 per cent of all internet access services were commercialised with at least one other service.41 Luxembourg benefits from an extremely developed FTTH architecture.

An ultimate aim of the government is to provide households and businesses with downstream speeds ranging up to 1GB/s and upstream speeds of 500Mbps in 2020. EPT and other alternative operators offer ultra-high speed internet access.

iii Restrictions on the provision of service

Pursuant to the Electronic Data Protection Law and GDPR, ISPs and operators of electronic communication services and networks are compelled to ensure the confidentiality of communications exchanged by way of electronic communication means. The general rule is that other than the user, no person is allowed to listen to, intercept or store communications and data relating to the traffic and location without the agreement of the user.

This prohibition does not apply to communications relating to emergency calls, commercial transactions to the extent that they constitute proof of the transactions, or authorities investigating and acting in relation to a flagrante delicto act or within the scope of criminal offences to ensure national and public security; and

A regulation adopted on 14 December 2017 provides for the conditions and limitations of any permitted interceptions.

In relation to data resulting from commercial transactions and cookies, the user or parties to a transaction must be informed that their data may be processed, the conditions (in particular the duration) and aim of the storage, and the possibility of the user opposing such data processing. The use of cookies can only be carried out with the express consent of a user. The user must have a real choice and no risk of deception or negative consequences if he or she chooses not to give his or her consent.

For the purpose of criminal law enforcement, specific conditions must be met to have recourse to intercepted communications data. In addition, for the purpose of research, monitoring and pursuit of criminal offences, and with the sole aim of providing relevant information to the judicial authorities, each ISP or operator must store traffic information and locational data for a period of six months. The Law of 24 July 2010 has amended the scope of criminal offences by limiting the possibility of only consulting the data that relates to criminal offences resulting in penal sanctions of more than one year’s imprisonment. The Grand-Ducal Regulation of 24 July 2010 relating to traffic data and localisation data determines the category of traffic data that may be useful for the research, observation and prosecution of criminal offences, as well as the manner pursuant to which such information is made available to the authorities. Bill of Law No. 7314 implementing the NIS Directive will provide legal measures to further enhance and strengthen the level of cybersecurity.

Intellectual property theft and piracy are regulated by the Copyright Law, the LCC, the Privacy Law, the Electronic Data Protection Law and GDPR.

There is currently no public authority in Luxembourg that exercises global supervisory or monitoring power over the content and traffic data of network operators, ISPs and users, as this would violate the essential privacy principles.

42 Articles 309, 460, 488, 505, 509-1 and following of the Luxembourg Criminal Code.
Similarly, and for the same reasons, network operators may not control the content, application and services accessed by their network users.

The practice of deep packet inspection is prohibited in Luxembourg, as it infringes confidentiality rules and constitutes an invasion of privacy in complete violation of the above-mentioned legislation. The same analysis would apply to the filtering of data processed by means of electronic communication means.

However, network operators, data centre operators and professionals of the financial sector are obliged to comply with the secrecy or confidentiality requirements, and to avoid invasion of privacy, piracy or intellectual property theft, to take appropriate technical and organisation measures, and to have systems and procedures (firewalls, encryption, secured and restricted access, etc.) in place that render the network and data processing via their network secure.

iv Security

National security

The Electronic Communication Law, the Electronic Communication Data Protection Law and the Data Protection Law provide for specific applicable measures to ensure national interests.

In certain circumstances, where national security (including public health and public order) is endangered, the government may requisition the entire electronic communication network established in Luxembourg, as well as the connected equipment, or prohibit the provision of some or all electronic communication services.

To maintain access to the emergency services, the government may also dictate special conditions for the use of electronic communication services and networks. Although storage of personal data is generally prohibited, the Electronic Communication Law provides for an exception in relation to storage of traffic data relating to emergency calls or inspection of false alerts or attacks or abusive calls.

The Law of 23 July 2016, creating a High Commission for national protection, attributes special powers to this High Commission to prevent, anticipate or manage crises and their effects, and consequently encourage the return to a normal state. For example, the protection of critical infrastructure includes all activities aiming to prevent, attenuate or neutralise the risks of a reduction or discontinuity of services essential to the protection of vital interests or personal needs for all or part of the country or its population.

Furthermore, following the recent terrorist attacks, a law on the exchange of personal data and information in police matters was adopted on 1 August 2018.

Finally, the Law of 7 June 2017 abolished anonymous prepaid SIM cards for mobile phones. Mobile operators will have to deactivate prepaid SIM cards with a Luxembourg number whose holders have not yet been identified. Consequently, they will have to collect certain data in relation to the identification of their clients before activating the purchased prepaid cards.

Without prejudice to the existing national laws, the NIS Directive creates a computer security incident response teams (CSIRTs) network to contribute to the development of trust and confidence between Member States and to promote swift and effective operational cooperation. The High Commission is working with other relevant authorities to enforce the application of the Directive through Bill of Law No. 7314.
Privacy and consumer protection

Privacy and consumer protection in the electronic communication domain is guaranteed by both the Consumer Code and the Media Law. They set guidelines and restrictions in relation to commercial advertisements and specific provisions for the protection of children.

Information about consumers must be treated confidentially and may not be rendered accessible to third parties, and the processing of consumer data is allowed only if it falls within the criteria defined by the relevant laws. Processing of data is subject to the principle of legitimacy of processing.

Luxembourg law prohibits in principle the addressing of advertisements or other unrequested communications to persons by electronic means without their consent. In any event, the consumer shall be able to object. If the supplier of a product received email addresses during a previous sale, he or she can use those email addresses to promote analogous products and services unless the concerned persons request such actions to be stopped.43

Specific Luxembourg provisions related to certain sectors (e-payment, financial services concluded or offered via electronic means) apply when a contractor and a prospective client conclude transactions or receive services over the internet or other mobile means that do not necessitate direct human contact.

The e-Privacy regulation that is currently being negotiated at the EU level will further enhance consumer protection, as will the contemplated European Electronic Communication Code.

Protection of children

There is no specific legislation or regulation that ensures the protection of children online.

In 2011, Luxembourg ratified the United Nation Convention in relation to children’s rights and the Convention of the Council of Europe concerning protection of children against exploitation and sexual abuses, and is involved in the implementation of their provisions.

Moreover, the government is issuing a number of recommendations and supporting various projects to make children and their parents aware of the risks related to the use of the internet. The BEE Secure project was drawn up in the context of the EU Safer Internet Programme, which gives directions for the use of the internet to children, parents and educational staff.

Generally, the policy is to familiarise children with new technology rather than filtering or blocking access to various types of information (which might, however, be an alternative); the intention is to teach children how to use the internet safely and to always be aware of the risks related to such use.

Children’s rights are protected by provisions of the Luxembourg Criminal Code (LCC). Further to the adoption of the Law of 21 February 2013 amending Articles 372 and 377 of the LLC, the LLC provides for enhanced sanctions in relation to sexual child abuse matters. BEE Secure Stopline is a project operated by a national consortium that provides a structure to report illegal information transmitted over the internet anonymously. The E-commerce Law requires information service providers to withdraw or render inaccessible any illegal content that they become aware of. The Media Law includes specific child protection provisions.

43 Article 11 of the Electronic Data Protection Law.
The University of Luxembourg is an active member of the EU Kids Online project, which is a multinational research network seeking to enhance European children’s opportunities and safety, and to minimise risks.44

In relation to the adoption of the 2014 Law, CNP lobbied to introduce an appropriate visual warning obligation. A Grand-Ducal Regulation was adopted on 8 January 2015 for the protection of minors regarding audiovisual media services.

The GDPR establishes enhanced protection for children when it comes to the processing of their data in relation to information society services. The processing of the personal data of a child shall be lawful where the child is at least 16 years old. Where the child is below the age of 16 years, such processing shall be lawful only if and to the extent that consent is given or authorised by the holder of parental responsibility over the child.45

Cybersecurity

Cybersecurity is one of the priorities of the government.

Individuals and companies are encouraged to take appropriate technical measures to defend themselves against cyberattacks.

Similarly to the internet project for children, the government has created CASES Luxembourg, a project that is accessible by all internet users and whose purpose is to make the public aware of potential cyberattacks that are inherent in internet use, and that advises on how to identify potential cyberattacks. In this context it is worth mentioning the certification authority, Luxtrust, which manages electronic certificates with the highest level of security.

Network operators and ISPs are required by applicable law to comply with stringent security measures.

As a response to the increasing number of cyberattacks, the LCC has been amended so as to include offences in the electronic communication sector.

The government pursues efforts to prevent and fight cybercrime, and in 2011 created two dedicated structures: the Luxembourgish Cybersecurity Board (CSB), whose mission is to work on a strategic plan against attacks via the internet; and the governmental computer emergency response team (GOVCERT), linked to the National Agency for Information Systems Security (ANSSI), which is the competent body to deal with incidents of cybercrime in the public information systems.

GOVCERT also cooperates with the High Commissioner for Protection (HCPN) and the Technology Centre for State Information. Both HCPN and GOVCERT have adopted a cybersecurity plan that has been submitted to the counsel of government. The CSB has determined five priorities (on both the national and international level) on which Luxembourg shall focus,46 and has asked a working group to review the national strategy regarding cybersecurity to determine whether any amendments are necessary. Furthermore, the government has signed a letter of intent with Belgium and the Netherlands to cooperate on the prevention of and fight against cybercrime. Luxembourg regularly hosts conferences on cybersecurity that are mainly dedicated to experts in security matters.

The CSB acts as a central point of information and contact for users to report cybersecurity incidents, which should allow the CSB to supply businesses with such information and put them in a position to take appropriate action to fight risks against security.

44 http://www.saferinternetday.org/web/eu-kids-online/home.
45 Article 8 of the regulation (EU) 2016/679
The Computer Incident Response Center Luxembourg, which is the official computer emergency response team (CERT) of Security made in Lëtzebuerg (SMILE), is competent for the private sector, municipalities and non-governmental entities in Luxembourg.

After the delay in the implementation of the European Council Convention on Cybersecurity (CCC) and Directive 2013/40/EU relating to attacks against information systems, a law relating to cybercrime was adopted on 18 July 2014. Such law adapts the national substantive and procedural criminal law to the specific needs of fighting cybercrime. The law introduces certain new criminal offences into the LCC, including in particular the misuse of identity, phishing and illegal interception of computer data, supplementing the legal instrument of computer-related crimes, which include the illegal access, hacking and deletion of computer data. The law also amends the Criminal Procedure Code to achieve the requirements of the CCC regarding the prompt preservation of stored computer data and traffic data. ANSSI, which is responsible for the security of the information systems for the public sector and critical infrastructures, was created in 2015. Further, SECURITYMADEIN.LU, launched in 2015 by SMILE, is an initiative with the objectives of coordinating governmental initiatives, and supporting and making the public more aware of cybersecurity issues. In addition, SECURITYMADEIN.LU aims to develop an ecosystem for cybersecurity that will reinforce the visibility of Luxembourg information security players and services. SECURITYMADEIN.LU and the activities of SMILE are an integral part of the national strategy that intends to position Luxembourg as a trusted ICT centre.\(^47\)

In May 2016, the government announced a collaboration between the new national agency of the security of information systems and SMILE through their respective CERT\(^48\) in relation to all activities in connection with the detection, management and notification of incidents.

Given the importance of international cooperation on cybersecurity at an EU level, the NIS Directive establishes that CSIRTs should be able to participate in international cooperation networks in conjunction with national authorities.

Furthermore, the eIDAS Regulation will enable an appropriate security level for electronic identification means to be reached, and consequently enhance security for e-businesses and electronic communication services.

In October 2017, a national centre of expertise in regard to cybersecurity in Luxembourg was created, helping to strengthen the positioning and the economic attractiveness of the country for undertakings in the ICT sector.\(^49\)

Within the framework of the European Cybersecurity Month, an annual advocacy campaign organised by the European Union Agency for Network and Information Security and the EC whose aim is to promote cybersecurity internationally, the Cybersecurity Week-Luxembourg took place in October 2018.

Luxembourg is fully aware that security in the increasingly high technological environment is an important pillar to continue to be successful in a data-driven economy.

\(^{47}\) [www.gouvernement.lu](http://www.gouvernement.lu), 9 June 2015.


Luxembourg participates in initiatives and programmes that aim to share information on cybersecurity-related subjects for instance through MONARC and MISP (malware information sharing platform and threat sharing).

**Emergency response networks**

Traditionally, Luxembourg first responders and other emergency responders (such as police, customs and civil protection) benefit from a dedicated network. This network, RIFO, was still analogue. With the adoption of the Law of 20 May 2014 for the financing of a national integrated radio communication network for Luxembourg, RIFO was replaced by RENITA. RENITA is based on the terrestrial trunked radio digital technology and, in the case of a congestion of mobile networks, the RENITA network is less exposed to inherent risks. RENITA has been operational since July 2015.

On an international scale, the government has actively cooperated on strengthening emergency telecommunications and rapid responses in the event of disasters. It has developed a nomadic satellite-based telecommunication system, emergency.lu, which aims to assist humanitarian agencies to respond to communities affected by natural disasters, conflicts or protracted crises.50 As of 2012, this platform was available as a public global service. At the end of 2014, the emergency.lu solution was extended for a period of six years by the government.51 At the beginning of 2018, the government decided to join the European Response Coordination Centre, and Luxembourg will be the first state to bring in a common module to the voluntary pool.

At an EU level, harmonisation of the digital frequency relating to these services has been achieved, thereby permitting interoperability. Consultations on the usage of 700MHz frequency band raised RENITA’s interest in Luxembourg.

**IV SPECTRUM POLICY**

i Development

The increasing development of wireless communication, media and information technology also affects spectrum policy in Luxembourg.

The need for radio spectrum has increased significantly over the past few years, and Luxembourg actively participates in the elaboration of a pan-European spectrum policy and favours a more flexible and efficient use of spectrum.

In its contribution paper to the EC in 2010, Luxembourg indicated that it is in favour of a more flexible use of spectrum, emphasising however that it is crucial that the more flexible use will not negatively impair the current quality of services or entail harmful interferences. Luxembourg has expressed its concern that a more flexible use would need to take into consideration the characteristics of more specific and sensitive technology, which would be more prone to harmful interference than others.

During the negotiations that led to the adoption of the European regulatory framework, Luxembourg explained that one of its top priorities was to maintain national competence in relation to the management of spectrum and a full subsidiarity in this area.

ii  **Flexible spectrum use**

As a result of the Law of 27 February 2011 amending the Spectrum Law, allocated licences are no longer personal. On that account, it is currently possible to sell, transfer or sublease allocated spectrum, thus enhancing the flexibility of spectrum use. The Spectrum Law also provides for the possibility of spectrum sharing.

The mobile use of spectrum dedicated to fixed use is possible as a matter of applicable law and regulations, and is in line with the principle of technological neutrality.

iii  **Broadband and next-generation mobile spectrum use**

According to the 12th edition of the eGovernment benchmark of the EC, fixed high speed internet is accessible by 100 per cent of the population of Luxembourg, compared with 97 per cent for the rest of the European Union. Regarding new-generation high speed internet (>30Mbps), 95 per cent of the Luxembourg population is covered compared with only 80 per cent in the other EU Member States.

In Luxembourg, the increasing need for spectrum for the offer of increasing broadband services is partly solved by opening additional frequencies or releases of spectrum for the use of broadband and next-generation mobile services.

Luxembourg completed the switch-off of analogue television broadcasting in 2006, which was replaced by DTTV. The released spectrum (referred to generally as the first digital dividend) is used for next-generation mobile services.

The ILR adopted a new frequency plan on 13 August 2018. The new frequency plan takes into account the following recent decisions: EU 2017/899 concerning the 470–790MHz frequency band, EU 2018/637 concerning the 900MHz and 1,800MHz frequency bands, and decision EU 2018/661 of 26 April 2018 amending decision (EU) 2015/750 of 8 May 2015 of the EC on the harmonisation of the 1,452–1,492MHz frequency band for terrestrial systems capable of providing ECSs in the European Union.

In October 2011, Luxembourg concluded an agreement with its neighbouring countries regarding reducing the risks of interference due to overlapping coverage in the frequency band 790–862MHz. Additional agreements were entered into in May 2017 with the administrations of Belgium, France, Germany, Switzerland and the Netherlands with respect to frequency usage and frequency coordination in border areas. Another multilateral agreement between France, Germany, Switzerland and Luxembourg was concluded in 2014 concerning the allotment of preferential frequency blocks in the 406.100–410.000MHz band to ensure equal spectrum access in the respective border areas. A bilateral agreement was signed with Germany regarding Luxembourg and Germany’s common approach on dealing with the 470–694MHz and the 694–790MHz frequency bands. A similar bilateral agreement was signed with France in 2016.

The licences within the 900MHz band have been renewed to the existing operators and one new operator, and the use thereof has been expanded to different technologies. These licences allowed the introduction of 4G technology in Luxembourg specifically (LTE). In addition, the three operators have spectrum in the 1,800MHz band, allowing flexibility for the introduction of innovative new technologies.

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Following a public consultation launched in July 2016 for frequency band 2.1GHz, EPT, MTX Connect Sà rl, Tango and Orange will each be allocated 14.85MHz in the 2.1GHz band to be used by no later than 1 January 2020.

At a European level, the EC has adopted a decision to make more spectrum available for mobile services in the 700MHz band (694–790MHz) by 2020 to allow the provision of high-quality internet to users, whereas the sub-700MHz area (470–694MHz) will remain available, as a priority, for audiovisual services. This development is in line with the deployment of 5G, foreseen as from 2020.

In August 2017, the ILR launched a public consultation to establish interest in the 700MHz band, and the possible use thereof and quantity needed to cover mobile services, security and emergency services. Three interested parties have responded (one of which, RENITA, is in charge of the emergency call network) and expressed their interest in obtaining broadband in that frequency, in particular with a view to the upcoming introduction of the 5G network. A new consultation will be opened by the ILR at the beginning of 2019.

European telecommunication ministers have signed the common Making 5G a success for Europe declaration, and they envisage the deployment of the 5G network between 2018 and 2025, with the aim to cover major cities and major transportation routes by 2025.

Spectrum auctions and fees

Given the small size of the market and the limited number of operators, the experience of the authorities shows that allocations of spectrum through auctions or beauty contests do not produce satisfactory results. Hence, although theoretically possible as a matter of law, auctions are not currently practised.

The Spectrum Law provides for various procedures for the allocation of spectrum licences such as competitive selection, comparative selection or by a public bidding procedure for the best offeror. The competent minister will determine the applicable procedure on a case-by-case basis after having undertaken a public consultation and publish this decision in the Luxembourg Official Gazette and in the EU Official Journal at least one month prior to the launch of the procedure.

The fees payable to the state (as owner of the national spectrum) for the allocated spectrum are determined by a Grand-Ducal Regulation of 21 February 2013 on royalties for radio frequencies. The Spectrum Law has modified the allocation and recovery of the fees payable in relation to spectrum licences in favour of the ILR. Public services and authorities are not subject to the payment duty to the extent that spectrum is used for the provision of services within the scope of national defence, public security or emergency services.

56 Article 6 of the Spectrum Law.
57 Grand-Ducal Regulation of 21 February 2013 on royalties for radio frequencies.
V MEDIA

i Restrictions on the provision of service

The Media Law has been amended several times, with the most recent amendment having taken place in January 2018. The Law aims to cover all types of audiovisual and sonorous media. High importance is attributed to content regulation, protection of children, non-discriminatory content, and the form and content of commercial advertising.

ii Internet-delivered video content

It is difficult to measure the importance of internet video distribution in Luxembourg given the absence of surveys or statistics on this phenomenon. The only indicator is the fact that, as in most other Western countries, people watch less traditional TV, which seems to indicate that internet video is becoming more popular, particularly with the younger public. Given the general availability of cable and satellite TV, the impact so far has been minimal. In addition, based on the high connection rates of Luxembourg residents to the internet, it should be expected that this move will not pose dramatic problems for consumers.

VI THE YEAR IN REVIEW

i Key legislation

Luxembourg is the first state in Europe to adopt a legal and regulatory framework ensuring property rights to private companies owning space resources by adopting the law of 28 July 2017 on the exploration and use of space resources (Space Law).

Given the growing interest of various actors to develop space activities, a pre-bill of law on space activity is being prepared that would go beyond the matters covered by the Space Law. Such new law would, inter alia, submit all Luxembourg space activities to prior authorisation, and thus would allow Luxembourg to accede to the Convention on Registration of Objects Launched into Outer Space of 1974 by creating a register of Luxembourg space objects.

Given the 'Europeanisation' of the legislation, national laws tend to be more and more linked to European regulations or directives. One major challenge is the recent entering into force of the GDPR, which has an impact on a large number of businesses. Luxembourg actively cooperated with other European countries on the implementation of the GDPR through its participation in the Article 29 Working Group, and continues to do so in relation to the implementation through its presence on the newly created European Data Protection Board (replacing the Article 29 Working Group), which is working on the guidelines for the implementation of the new provisions of the GDPR.

In the era of the development of internet payment services, in which one of the main challenges remains compliance with know-your-customer requirements, Luxembourg has adopted a regulation that provides for lighter identification requirements for transactions below certain threshold amounts. The law of 13 February 2018 amended a relevant portion of the Luxembourg anti-money laundering law to include the lighter identification requirements under certain conditions.

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58 Information in this section has been largely drawn from the government’s annual reports (latest available, 2017).
EU Regulation 2015/2120, which definitely abolished roaming charges in June 2017, resulted in enhanced competition among operators and created attractive offers for consumers. This is of particular importance to Luxembourg residents, given the small size of the Luxembourg territory.

The government’s ongoing efforts in its Digital Letzebuerg strategy, launched in August 2014, and Digital (4) Education strategy, launched in May 2015, evidences the government’s efforts to continue the development of the ICT sector with the aim of making and keeping Luxembourg a high-tech centre of excellence. Luxembourg’s creation of an easier procedure through the adoption of a law of 8 March 2017 for highly qualified persons to get a residence permit shows its willingness to attract talents to the country.

In the context of the adoption by the EC of the Intellectual Property Package, Luxembourg is working on a bill of law and has also adopted a new law on the Benelux Convention relating to intellectual property. In a period where innovation is key to the success of society, businesses and prosperity, it is important that adequate protection is granted to innovators.

Focusing strongly on innovation, the Luxembourg legislator adopted a law on the promotion of research on 17 May 2017, renewing the current regime applicable in Luxembourg in R&D.

iii Key mergers and takeover activity

No major takeover activity has taken place over the past six months, but the actors in the ICT sector have taken the opportunity to develop their activities and services in the respective areas of predilection in the light of new technologies (cloud, e-archiving, roaming, digital payment services, etc.).

VII CONCLUSIONS AND OUTLOOK

The digital economy is an important Luxembourg pillar, and is a top priority of the government. Luxembourg is considered to be located in the middle of the Golden Ring.59 Continuing efforts are made to favour the development of new communication and information technologies. The development of international connectivity and security in the current context remain key priorities. Digital Letzebuerg’s ongoing actions and initiatives show the government’s commitment and awareness of the importance of the ICT sector and ICT-related services. The development of FinTech services is strongly supported by many market players and the government.

The Grand Duchy reinforces its position as a European hub for the exploration and use of space resources as it continues to pursue its path towards innovation and constantly search for new opportunities. Luxembourg’s launch of a space research initiative in 2016 and the adoption of the Space Law shall ensure that private operators working in space can be confident about their rights to the resources they extract in outer space shows how progress-oriented Luxembourg is and will continue to be. The newly created Luxembourg Space Agency is actively working on projects from which various industries may benefit. The space activities sector will certainly be one of the areas where Luxembourg will focus on specifically, given its history in the satellite industry.

59 Luxembourg and ICT: a Snapshot.
In the satellite sector, SES has continued to expand its fleet of satellites, offering a global connectivity covering 99 per cent of the world’s population. It is investing in new onsite infrastructures. SES has ordered seven ultramodern satellites to increase its services starting from 2021. SES launched four satellites in 2018, and two more launches are planned until the end of 2021 with the aim of expanding its activities in Europe, Asia and South America. The broadcasting of ultra HD content is another SES priority. SES is part of a 16-member consortium that has been tasked with integrating satellite into 5G networks, enabling ubiquitous and instantaneous 5G coverage and capacity. SES supports the EC’s action plan for the deployment of 5G in Europe, and strongly believes that Europe has the potential to become the global leader in 5G, permitting the enablement of economic growth, sustainability and high-quality jobs.

Furthermore, SES has signed a partnership agreement with the LIST that will allow cooperation through their international network of research partners with unique expertise in satellite communications, and widening the scope of SES’s international research activities together with other reputable universities. The new partnership agreement further enhances Luxembourg’s technology ecosystem by attracting start-ups to develop their businesses in Luxembourg, and will facilitate the transfer of new technologies stemming from national public and private research.

In partnership with the European Space Agency (ESA), SES established QUARTZ, a quantum cryptography telecommunication system that is a new platform aimed at providing a global service for next-generation encryption keys for use in geographically dispersed networks. Luxembourg and ESA have also signed a joint statement on future activities concerning related technologies and space exploration.

Government policy also aims at further promoting ICT-related infrastructure (data centres, etc.) as one of the pillars of the economy. The government is continuing to invest heavily in the security of the networks and infrastructures as one of the main pillars of the development of the electronic communication systems. As of January 2017, Luxembourg, with its eight Tier IV data centres, had 40 per cent of the total number of Tier IV data centres in Europe, Tier IV being the highest level possible for a data centre with very high security and availability standards. Discussions are underway between the government and Google for the creation in Luxembourg of one of the biggest data centres.

In June 2017, Luxembourg signed an agreement to establish Estonia’s first ‘data embassy’ with the aim of storing sensitive data for the Estonian government on servers in the Grand Duchy. This innovative legal framework ensures the security and non-violation of its premises and data. This again shows how innovative Luxembourg is.

The creation of various structures at the national level evidences the government’s priority to prevent and combat cybercrime and other attacks on electronic communication services and infrastructures.

The continuing development of the online video games sector in Luxembourg and the establishment of internationally known companies such as Nexon and Valve Corporation are

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63 https://infrachain.com/.
encouraging LU-CIX, Luxembourg’s commercial internet exchange, to develop its services. The government has renewed previous efforts to establish efficient technical infrastructures and a business-friendly legal environment to assure the best development possible for these companies in Luxembourg.

The government, through its competent organ, has continued its ICT promotion efforts, and visited various countries and states in 2017 and 2018. A Luxembourg delegation continues to travel to various countries to show the government’s support and interest, and promote Luxembourg start-ups. In July 2018, the Digital Tech Fund signed an agreement with artificial intelligence computing leader NVIDIA was a focus on skills training. This new cooperation will strengthen Luxembourg’s digitalisation efforts and will make Luxembourg even more attractive place for the developing of machine-learning and deep-learning technology.65

In addition, two buildings in the House of BioHealth have been made available for start-ups active in the health field in Luxembourg.66 Luxembourg actively takes part in the promotion of CleanTech. To reduce negative ecological impacts and optimise the use of the earth’s natural resources, Luxembourg supports the development of CleanTech innovators such as APATEQ, a Luxembourgish company focused on oil–water separation systems, wastewater treatment and water conservation solutions.67

Luxembourg has also participated in various conferences organised in Luxembourg and throughout the world.

Luxembourg hosts the annual ICT Spring conference. In 2018, the Conference mainly focused on the fast-evolving FinTech industry and exploring the impact of space technologies and satellite data management. The Conference attracted approximately 4,000 attendees.

The Infrachain project (a common blockchain infrastructure project), launched in 2016, is also moving in the right direction. A non-profit organisation putting in place Community-driven governance for blockchain use was incorporated in May 2017, showing the interest of various actors in that technology.

Luxembourg is keen to take advantage of the growing demand for high performance infrastructure bandwidth capacity and the connectivity needs of the e-economy. Its geographical location close to the major European cities is a clear advantage. Luxembourg will actively participate in the deployment of the 5G bandwidth both at the national and European levels.

Luxembourg will continue to develop high standard data centre services and facilities. It had the first green centre worldwide, showing its commitment to research and development into new infrastructure and technologies. Many Luxembourg data centres (eight out of a total of 23 data centres) offer Tier IV design, and most of the other centres are classified Tier III. Luxembourg is actively working on cybersecurity, and participated in the European Data Protection Board. Luxembourg is already hosting the EC’s data processing centres, and at the end of 2016 a new data centre for the EC was been inaugurated in Betzdorf. This

66 Luxembourg 2020, Plan national pour une croissance intelligente, durable et inclusive.
centre, according to the former European Commissioner for Digital Economy and Society is a world-class data centre that ensures a modern, reliable and economic IT infrastructure for the EC.⁶⁸

Besides the importance of developing networks and guaranteeing security, the government and its partners are aware that the long-lasting and efficient development of the digital economy requires e-skills, and it is thus active in promoting ICT businesses to students. Awareness of training opportunities and carriers in the ICT sector is one of the areas of development of the digital economy in Luxembourg (e-skills project) and goes hand in hand with the new Digital (4) Education strategy. Children, students and teachers are, for instance, granted free access to Office 365, an environment proposing platforms and computer applications to satisfy administrative and educational needs for the national education. MathemaTIC has also been created, which proposes a digital mathematical learning environment for children.

BEEcreative is another initiative of the Ministry for Education, constituting a place of discovery and creation intending to stimulate the creativity of the next generation.

A pilot project launched in 2016 resulted in the new Luxembourg Tech School.⁶⁹

The entry into force of the NIS Directive, which will be implemented by Bill of Law No. 7314, will have an impact on the national legislative framework, and Luxembourg is keen to count itself among the countries that can ensure very high standards in terms of security.

Finally, the eIDAS Regulation entered into force in July 2016, enhancing security for e-businesses and electronic communication services.

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Chapter 17

MEXICO

Federico Hernández Arroyo

I OVERVIEW

The state monopoly carrier was privatised in 1990. Five years later, the sector was liberalised, a new law was issued and a new regulator established. Although for more than 15 years there was some progress and the sector was growing each year, there were major problems to tackle.

In 2012, the OECD published a study that described the weakness of the telecommunications sector in Mexico and recommended the implementation of different actions to foster the market. The study presented the following market shares:

a 80 per cent of Telmex in fixed telephony;
b 70 per cent of Telcel in mobile telephony;
c 45 per cent of Televisa in pay-TV; and
d 28 per cent of Megacable in pay-TV.

The report also stated that the penetration rates for fixed line, mobile and broadband were among the lowest in the OECD.

Considering the foregoing, a historic telecommunications constitutional reform (Reform) was published in June 2013 with the main aim of improving and securing effective competition with the respective benefits for the end users.

The Reform was followed by the formation in September 2013 of the new Federal Telecommunications Institute (IFT) and the publication in July 2014 of new convergence legislation, the Federal Telecommunications and Broadcasting Law (FTBL).

Since its creation, the IFT has been issuing various regulations and guidelines, and has been in charge of implementing the Reform and the FTBL through the drafting and execution of various policies, some of which we review below.

In August 2017, the OECD published a new study that weighs the developments derived from the Reform and acknowledges the important evolution and tangible benefits to the people through the regulatory changes, but also identifies areas of opportunity and new actions to be implemented.

1 Federico Hernández Arroyo is a partner at Hogan Lovells BSTL, SC. The author thanks Rodrigo Méndez Solís (senior associate) and David Amado Monroy (associate) for their help in the preparation of this chapter.
2 OECD (2012), OECD Review of Telecommunication Policy and Regulation in Mexico, OECD Publishing. DOI: 10.1787/9789264060111-en. This study excludes broadcasting.
3 Telmex and Telcel are part of the same economic interest group and are held by América Móvil.
In July 2018 there were federal elections in Mexico, and a new government and Congress will be in place by the end of the year, which will impact the regulation of the sector in the following six years.

II REGULATION

i The regulators

The main regulator is the IFT, which was created as a constitutional entity with enhanced powers covering almost all decisions concerning the telecommunications and broadcasting sectors, except as mentioned below. It has a new institutional design, specific rules for the designation of its commissionaires, as well as rules for transparency and contact with the regulated industry.

The IFT has the following main features:

a constitutional autonomy;
b management of its own patrimony and budget;
c independence of resolutions, including its own statutes and general provisions;
d public deliberations;
e powers to directly grant, revoke and approve all acts regarding telecommunications and broadcasting concessions and authorisations; and
f exclusive powers in economic competition matters regarding the broadcasting and telecommunications sectors, and the power to regulate content transmissions except with respect to the following content: electoral, childhood, health, copyrights and education (in which the respective authorities shall intervene accordingly).

Norms, acts or omissions of the IFT can be appealed only through a constitutional trial (amparo indirecto), and there is no injunction. Such trials will be held before specialised judges (two federal judges) and courts (two federal tribunals comprising three magistrates) in broadcasting, telecommunications and economic competition matters that were established as part of the Reform.

Another regulator in the sector is the Federal Consumer Protection Agency through a newly created Telecommunications Deputy Attorney (Profeco), which is in charge of protecting the rights of telecommunications consumers. The Profeco shall approve adhesion agreements to balance the obligations and rights between telecommunications service providers and end users.

The Ministry of Communications and Transportation (SCT) continues to participate as an authority (but to a much lesser extent), such as by issuing non-mandatory opinions with respect to specific acts of the IFT; implementing social, universal and broadband programmes; and in international negotiations of treaties and orbital resources.

The Ministry of Finance and Public Credit (SHCP) has the option to issue non-mandatory opinions to the IFT regarding considerations applicable to the grant and use of frequency bands.

The main sources of law in the telecommunications and broadcasting sector are the following:

a the Mexican Political Constitution;
b the FTBL;
c the Federal Economic Competition Law (FECL); and
d the Foreign Investment Law (FIL).
In addition to the foregoing, there are numerous international treaties, specific regulations, guidelines and rules, and other administrative and technical provisions issued by the IFT and the prior regulator that continue to be applicable.

ii Regulated activities

The FTBL contemplates two types of approval for the provision of telecommunications and broadcasting services: concessions and authorisations, each of which has its own modalities as detailed below.

Public telecommunications and broadcasting services are defined as those ‘services of general interest provided by concessionaries to the general public with commercial, public or social purposes’. On the other hand, the concept of telecommunications is defined as ‘every emission, transmission or reception [except of broadcasting] made through threads, radio electricity, optic means, physical or other electromagnetic systems: signs, signals, data, writings, images, voice, sounds or information of any other kind’. In turn, broadcasting is defined as follows: ‘dissemination of electromagnetic waves of audio or associated audio and video signals, using, enjoying or exploiting the frequency bands of the radio spectrum, including those associated to orbital resources [. . .] with which the population may directly and freely receive the signals of its transmitter using the proper devices’.

The unique concession is a figure put forward by the Reform and the FTBL that allows the provision of all services that are technically feasible, excluding spectrum or orbital resources. According to its purposes, the unique concession shall be for commercial use (for profit), public use (government agencies), private use (private experimentation and testing, when spectrum or orbital resources are required) and social use (not-for-profit cultural, scientific, education, community and indigenous). There are specific guidelines issued by the IFT that describe the procedure, terms and conditions to secure unique concessions through the submission of the corresponding application formats.

An additional concession shall be granted for the use and exploitation of determined frequency bands and orbital resources (geostationary orbital positions or satellite orbits assigned to Mexico). Such concessions are also divided depending on their purpose as detailed above and the type of service to be provided (telecommunications or broadcasting).

Frequency band concessions for commercial and private use are granted through public bids, where the economic factor (consideration) shall not be the sole element to determine the winner of a bid. Frequency band concessions for public and social purposes for the provision of telecommunications services are assigned directly, and for broadcasting services are granted through a specific plan and procedure conducted by the IFT.

Orbital resources concessions are in principle granted through public bids, but there are two exceptions under which they can be directly assigned: if there is a justified application from an interested private party and in the case of public entities.

An authorisation granted by the IFT is required to:

a. establish a reseller of telecommunications services without being a concessionaire;

b. install, operate and exploit earth stations to transmit satellite signals;

c. install telecommunications equipment and transmission media that cross the borders of the country;

d. exploit the emission and reception rights of signals and frequency bands associated with foreign satellite systems that cover and could provide services in the Mexican territory; and

e. use temporary spectrum bands for diplomatic visits.
There are specific guidelines issued by the IFT that describe the procedure, terms and conditions to secure each of these authorisations through the submission of the corresponding application form.

On the other hand, products, equipment or devices intended for telecommunications or broadcasting services that are to be connected to a telecommunications network or use the spectrum shall be homologated or certified by the IFT.

Value-added services are no longer regulated under the new regulatory framework so they can be freely provided, although internet access is now considered as a telecommunications service and subject to concession or authorisation.

iii Ownership and market access restrictions

The frequency bands and orbital resources concessions can only be granted to Mexican individuals or entities, but as a result of the Reform, there is no limitation with respect to foreign investment for telecommunications services. In broadcasting, foreign investment is limited to 49 per cent control of an entity, subject to reciprocity from the country of the ultimate investor, but through neutral investment it is possible to secure larger economic participation. In its 2017 report, the OECD recommended eliminating any foreign investment restriction in broadcasting.

All authorisations (except one) are also granted to Mexican individuals or entities and are not subject to foreign investment restrictions. The authorisation for the use of temporary spectrum bands for diplomatic visits can only be granted to the Ministry of Foreign Affairs.

The frequency bands and orbital resources concessions for commercial purposes are subject to public bidding procedures, which usually contain spectrum caps depending on the particular bid. The winner of an auction must make an up-front payment for the grant of the concession and periodical payments for the use and exploitation of such resources. The latter payments are also applicable for authorisations concerning the exploitation of frequency bands associated with foreign satellite systems.

On the other hand, to level the playing field, the Reform introduced a new concept, called preponderance, which triggers asymmetrical regulation in an expeditious manner in addition to the standard concept of dominance (substantial market power in one or more telecommunications or broadcasting markets under the FECL). Preponderance applies to agents who hold a participation of more than 50 per cent in the telecommunications or broadcasting sectors. In March 2014, the IFT declared as preponderant agents and imposed different measures on Telcel, Telnor and Telmex (and other companies within the same group) in the telecommunications sector, and Televisa (and other companies within the same group) in the broadcasting sector.

The measures imposed by the IFT, which were reviewed and amended in 2017, have the purpose of preventing abuses by the preponderant agents and granting access to the rest of the players to services, infrastructure and other information that would foster competition. Moreover, in March 2018, the IFT resolved that Temex and Telnor shall incorporate two new companies that will provide access to the local network, dedicated circuits and passive infrastructure to other carriers on a non-discriminatory basis.

In 2014, the IFT declared the Televisa Group as an agent with substantial market power in the pay-TV market. Such resolution was challenged, and finally the Supreme Court resolved in February 2018 that the IFT shall issue a new resolution related to this matter. The IFT resolved that the elements to consider the Televisa Group as an agent with substantial market power in the pay-TV market were not proven.
Finally, the rollout of infrastructure and networks is subject to state and municipal restrictions that are inconsistent, costly and burdensome. Although the IFT and the SCT are working to improve the situation, there is a long way to go. However, the state of Hidalgo has agreed with the SCT to simplify the procedures regarding the installation of telecommunications infrastructure in all of its municipalities.

iv Transfers of control and assignments

The IFT is in charge of authorising the total or partial assignments of concessions for commercial or private use, as long as at least three years have passed since the granting date of the concession. It shall also authorise the assignment of any public or commercial concessions between Mexican public entities. The regulator has 90 calendar days to approve the assignment, in which case the assignee shall commit to comply with the pending obligations and new conditions imposed by the IFT.

When the assignment of concessions is between concessionaires that provide similar services in the same geographical zone, the IFT shall review the actual or potential antitrust effects. The assignment, encumbrance, pledge, trust, sale or mortgage, either totally or partially, of any concession in favour of foreign governments or states is prohibited. If a concessionaire subscribes or sells shares or equity, in one or consecutive acts, that represent 10 per cent or more of its capital stock, the following procedure will apply, unless an antitrust concentration procedure is triggered:

a the concessionaire shall notify the IFT, providing a report of the party interested in acquiring the shares that includes information about the ultimate individuals indirectly holding more than 10 per cent;

b the IFT will have 10 business days to request the opinion of the SCT;

c the SCT will have 30 calendar days to issue its opinion; and

d the IFT will have 15 business days, counted from the receipt of the SCT’s opinion or the termination of its term, to justifiably reject the operation. If there is no objection from the IFT within such term, the transaction will be considered as authorised.

The foregoing procedure is not applicable in the case of a subscription or sale of neutral investment shares under the FIL, or when the capital increase is subscribed by the same shareholders and its percentage in the capital stock is not modified.

The assignment approval and the subscription or sale procedure are not applicable in the case of mergers, spin-offs or corporate restructures if such acts are performed within the same group of control or economic agent. In such scenarios, a notice shall be submitted to the IFT within 30 calendar days of the transaction.

If a concentration notice under the FECL is triggered in any case, the IFT shall resolve under the corresponding procedure provided in such law and a new set of merger guidelines issued by the IFT.

Notwithstanding, the Ninth Transitory Article of the FTBL provides that the FECL’s concentration procedure is not applicable as long as there is a preponderant agent in the telecommunications and broadcasting sector, and a simplified process shall be followed. In the 2017 report, the OECD suggested eliminating the foregoing.

In addition, specific provisions may apply considering the particular rules contained in the corresponding concession.
III  TELECOMMUNICATIONS AND INTERNET ACCESS

i  Internet and internet protocol regulation

The Reform categorises telecommunications and broadcasting services as human rights and public services of general interest. This means that all persons must have access to such services, and the state is obliged to ensure access to information and communication technologies, as well as to telecommunications and broadcasting services, including broadband and internet services. Thus, internet services are currently considered as standard telecommunications services, and a concession or authorisation is required for their provision.

The FTBL includes new provisions regulating net neutrality that are applicable to concessionaires and authorised parties providing internet access services. Such parties shall observe the following principles:

- free election;
- non-discrimination;
- privacy;
- transparency and information;
- management of traffic and quality; and
- sustained development of the infrastructure.

The IFT is planning to issue guidelines with details of such principles by the end of 2018.

The IFT has also launched a website, IPv6, which is focused on new actions to improve the adoption of IPv6. Actions for the adoption of IPv6 were also recommended by the OECD in 2017.

ii  Universal service

The SCT is in charge of drafting and implementing a social coverage programme every year, with the aim of increasing the coverage of telecommunications networks and the penetration of telecommunication services (mainly voice and internet) in less developed areas of Mexico. The SHCP and other federal, state and municipal entities shall support and participate in this programme.

Using public funds, the SCT has for several years been successfully executing a connectivity programme for public places: Mexico Conectado. This programme has granted broadband connections to more than 100,000 sites and spaces around the country, serving millions of people in urban and rural areas with limited access. However, these sites have stalled from 2015 to date.

In 2017, the SCT successfully concluded a public–private partnership bidding process for the biggest telecommunications project in the history of Mexico: Red Compartida. It contemplates the design, financing, deployment, operation and marketing of a wholesale national 4G LTE network in the 700MHz band that will provide broadband services to concessionaires and authorised parties under non-discriminatory terms. Red Compartida started operations in March 2018 with coverage of 32 per cent, and is required to cover 92.2 per cent of Mexico by the seventh year of its implementation.

iii Restrictions on the provision of service

The FTBL provides several rules for the provision of services. Additionally, the preponderant agents have more restrictions in providing telecommunications and broadcasting services. Some general conditions applicable to the provision of telecommunications services are the following:

- **a** any discrimination on whatever ground is forbidden;
- **b** concessionaires shall interconnect (directly or indirectly) their network with other requesting concessionaires. The interconnection agreements shall be filed before the IFT and certain obligations must be observed. The IFT will resolve any disagreement through a specific procedure;
- **c** traffic between interconnected concessionaires cannot be interrupted;
- **d** number portability shall be allowed to all users under strict terms and conditions;
- **e** concessionaires must abstain from establishing contractual barriers limiting other concessionaires from accessing telecommunications infrastructure in real estate;
- **f** any communications directed to emergency numbers shall be transmitted;
- **g** standard service agreements shall be filed before the Profeco and afterwards before the IFT, and must include different rights in favour of users (including disabled consumers) to protect final consumers from any potential abuses (consumer protection regulations);
- **h** tariffs of telecommunications services shall be electronically filed with the IFT before their offering; and
- **i** must-offer and must-carry obligations will apply on a free basis, subject to the must-carry obligations being applicable to DTH operators if they cover 50 per cent or more of the territory, and the gratuity not applying to preponderant or dominant concessionaires.

As mentioned above, concessionaires and authorised parties that provide internet access services are subject to the following net neutrality obligations:

- **a** users must have access to any content;
- **b** access to services, content and applications cannot be discriminatory, delayed, interfered with, inspected or filtered;
- **c** the privacy of users must be respected and the network must be secure;
- **d** they must describe the features of the service provided on their websites; and
- **e** network and traffic management shall ensure the quality and speed of the service contracted by users.

Further, the Profeco has implemented a system whereby telephone users can register their phone numbers to avoid receiving marketing or publicity calls.

Finally, the preponderant agents have additional restrictions based on the specific measures imposed by the IFT, such as the following:

- **a** interconnection obligations (including a master interconnection agreement);
- **b** public offer to share passive infrastructure;
- **c** public offer of services to MVNOs;
- **d** public offer to provide national roaming services;
- **e** non-exclusivity agreements; and
- **f** the provision of, *inter alia*, information, tariffs, quality standards.
Security

The FTBL includes different obligations regarding security and judicial matters, which were further detailed by specific guidelines issued by the IFT. In April 2018, the IFT amended these guidelines to harmonise their provisions with those applicable to the transparency and data protection statutory framework by reducing obligations to the IFT and to concessionaires, and authorised them since the same corresponded to the Mexican Data Protection and Transparency Authority (INAI). Among other things, concessionaires and authorised parties have the obligation to provide a geographic location in real time for mobile devices, and to store, register and provide specific information about communications made from any line. They are required to answer written requests from security or judicial authorities duly founded and motivated under the applicable laws, and provide the information within the following 24 hours. Private communications are inviolable unless a federal judicial authority requests to tap or block on a private communication.

Although the International Telecommunication Union (ITU) ranked Mexico in third place in the Americas region in the 2017 Cybersecurity Index, still more actions need to be taken to protect data and information technology systems from cyberthreats. The INAI has assessed more than 20 international standards to provide a guide to data controllers and data processors to facilitate their compliance with data security obligations. Likewise, the International Chamber of Commerce Mexico published the ICC Cybersecurity Guide for Business, which is a tool and self-regulatory guide to promote good business practices.

Cybersecurity threats have affected the financial services industry more than anything else in Mexico. The financial regulator has published standards for banks and other financial institutions to protect and safeguard their customers’ information. In early 2018, the Central Bank of Mexico suffered a cybersecurity threat that resulted in the creation of a specialised cybersecurity department in charge of issuing policies to guarantee the operation of the financial system.

IV SPECTRUM POLICY

i Development

Spectrum and the orbital resources are publicly owned goods under the regimen and administration of the state. The IFT is in charge of the administration of the spectrum, which includes:

a the issuing of plans and programmes;

b granting, revoking, changing and taking concessions;

c supervising the radio electric emissions and interferences; and

d enforcing any applicable sanctions.

To promote an efficient use of the spectrum, the IFT must periodically update the National Frequencies Allocation Chart (CNAF). The spectrum is divided into four categories:

a determined: for the provision of services specified in the CNAF;

b free: which may be used for the public in general without concession or authorisation;

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protected: for radio navigation and security of human life; and
reserved: for planning purposes.

On 31 December of every year, the IFT must issue the Frequency Bands Programme, which shall provide the frequencies that will be auctioned the following year. Interested parties may request the inclusion of frequency bands in such programme.

In April 2018, the IFT issued new guidelines that authorise the use of spectrum on a secondary basis in two particular cases: specific events, and facilities for commercial and industrial activities.

ii Flexible spectrum use
The FTBL introduced the attribution of frequency bands on a primary basis (protected against harmful interferences) and secondary basis (cannot cause harmful interferences to services provided under a primary basis). This new attribution aims to improve the efficient use of the spectrum.

Likewise, the FTBL put forward the possibility to lease spectrum for commercial or private use, subject to the IFT’s authorisation. Such approval must comply with the following:

a the lessee must hold or have applied for a unique concession for the same use;
b the lessee must be joint obligor with the concessionaire regarding the obligations derived from the bands leased;
c the continuity in providing services cannot be affected; and
d it cannot generate negative concentrations, monopolisation or cross-ownership.

iii Broadband and next-generation mobile spectrum use
In September 2018, the IFT issued resolutions under which AT&T and Telefónica were declared the winners of the auction of 120MHz of the 2.5GHz band as follows: AT&T will be granted two frequency division duplex (FDD) and two time division duplex blocks, and Telefónica two FDD blocks. Considering the foregoing auction, Mexico has allocated 584MHz for international mobile telecommunications, which represents 44.9 per cent of the ITU recommended amount of spectrum allocation for 2015.

iv Spectrum auctions and fees
At the end of 2017, the IFT concluded an auction in which it assigned 32 channels (out of 148, of which 116 were out of interest for the market) for new local digital terrestrial television stations around Mexico. Early in 2018, the IFT also successfully concluded an auction allocating frequency bands for the provision of private radiocommunications services.

In April 2018, the IFT published the final 2018 annual programme of use of frequency bands, which plans the auction or assignment of various frequency bands, including the auction for commercial purposes of bands for ancillary terrestrial components for satellite mobile services; digital terrestrial television stations around Mexico; and FM and AM radio stations around Mexico.

The spectrum pricing policy in Mexico for telecommunications is divided into two categories: an upfront payment for the granting of the frequency concession as a result of the bidding procedure; and periodical payments concerning the use and exploitation of the bands for the concession’s term. The upfront payment is also applicable in broadcasting, but the periodical payment is made through air time. Any renewal of frequency concessions is subject to an upfront payment. However, the level of the fees has been questioned by the
OECD in its 2017 report and by other players in the sector such as Telefónica. In addition, community and indigenous spectrum concessions should also pay periodical fees, which is inconsistent with its purposes.

V MEDIA

i Restrictions on the provision of service

The FTBL regulates broadcasting services (free-to-air television), and terrestrial and satellite pay television and audio services, which are considered to be telecommunications services. Both services shall be provided through concessionaires.

The FTBL also identifies programmers as individuals or entities that have the capacity to constitute a programming channel based on own or third parties’ production, whether the copyright ownership is Mexican or foreign. Programmers provide programming channels to Mexican pay-TV concessionaires through specific agreements executed by both parties. Concessionaires and programmers have different rights and obligations under the FTBL.

As a general rule, content distributed through free-to-air or pay-TV services shall promote, inter alia:

a integration of families;
b harmonic development of childhood;
c improvement of educational systems;
d artistic, historical and cultural values;
e sustainable development;
f ideas of national identity;
g gender equality;
h scientific and technical knowledge; and
i correct use of language.

Content shall also comply with the Mexican rating requirements on their respective content, and there is a maximum amount of minutes for advertising per hour per channel. Depending on the advertising, specific regulations will be applicable (e.g., health, religious, electoral). In August 2018, as a result of numerous lawsuits, the Ministry of the Interior issued the new Guidelines for the Audiovisual Content Classification of Broadcasting Transmissions and Pay Television and Audio Services, which are basically the same as the prior ones that dramatically increased the hours during which a programme or advert can be broadcast depending on its rating.

ii Internet-delivered video content

ICPs are not regulated under the Mexican regulatory framework, but benefit from the net neutrality provisions. OTT online video service providers currently do not require a concession or authorisation to provide services, and differ from standard operators that hold a network to offer services. The IFT has confirmed the foregoing criteria, although some of the pay-TV concessionaires are pushing for regulation of OTTs to level the playing field. We expect that discussions in this respect will continue in the years to come.

According to the most recent report issued in 2018 by Mexico’s National Institute of Statistics and Geography, Mexico has 71.3 million internet users, which represents 63.9 per cent of the population. In 2017, 72.2 per cent of the same population used a mobile phone.
Of those users, 64.7 per cent have a smartphone, whereby 92.7 per cent connect to the internet. According to the IFT, in June 2017, there were 62 mobile broadband connections per 100 inhabitants, and its penetration has grown 170 per cent since 2013.

VI THE YEAR IN REVIEW

The main highlights of 2018 were the following:

a the beginning of operations of the Red Compartida wholesale network project and the approval of its public offer;
b the OECD reported that from 2014 to 2017, the interconnection fees for mobile services decreased 84 per cent in Mexico;
c reversion of the declaration of the Televisa Group as an agent with substantial market power in the pay-TV market;
d the success of the bidding procedures of auction bands for local TV channels and the 440–450MHz band for private radiocommunication services;
e the success of the bidding procedure for 120MHz of the 2.5GHz band;
f the publication of the tender rules to auction the Red Troncal, a nationwide fibre optic wholesale network project, as a public–private partnership project that plans to provide minimum coverage of 80 per cent in the territory;
g the IFT’s approval of the reallocation of the 600MHz band to reallocate TV concessionaires that still operated in such band;
h the IFT imposed a fine amounting to around US$5 million on América Móvil and Telcel for an exclusivity agreement regarding airtime top ups as a relative monopolistic practice;
i the IFT ordering the functional and legal separation of Telmex and Telnor, including the approval of the by-laws of the two companies that will emerge from the functional separation; and
j the publication by the IFT of new guidelines applicable to TV broadcasting services to include sign language in favour of the part of the population with hearing disabilities.

VII CONCLUSIONS AND OUTLOOK

Telecommunications reforms have continued and results have been seen in 2018, such as broadband penetration and a reduction of prices for final users, particularly regarding mobile services. On 1 December 2018, a change of the federal and many state governments will take place. The entrance of the new federal government will be a change that has not happened before in the history of Mexico, since it will be the first time that a left-wing party will take the executive power, and specialists envisage several changes may affect the public sector, the country’s economy and policies in general. Although we expect there will be changes in the telecommunications sector, we are not certain of the scale and extent of the same. So far, it appears that the Reform will not be changed, but some adjustments could be implemented in order to improve certain aspects, particularly in dealing with the competitive landscape. We hope that such changes will be consistent with the Reform, and that competition and investments will not be affected. One of the main challenges that the IFT and the new government will face is the implementation of the functional separation of Telmex and Telnor, with other operators waiting to see the real outcome of such measure.
I OVERVIEW

Following the market dynamic, TMT policies have been consistently trying to closely safeguard users’ needs, orienting them towards increasingly sound principles of transparency and fair and non-discriminatory treatment by service providers.

Following the repeal of the legal regime governing the personal radio service – citizens’ band (CB), as under the provisions of Decree-Law No. 1/2017 of 5 January, through a decision adopted on 9 March 2017, the National Telecommunications Authority (Anacom) has determined an exemption from licensing for CB stations and from the corresponding amendment of the National Table of Frequency Allocations. The adopted decision defines the harmonised technical provisions that govern the functioning of CB stations. As a result of the SIMPLEX+ 2016 programme, CB stations are now under the general radiocommunications regime that exempts registration if certain requirements are met.

The radio communications regime has been highly dynamic in 2017 and 2018. Radio spectrum is a scarce resource whose use is repeatedly the target of regulatory and legislative measures at both the European and national level that aim to regulate and discipline its use. Decree-Law No. 57/2017, published on 9 June, establishes conditions governing the use of radio and other equipment that has a bearing on the spectrum’s efficient use. With such amendments in mind, Anacom launched an information campaign on 28 September 2017 to provide economic operators with information about the new legal regimes applicable to radio and electronic communications equipment, and on the placement and availability of this equipment on the market. The campaign’s aim is to warn operators in the distribution chain handling such equipment that they can now be held equally responsible for compliance with the prevailing rules, such as manufacturers, agents, importers and distributors of equipment using the electromagnetic spectrum. Portugal’s Testing and Calibration Laboratory checks that such equipment is compliant with the essential requirements to which it is subject when placed in the market, as well as the requirements that result from such equipment’s entry into operation within the framework of the Radio Equipment Directive (under Decree-Law No.

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1 Jaime Medeiros is a partner, Carolina Ribeiro Santos is an associate and Ana Ramos Logrado is a trainee lawyer at Coelho Ribeiro & Associados.
2 Available for consultation at https://www.anacom.pt/streaming/09032017Annex1InfoTecnicaCB.pdf?contentId=1412954&field=ATTACHED_FILE.
3 The Radio Equipment Directive (2014/53/EU) (RED) has been applicable since 13 June 2016. It was in a one-year transitional phase until 12 June 2017, and revises the Radio and Telecommunication Terminal Equipment Directive (1999/5/EC). The new RED was adopted on 16 April 2014, and EU countries had to transpose it into their national law before 13 June 2016.
Portugal

57/2017 of 9 June) and the Electromagnetic Compatibility Directive (under Decree-Law No. 31/2017 of 22 March). Radio equipment conforming to Decree-Law No. 192/2000 that was placed on the market before 13 June 2017 may continue to be made available on the market or put into service.

On 15 June 2017, the ‘roam like at home’ initiative was launched following a decision of the European Parliament on 6 April 2017, with maximum wholesale roaming prices being approved following a political agreement reached at the beginning of the year. The agreement was the result of a long process dating back to 2013 with the first draft proposal of the Telecom Single Market (TSM) Regulation.4 Alongside this decision is a set of detailed rules on the application of a fair use policy, the methodology for assessing the sustainability of abolishing retail roaming surcharges and the applications to be submitted by roaming providers for the purposes of such assessment.5 To avoid abusive or anomalous use of the system, the Portuguese national regulatory authorities (NRAs) also have powers to intervene if the ending of roaming charges leads to price increases for domestic customers. In this respect, on 28 March 2017 the Body of European Regulators for Electronic Communications (BEREC) published its BEREC Guidelines on Regulation (EU) No. 531/2012, as amended by Regulation (EU) 2015/2120 and Commission Implementing Regulation (EU) 2016/2286 at the retail level. These Guidelines are complementary to the provisions set out in the Roaming Regulation, and NRAs must to take them into account when supervising the Roaming Regulation in their Member States. To be in harmony with this informal political agreement of the Parliament, the Council and the Commission, and at the express request of Apritel (the Portuguese association of operators), under a decision of 20 February 2017,6 Anacom approved the opening of a procedure to amend the Regulation on pre-contractual and contractual information.7 On 20 March 2017, a new notice8 announced that the effects of that Regulation have been suspended, which suspension took effect from 23 February 2017 and will remain in place until the entry into force of the amendment to Regulation No. 829/2016 of 23 August. This decision aims to enable a different approach for the simplified information file form and system.

Statistics show9 that by the end of the third quarter of 2017, nine out of 10 families had bundled services. The number of subscribers to these deals reached 3.7 million (254,000 more, or an increase of more than 7.4 per cent, compared to the equivalent quarter of the previous year, which represents the highest growth recorded in the past four quarters).10 This growth is mainly due to the quintuple play (5P) bundled deals offering (FBB+FTS+STV+MTS+MBB), which gained more 46,000 subscribers, followed by the third play (3P) FTS+FBB+TVS offer with more 28,000 subscribers, which represents 82.3 per cent of total subscribers, with approximately 1.5 million subscribers each. Convergent bundles, which combine services

6 The notice of 20 February 2017 is available for consultation at https://www.anacom.pt/streaming/inicioProcedimento20fev2017.pdf?contentId=1405000&field=ATTACHED_FILE.
7 Regulation No. 829/2016 of 23 August.
10 This section does not consider bundles that include only mobile services, available at https://www.anacom.pt/streaming/bundles1Q2017.pdf?contentId=1414539&field=ATTACHED_FILE.
provided in a fixed location with mobile services, reached 1.7 million subscribers (3.9 per cent more than in the previous quarter) and already represent 46.9 per cent of the bundled offers. In the quarter under review, MEO – Serviços de Comunicações e Multimédia (MEO) had the highest share of bundled subscribers (39.9 per cent), followed by NOS Group (38.5 per cent), Vodafone (16.7 per cent) and NOWO/ONI (4.8 per cent). The NOS Group continues to lead in the 3P and 4P bundles (with shares of 36.2 and 75.7 per cent, respectively), while MEO led in the 2P and 5P bundles (43.4 and 48 per cent, respectively). Between January and September 2017, revenues from bundled services increased to €1.3 billion, an amount corresponding to an increase of 5.9 per cent compared to that recorded in the same period of the previous year. MEO had a share of 41.4 per cent of revenues, followed by the NOS Group with 40.6 per cent, Vodafone with 14.7 per cent and NOWO/ONI with 3.3 per cent. The NOS Group had the highest share of revenues from 3P and 4P bundles (38.9 and 79.4 per cent, respectively), while MEO led the 2P and 5P bundles (38.8 and 48.5 per cent, respectively).

According to Marktest’s Telecommunications Barometer (TCB),11 in 2017 the average monthly household bill for residential customers with bundled deals was €52.24, including VAT. The average bill decreased 0.8 per cent compared to the previous year, thus reversing the upward trend that had been recorded in recent years.12

Parallel to the statistics mentioned in the previous paragraph, we found an increased number of visits on the Anacom’s interactive tool COM.escolha,13 which helps users to check the tariffs for the following electronic communication services: television, internet, fixed telephone and mobile devices (including calls, messages (SMS) and internet services). The COM.escolha simulator received 26,088 visits from 22,358 users in the third quarter of 2017, an increase of 26.11 per cent compared to the second of quarter 2017, when it received 20,687 visits from 17,711 users. Of these visits, 84.7 per cent were accesses originated by new users and 15.3 per cent were originated by returning users. The most-used comparisons and simulations were as follows:

- mobile phone services: tariff consultations (14,244 accesses);
- internet: tariff consultations (13,308 accesses);
- combined services: tariff consultations (5,205 accesses);
- combined services: consumption simulations (3,932 accesses);
- internet: consumption simulations (3,188 accesses); and
- mobile phone services: consumption simulation (2,374 accesses).

Such numbers lead us to believe that today’s users are becoming more informed, educated and demanding regarding the numerous service options displayed on the market. It might even be said that the consumer profile is changing. Where before it was the companies that

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11 The TCB is a regular study developed by Marktest for the telecommunications sector. The universe of the Telecommunications Barometer Fixed Network comprises homes located in mainland Portugal and in the autonomous regions of Madeira and the Azores. A sample is compiled on a monthly basis that is proportional to and representative of the universe, corresponding to 1,150 interviews per month. Analysis of the TCB data is undertaken for quarterly periods. The sample of households guarantees a maximum absolute margin of error of 1.7 percentage points (questions put to all households).

12 Available for consultation at anacom.pt/streaming/Bundled_Services2017.pdf?contentId=1435794&field=ATTACHED_FILE.

13 COM.escolha allows people to see which tariff is best suited for each consumer’s needs. Available for consultation at https://www.anacom.pt/tarifarios/PaginalInicial.do.
dictated the tastes, preferences and new acquisitions of consumers, this scenario is now very different. It is no longer the customers that go to the brands, but rather the brands that must win the competition to get customers, and in that process must provide the options that best suits such customers’ needs. On 2 March 2017, Anacom issued a draft decision approving an agreement reached by MEO, NOS and Vodafone on the distribution between them of 588 parishes potentially lacking mobile broadband coverage for which obligations of coverage were imposed as part of the process of renewing the rights of use of frequencies in the 2,100MHz band, as approved under the terms of an Anacom decision of 18 February 2016.14 With the approval of the agreement on the distribution of the parishes, the geographical scope of the established obligations has been accomplished, becoming an integral part of the corresponding titles. Anacom will consider future bilateral exchanges of parishes, provided it is informed of any change to the agreement for the purposes of approval and public disclosure.15

Postal traffic continues to decline annually as a result of the increasing replacement of postage services by electronic communications.16 In the third quarter of 2017, total traffic from postal services in Portugal totalled about 179.1 million objects, falling by 7.1 per cent versus the third quarter of 2016. Despite this decline, revenues from postal services increased by 0.7 per cent, rising to €152 million. Traffic from postal parcels made up 27 per cent of total revenues versus 26.4 per cent in the same period of 2016. The increase in 2017 (over €113,000) reflects the fact that the last year of the transitional period provided for in the legislation terminated,17 which translated into the additional coverage of more 20 per cent of administrative costs of regulation, compared to 2016.

Universal postal service traffic, which represents 84.1 per cent of total traffic, decreased by 8.5 per cent from the same period in 2016. On average, each inhabitant sent 17.4 postal items in the third quarter of 2017, which is 1.3 fewer items per capita compared to the third quarter of 2016.

Grupo CTT (CTT) retained a share of 91.7 per cent of total postal traffic. Anacom has again stated that the company is abusing its dominant position by refusing its competitors access to its standard mail delivery network since 2012, in breach of national and EU competition rules.18 Consequently, Anacom, approved, on 2 February 2017, a draft decision on the disclosure of information on letter boxes by CTT, and CTT had, among others, to disclose information about letter boxes located on public roads and in public places where users could deposit items of correspondence into CTT’s postal network.

On 28 December 2017, the Portuguese Competition Authority (AdC) tackled the same abusing of a dominant position by CTT, opening an administrative infraction proceeding for indications of infringement of the competition rules. The AdC’s investigation identified a set of fair competition concerns related to access to CTT’s traditional mail distribution network by competing postal operators. Given that competing postal operators require access to the postal distribution network of CTT in order to be able to provide traditional courier services

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16 https://www.anacom.pt/streaming/PostalServices1Q2017.pdf?contentId=1414868&field=ATTACHED_FILE.
17 The legislative amendments intend to promote an environment of full competition in the provision of postal services.
to business customers, the AdC preliminarily considered that the behaviour of CTT could have a restrictive effect on competition by creating barriers to the development of effective competition in the traditional mail market.

Addressing the AdC’s concerns, CTT committed to, for example, extend to competing postal operators the postal services covered in its access offer, namely the national editorial service, the national priority service and the national registered service, among others. The AdC is keeping a close watch on CTT’s commitments and monitoring its activities.

On 2 February 2017, Anacom began drawing up a regulation concerning the registration of companies that offer electronic communication networks and services, culminating in Regulation No. 6/2018, published on 5 July 2018. The objects of the present Regulation include the establishment of notification obligations imposed on undertakings that offer or intend to offer ECNs and services as regards identification and contact details, and the commencement, modification and discontinuation of their activities. The Regulation also sets out the rules governing the maintenance of undertakings’ registration with Anacom, all with a view to pursuing the principle of good administration.

Among Anacom’s recommendations in 2017, we highlight the end of the universal fixed telephone service. Having considered that the scant demand for the services covered does not justify maintaining the contract for a universal fixed telephone service between the state and NOS Comunicações, Anacom recommended, as per the terms established in 2014, that the government end it. In view of this data, Anacom considers that there is evidence that the objectives underlying the universal service contract for this provision are being accomplished by the market on a competitive basis.

Without disregarding the policies and legislative changes mentioned above, net neutrality was undoubtedly one of the most important topics in the TMT industry in the present year.

Following the entry into force of the Telecom Single Market (TSM) Regulation, Anacom closely followed BEREC’s (30 August 2016) Guidelines concerning the implementation by national regulators of the European net neutrality rules by ensuring compliance with the rules to safeguard equal and non-discriminatory treatment of traffic in the provision of internet access services and related end user rights.

Proof of such commitment was seen in an Anacom order of February 2018 giving operators 50 working days to amend zero-rated and other similar offers made available by providers of mobile internet access where these offers violate the provisions of the TSM Regulation and the Roaming Regulation as regards net neutrality and roaming rules. This order stems from Anacom’s oversight of existing offers, whereas a thorough investigation detected situations where providers employ traffic management practices that differentiate between general traffic allowances and specific traffic allowances or applications not subject to traffic limits in violation of the net neutrality rules. It has also been found that, in some

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19 The remaining commitments may be found in an AdC statement available at http://www.concorrencia.pt/vPT/Noticias_Eventos/Comunicados/Paginas/Comunicado_AdC_201723.aspx.

cases, specific data allowances cannot be used by customers when travelling in the European Economic Area (EEA) on terms equivalent to those that apply in Portugal, which is contrary to the roam-like-at-home principle.

In view of these findings, Anacom decided to order providers of internet access services to amend their procedures in offers that include mobile internet access services (including mobile phone internet services) in cases where there is a differentiated treatment of traffic. This differentiated treatment has been seen between applications and content included in specific data allowances or those made available without traffic limits and other applications and content included in general data allowances, applied once general data allowances have been exhausted. Anacom’s determination applies to any offer with these characteristics, even if not specifically referenced in Anacom’s analysis. Anacom has also ordered providers to amend procedures (within the same 50-day deadline) in the case of offers where content and applications are subject to conditions of use when customers are roaming in the EEA that are not equivalent to the conditions applied to use in the national territory.

We also highlight the following regulatory and legislative developments.

The Electronic Communications Law was amended by Decree-Law No. 92/2017 of 31 July 2017 reinforcing measures to reduce the cost of implementing high-speed ECNs by transposing Directive 2014/61/EU.

Law No. 49/2015 of 5 June establishes private copying levies over digital devices such as mobile phones, smartphones, tablets and scanners, as well as support equipment (USBs, external drives, MP3 and MP4 players, memory cards, etc.). The approval of this Law was highly controversial: the President vetoed it, but it was subsequently reapproved unchanged by a qualified majority in Parliament. To date, the Law has not undergone any revision or amendment.

Law No. 78/2015 of 29 July establishes new rules with regard to the ownership, management and financial transparency of media undertakings. The Law entered into force on 30 October, and the first disclosures of ownership and management to the regulator occurred on 30 January 2016. To enable media undertakings to comply with the legislation, the Transparency Digital Platform was created. Through this Platform, all media undertakings must communicate to the Regulatory Authority for the Media (ERC) the relationship of holders for their own account or for the account of others, and the usufructuaries of shareholdings in entities that carry out communication activities, together with the composition of their corporate bodies and the identification of the person in charge of the editorial orientation and supervision of the contents.

Online gambling has been a regulated legal activity in Portugal since 2015. Decree-Law No. 66/2015 of 29 April regulates online gambling, betting and gaming, which was later amended by Law No. 114/2017 of 29 December. At the end of the first quarter of 2018, there were seven entities authorised by the Gaming Commission of the SRIJ (Regulatory Service and Gaming Inspection) to engage in online gaming and gambling activities in Portugal, which is three more than were authorised in the same period of 2017. The mentioned activities have generated around €33.8 million gross revenue, a value of around €2.5 million more over the same period in the previous year. The Portuguese Premier League remained the largest betting player, accounting for 14.7 per cent of the total amount of bets placed on football in the period under review.
Concerning the scope of data protection, notwithstanding the General Data Protection Regulation\textsuperscript{21} (GDPR) being approved on 27 April 2016 and coming into force in 25 May 2018, to date, Portugal does not have data protection legislation in place that implements the GDPR.

\section{II \hspace{1em} REGULATION}

\hspace{1em} \textbf{i \hspace{1em} The regulators}

Portugal has two independent sectoral regulators: Anacom in the scope of communications, and ERC with regulatory competence in the media sector. Although both regulators have responsibility for the promotion of competition and pluralism in their respective sectors, this does not preclude the powers vested with the AdC. In fact, regarding matters related to the application of the legal framework for competition in these respective sectors, Anacom, ERC and the AdC must cooperate and collaborate, and pay due regard to their respective powers.

The statutes of Anacom (formerly ICP-Anacom) were approved by Decree-Law No. 39/2015 of 16 March, under which Anacom is endowed with regulatory, supervisory, monitoring and sanctioning powers. It is also incumbent upon Anacom to promote out-of-court dispute settlement mechanisms between providers subject to its regulation as well as consumers and other end users of electronic and postal communications.

Anacom is a legal person governed by public law and statutes, and is independent from the government at the organisational, functional, technical and financial levels. Anacom is not subject to government oversight or authority in connection with its functions, and members of the government are not allowed to make recommendations or directives with regard to Anacom’s regulatory actions or the priorities it will adopt.

Anacom’s main areas of intervention are in the following areas:

\begin{itemize}
  \item \textit{a} ECNs;
  \item \textit{b} ECSs;
  \item \textit{c} spectrum management;
  \item \textit{d} radio communications services;
  \item \textit{e} the postal area;
  \item \textit{f} radio and telecommunications terminal equipment;
  \item \textit{g} the installation of infrastructure for telecommunications in buildings; and
  \item \textit{h} some aspects of information society services, namely e-commerce.
\end{itemize}

Regarding radio and television, the broadcasting and management of the spectrum are subject to Anacom regulation and supervision.

The following is a brief outline of the main sources of law regarding communications:

\begin{itemize}
\end{itemize}


b In the field of e-commerce, the main act is Decree-Law No. 7/2004 of 7 January (as subsequently amended), which transposed into the Portuguese legal system Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the internal market.

c With regard to data protection, the main sources of law are the GDPR and, to the extent it does not conflict with that, Law No. 67/98 of 26 October, which transposed into the Portuguese legal system Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, and Law No. 41/2004 of 18 August (as subsequently amended) concerning the processing of personal data and the protection of privacy in the electronic communications sector, which transposed Directive 2002/58/EC of the European Parliament and of the Council of 12 July, and Directive 2009/136/EC.

In the postal area, the main source of law is Law No. 17/2012 of 26 April (as subsequently amended), which lays down the legal regime that governs the provision of postal services under a full competition regime in the national territory, as well as international services to or from the national territory, and transposes into the Portuguese legal system Directive 2008/6/EC of the European Parliament and of the Council of 20 February 2008.

The media sector is regulated by ERC. ERC is an independent regulator that is not subject to recommendations or directives from the government or any other political body. The exclusive competence of ERC is restricted to the activity of media companies from the perspective of freedom of speech and the content of media, and this competence should not collide with the competence of other regulators. In this regard, on 18 July 2018 ERC issued a set of guidelines to encourage standards of good practice by the media under Portuguese jurisdiction to cover forest fires and other calamities: the Guide to Good Practices. Unfortunately, in 2017 and the third quarter of 2018, forest fires in the interior of the country mobilised a significant amount of media coverage, which gave rise to numerous complaints to ERC regarding the journalistic coverage of that news, raising the need for an analysis by the regulator of the journalistic practices adopted in these types of circumstances. More important than analysing the past is undoubtedly the promotion and implementation of good practices for the future. In this respect, it is important to note that radio and television broadcasting and the management of the spectrum is under Anacom regulation and supervision.

In the media sector, the main sources of law are as follows:

a The Radio Act (Law No. 54/2010 of 24 December, as subsequently amended) concerning access to and pursuit of radio broadcasting activity in the national territory.

Law No. 78/2015 of 29 July governs the promotion of transparency with regards to the ownership, management and means of financing of media undertakings. The Law entered into force on 30 October 2015. The annual corporate governance report shall be delivered by 30 April each year to ERC and shall include a ‘truthful, complete, objective and current report on corporate governance structures and practices adopted by media companies’. In short, this regulation establishes that media companies are required to provide information on equity, liabilities, ownership and holding of corporate bodies, and related business activities.

The Press Act (Law No. 2/99 of 13 January) governs the basic principles of media content and freedom of speech.

Regarding data protection, the Portuguese Data Protection Authority (CNPD) is responsible for monitoring compliance with the GDPR. In contrast to what was the case under the previous Portuguese Data Protection Law, the role of CNPD, now that the need for prior notification or for prior authorisation has disappeared, is mostly of a supervisory nature.

ii Regulated activities

TMT activities are fully liberalised, and the general rule is that the provision of ECNs and services, whether publicly available or not, is only subject to a communication duty and to a general authorisation regime; such provision of networks or services is not dependent on any prior decision or act of Anacom. However, there are exceptions, namely:

- the allocation of spectrum;
- the use of numbering;
- the use of radio communications networks and stations;
- television broadcasting using the terrestrial spectrum; and
- radio broadcasting.

The space where radio waves may propagate constitutes a public domain of the state, and Anacom is responsible for the management of the spectrum in coordination with the European Commission and the regulatory authorities of other Member States with regard to strategic planning, coordination and harmonisation of the use of radio spectrum in the European Union, namely in the scope of multiannual radio spectrum.

The allocation of spectrum and the assignment of frequencies should be based on objective, transparent, non-discriminatory and proportionate criteria. The management of spectrum is subject to the principles of technology neutrality, in accordance with which all types of technology used for ECSs may be used in frequency bands declared to be available for ECSs, and are published in the National Frequency Allocation Plan as such; and service neutrality, in accordance with which all types of ECSs may be provided in frequency bands declared to be available for ECSs, and are published in the National Frequency Allocation Plan as such.

Licences for the use of frequencies are granted for 15 years and are renewable.

The use of numbers depends on the allocation of rights of such use. Such rights may be allocated both to providers and users, and the law warrants that the allocation procedure must be open, objective, transparent, non-discriminatory and proportional.

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The use of radio communications networks and stations is also subject to licensing. Anacom is responsible for granting licences, and the licensing procedure is ruled by Decree-Law No. 151-A/2000 of 20 July, as further amended. Anacom has announced that use of the 1850-2000kHz band has been authorised, under conditions set in the National Table of Frequency Allocations for the 1830–1850kHz band, for the purpose of taking part in a number of specific contests in 2018. This authorisation for temporary use of the 1850–2000kHz band does not allow it to be used for any other purpose in the scope of amateur service or for any other radiocommunication services.

With regard to television broadcasting, the licensing regulation differs according to whether there is an allocation of the terrestrial spectrum. Licences to broadcast using the terrestrial spectrum are subject to public tenders. These can be public tenders for unrestricted free-to-air television programme services, and for conditional access television programme services or free-to-air television programme services subject to a subscription. If the proposed broadcasting activity does not use the terrestrial spectrum, authorisation is given upon the request of interested undertakings. A simple registration is needed where the television activity consists of the broadcast of television programme services exclusively through the internet that are not retransmitted by other networks.

Access to radio broadcasting activity is also regulated. Radio broadcasting is conditional upon the issue of a licence by means of public tender, or of an authorisation, according to whether programme services to be provided will use the terrestrial broadcast spectrum. Radio broadcasting through the internet is only subject to registration.

Illegal television activity and illegal radio activity are both considered criminal activities that are subject to a term of imprisonment of up to three years or to a daily pecuniary sanction for up to 320 days.

iii Ownership and market access restrictions

The TMT market is fully liberalised, and there are no foreign ownership restrictions with regard to telecom services or networks, without prejudice to the application of the legal regime of competition in the electronic communications sector. However, there are several ownership and market restrictions in the media sector that have to be taken into consideration.

Television and radio cannot be controlled or financed by political parties or associations, local authorities or their associations, trade unions, or employer or professional associations; furthermore, radio broadcasting activities cannot be pursued directly or indirectly by the state, autonomous regions, local authorities or public institutions unless such activity is exclusively performed through the internet and consists of the organisation of institutional or scientific programme services.

Additional specific concentration and cross-ownership restrictions apply to television and radio activities. Concentration operations between media operators that fall under the intervention of the AdC are subject to a prior opinion of ERC that will be binding where there is deemed to be a risk to free expression and pluralism. Changes of control are prohibited during the first three years of the licence, and thereafter are subject to the prior consent of ERC. An undertaking also cannot hold more the 50 per cent of the licences for national unrestricted free-to-air television programme services, and there are cross-ownership restrictions with regard to radio both at the national and local level.
New rules on ownership, management and means of financing transparency are also in force for the media sector, including regarding television, radio, press and internet media content.23 According to the transparency principle:

a the shares of media entities must be registered shares;
b certain information, including direct, indirect and ultimate beneficiary ownership, and the identity of the board members, the chief editor and the auditor, must be notified to ERC;
c public disclosure is mandatory whenever there is a variation in the capital stock that meets 5, 10, 20, 30, 40 or 50 per cent of the share capital or of the votes, or if there is a change of control; and
d shareholders’ agreements, special financial movements and corporate governance rules have to be disclosed to ERC, and certain specific information about the shareholders must be published on the operator’s website.

iv Transfers of control and assignments

Regarding the right of use of frequencies and numbers, the general rule is that such rights are transferable upon prior notification to Anacom, which may oppose the transfer or impose conditions to avoid distortion of competition. In this case, the AdC shall give a prior opinion.

Licences and authorisations for television activity are non-transferable. Radio licences and authorisations at the local level are transferable, subject to the prior authorisation of ERC, without prejudice to the assignments granted by Anacom as the national communications regulatory authority and by the AdC.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

Internet services are regulated by the Electronic Communications Law24 and by the E-Commerce Law,25 and such activity is not subject to prior authorisation but only to prior notification to Anacom.

Online intermediary service providers do not have an obligation to monitor the information that they transmit or store, or to investigate possible offences practised within their scope. However, in relation to the competent authorities, they shall, when requested:

a inform the authorities if they become aware of illegal activities undertaken via the services they render;
b comply with requests for identification of recipients of their services with whom they have entered into storage agreements;
c comply promptly with instructions aimed at terminating or preventing an offence, namely by removing or disabling access to given information; and

d supply lists of owners of hosted websites.

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23 Law No. 78/2015 of 29 July entered into force on 30 October; see Section 1.
24 Law No. 5/2004 of 10 February (as subsequently amended).
25 Decree-Law No. 7/2004 of 7 January (as subsequently amended).
The guidelines issued by Anacom on VoIP date back to 2006, at which time a new 30 number range was created in the national numbering plan to accommodate nomadic VoIP numbers. Providers of VoIP services provided at a fixed location are subject to number portability obligations, but only within the 30 non-geographic numbering range. However, by a decision of 14 July 2016, Anacom approved a report on the public consultation report on the implementation of the common position of the European Regulators Group on VoIP, and the conditions governing the use of geographic, nomadic and mobile numbers. Anacom will now prepare a new regulation to govern the use of geographic and mobile numbers in nomadic situations.26

ii Universal service

Currently, the following activities are covered by USOs: fixed telephone services, public pay telephones, and telephone directory and directory enquiries services; the postal area; and radio and television.

The latest regulatory measures and financing lines for the development of the NGA networks date from late 2010. However, it is important to note that by December 2014, Portugal showed 100 per cent fixed broadband coverage and 89 per cent NGA coverage.27

iii Restrictions on the provision of service

As a general rule, prices are not regulated, but operators are subject to the obligation of the cost-orientation of prices. Anacom may intervene in cases of a dominant position and may require prices to be adjusted. For instance, by decisions adopted on 13 July 2017, and after a prior hearing of the interested parties, Anacom has ordered MEO, NOS, NOWO and Vodafone to adopt corrective measures that entail sending written communications to subscribers affected by contractual changes made upon the initiative of these operators. This requirement applies in situations where such contractual changes (made subsequent to the entry into force of Law No. 15/2016 of June 17) were not communicated to the customer in tandem with the information that, in cases where customers do not accept the changes in question, the customer has the right to terminate the contract without any charge (even if the customer was subject to contract lock-in periods or other commitments to stay).

Through this decision, Anacom announced that it had noticed the existence of some constraints in the termination of contracts for customers who received communications sent by operators in compliance with the previously mentioned corrective measures. In view of this, on 23 August 2017 Anacom alerted customers wishing to exercise their right of withdrawal that they may do so not only in person in any store or by telephone, but also in writing through any of the contact methods indicated in their respective contracts or those disclosed to the public (address, fax, email address, etc.), or through the customer area of an operator’s website. A request for termination does not depend on the submission of any documents other than those that are strictly necessary for the confirmation of a subscriber’s identification.28 If customers wish to keep their telephone numbers, they have three months to request the use of such numbers with the same operator or to ask for their portability.

26 www.anacom.pt/render.jsp?contentId=1391066#.V9guIE_fM3E.
A recent intervention regarding customer retention and retail prices for portability operations so as to avoid market distortion also recently took place. The Portability Regulation, which establishes the principles and rules governing portability on public communications networks, was subject to some amendments (the last one had occurred four years ago) to simplify some procedures, namely:

- the use of the portability window has been made more flexible;
- response times have been cut to one working day for the effective transfer of numbers; and
- a new mechanism to validate subscribers in electronic portability requests has been introduced: this validation is designed to reduce the number of electronic requests refused due to a lack of subscriber identification data at the originating provider or holder.

As regards procedures between companies with portability obligations, the sending of contract-terminating documentation has been limited to situations of portability not requested by subscribers, at the same time entailing a requirement that the recipient provider keeps this documentation. In terms of tariff transparency, the announcement that a call is being made to a ported mobile number will only be made available where expressly requested by the end user.

Anacom also regularly issues guidelines regarding terms and conditions for end users, and operators must submit for approval all standard contracts with customers.

Unsolicited communications (e.g., automated calling machines, facsimile machines (i.e., faxes), email, SMS, EMS, MMS and other similar applications) are subject to prior and explicit consent from the user (opt-in), except if the user is a legal person, in which case the opt-out rule applies.

Nevertheless, even in the event the user is a natural person, unsolicited communications may not be subject to a user’s prior and explicit consent provided that:

- they are or have been in a business relationship with the user;
- the commercial communications are about the same or similar products or services previously supplied to the user;
- users were explicitly given the opportunity to opt out from receiving unsolicited communications at the time their data were collected as well as by the time of each communication; and
- opting out is simple and free of charge.

In addition, providers shall keep, themselves or through representative bodies, an up-to-date list of the natural users who opted in to receive unsolicited communications as well as of users who did not object to receiving these, and of the legal users that opted out.

Following the recent and devastating effects of the terrible fires that afflicted Portugal in the summer of 2017, Anacom recommended on 31 October 2017 that companies offering electronic communication services should not charge customers for the time period during which they had no telecommunications services due to the fires. While it is not in dispute that the suspension of services was not due to a voluntary act of the provider or due to an

act attributable to the provider, there is also no question that the deprivation of services is likewise not attributable to subscribers, and there is no justification for penalising subscribers with the burden of paying for a service that they did not enjoy. However, the Electronic Communications Law does not establish any obligation to deduct days of non-availability of a contracted service from customer bills. Nevertheless, Anacom considers that service providers should arrange, upon their own initiative, an adjustment of the amounts charged, performing what is considered to be, above all, under an imperative of fairness. Anacom also intervened, requesting that the interrupted telecommunications services should be put back in place as quickly and effectively as possible, having also promoted the identification of measures for the security and resilience of communications infrastructures, and the establishment and operation of efficient warning systems for the population in emergency situations.

iv Security

Freedom of access to information and self-expression are constitutional rights. Nevertheless, such rights can be limited under legally foreseen terms (e.g., judicial secrecy, state secrets). In addition, the electronic communications sector is ruled by the protection of privacy principle (Law 41/2004 of 18 August, subsequently amended by Law 46/2012 of 29 August on the processing of personal data and the protection of privacy in the electronic communications sector that transposed Directives 2002/58/EC and 2009/136/EC). However, this protection of privacy rule has some exceptions, such as those that are strictly necessary for the protection of activities concerning public security, defence, state security, and the prevention, investigation and prosecution of criminal offences, under the terms established in special legislation.

With regard to the processing of personal data and the protection of privacy in the electronic communications sector, providers of publicly available ECSs shall:

a Take appropriate technical and organisational measures to ensure the security of their services and at least the following: measures that ensure that personal data can be accessed only by authorised personnel, and only for legally authorised purposes; the protection of personal data transmitted, stored or otherwise processed against accidental or unlawful destruction, loss, alteration, and unauthorised disclosure of or access to such personal data; and measures that ensure a security policy with respect to the processing of personal data.

b In order to allow them to take the necessary precautions, without undue delay notify the personal data breach to the Data Protection Authority (CNPD) and, where the personal data breach is likely to adversely affect the personal data of a subscriber or user (i.e., where the breach could result in, for example, identity theft or fraud, physical harm, significant humiliation or damage to reputation in connection with the provision and use of publicly available communications service), the subscriber or user.

c Ensure the inviolability of communications and related traffic data by means of public communications networks and publicly available ECSs, which means that any interception or surveillance of communications and related traffic data by persons other than users is prohibited without the prior and explicit consent of the users concerned, except for cases provided for in the law (criminal procedures); and any legally authorised (by the CNPD) recording of communications and related traffic data when carried out in the course of lawful business practices for the purpose of providing evidence of a commercial transaction, provided that the data holder has been informed thereof and given his or her consent thereto.
d. Not store information or gain access to information stored in the terminal equipment of a subscriber or user (e.g., cookies, web beacons) unless with his or her prior and informed consent, or if required for carrying out the transmission of a communication over an ECN, or the provision of a service explicitly requested by the subscriber or user.

e. Erase or make traffic data relating to subscribers and users that have been processed and stored anonymously where they are no longer needed for the purpose of the transmission of a communication, except the data strictly needed for billing purposes and only up to the end of the period during which the bill may lawfully be challenged or the payment be pursued, unless with a subscriber or user’s prior, explicit and informed consent, which can be withdrawn at any time, and to the extent and for the duration necessary for the purpose of marketing ECSs or for the provision of value added services.

f. Process location data provided that they are made anonymous or, to the extent and for the duration necessary for the provision of value added services, with a subscriber or user’s prior, explicit and informed consent, which can be withdrawn at any time.

g. Reconcile the rights of subscribers receiving (those who want) itemised bills with the right to privacy of calling users and called subscribers.

h. Provide transparent and up-to-date information on the several possibilities regarding identification of calling line and connected line.

i. Cancel (with a prior opinion of the CNPD), where compatible with the principles of necessity, appropriateness and proportionality, for a period of time not exceeding 30 days, the elimination of the presentation of the calling line identification on a written and duly substantiated request from subscribers who wish to determine the origin of non-identified calls that upset the peace of their family or the intimacy of their private life.

j. Ensure that any subscriber has the possibility, using a simple means and free of charge, of stopping automatic call forwarding by a third party to the subscriber’s terminal equipment.

k. Inform subscribers or users, free of charge and before the respective data are included in printed or electronic directories available to the public or obtainable through directory enquiry services, and collect their consent for such purposes, being the subscribers or users entitled to choose the personal data they want to be displayed in such directories.

The retention of data revealing the content of electronic communications is prohibited, without prejudice to those cases laid down in the law and mentioned above, as well as in criminal procedure law on the recording and interception of communications. Furthermore, under Law 32/2008 of 17 July (implementing Directive 2006/24/EC), providers of publicly available ECSs or of public communications networks shall retain and transmit traffic and location data on both natural persons and legal entities, and the related data necessary to identify a subscriber or registered user, for the purpose of the investigation, detection and prosecution of serious crimes by the competent authorities. Under this law, operators shall retain, for one year, the following categories of data:

a. the source of a communication;

b. the destination of a communication;

c. the date, time and duration of a communication;

d. the type of communication;

e. the users’ communication equipment; and

f. the location of mobile communication equipment.
The retention and transmission of data is exclusively intended for the investigation, detection and prosecution of serious crimes by the competent authorities, and the transmission of data may only be ordered or authorised by a reasoned court order. In addition, files intended for data retention within this Law must be stored separately from other files with different purposes, and (except for data on subscribers’ names and addresses) must be blocked as from the moment they are retained, only being unblocked in the event of transmission to the competent authorities. Despite the fact that this data retention law has not been declared invalid by the Portuguese courts, the CNPD, in line with the arguments of the Court of Justice of the European Union in the *Digital Rights Ireland, Ltd* and *Tele2* judgments, has already recommended that the Portuguese legislator review Law 32/2008 to make it compliant with the Charter of Fundamental Rights of the European Union and with the Portuguese Constitution.

There are no specific provisions as far as children are concerned within the data protection laws, or regarding their protection online. However, the CNPD through Project Dadus (which is currently on hold), as well as the Ministry of Education in conjunction with other public and private entities through Project SeguraNet, aware of the need to educate children (at all ages), teachers and parents on privacy issues, particularly online, have been developing several initiatives and making available resources to create awareness, train and test all the educational community on how to protect children’s privacy and their personal data as well as to allow them to have a safer experience online. Raising awareness about the dangers of the online world is of major importance, as the latest statistics revealed by Anacom, on World Children’s Day, show that 83 per cent of children between 10 and 12 years old have a mobile phone, a figure which rises to 97 per cent for those between 13 and 17 years old.

Cybersecurity concerns are growing, as indicated by the approval of the National Cyber Security Strategy on 12 June of 2015. In addition, at the end of 2014, the National Cybersecurity Centre was established (by Decree-Law No. 69/2014 of 9 May) and became operational in October 2014. Its aims are:

- to implement measures and instruments for the anticipation and detection of, response to and recovery from situations that, given the imminence or occurrence of incidents or cyberattacks, undermine the functioning of state agencies, critical infrastructure and national interests; and

- to pursue a strategy of prevention, raising awareness and educating organisations in particular, and civil society in general, on issues of cybersecurity, thus contributing to creating a community of knowledge and a national culture of cybersecurity.

More recently, on 24 August 2017, the High Council for Cyber Security was created to coordinate the political and strategic landscape for cybersecurity as well as to monitor the implementation of the National Cyber Security Strategy and its revision.

It is also worth mentioning the Cybercrime Law (Law 109/2009 of 15 September), which implemented Council Framework Decision 2005/222/JHA and establishes the substantive and procedural criminal provisions as well as the provisions on international cooperation in criminal matters related to cybercrime and the collection of evidence in electronic form.

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30 Proc C-293/12 and C-594/12; C-203/15 and C-698/15.
31 Council of Ministers Resolution 36/2015.
Regulation 2018/51/EU, of 31 January 2018, was published in January, laying down rules for the application of Directive (EU) 2016/1148 of the European Parliament and of the Council as regards a further specification of the elements to be taken into account by digital service providers for managing the risks posed to the security of network and information systems, and of the parameters for determining whether an incident has a substantial impact.

More recently, Law 46/2018, 13 August 2018 was published with the Portuguese legal regime for cyberspace security, which transposes the above-mentioned Directive. The Cybersecurity National Centre was established as the Portuguese national authority for cybersecurity, and a cybersecurity incident response team was created.

On 29 March 2018, Council of Ministers Resolution No. 41/2018 came into force, which approved the minimum technical requirements of network and information systems that are required or recommended to all services and bodies run either directly or indirectly by the state.

IV SPECTRUM POLICY

A new national strategic plan for radio spectrum (PEE) was approved by Anacom on 10 August 2016. PEE establishes strategic guidelines for the provision of frequencies used by civil radio services and applications, satisfying spectrum requirements and the specifications of each service or application. However, the entry into force of PEE does not result in any immediate change to the National Table of Frequency Allocations. According to Anacom, the intention of PEE is to examine key themes common to all radio spectrum bands in order to explore a strategic approach to spectrum planning.

Particular attention has been focused on DTTV, with the government approving a new policy regarding the reservation of capacity required to expand the provision of programme services in the DTTV platform (Resolution of the Council of Ministers No. 37-C/2016, of 8 July). Following such new policy, the Parliament approved, on 24 August, Law No. 33/2016, which supports the expansion of the provision of DTTV programme services, and establishes technical conditions and price control over the DTTV signal transmission and broadcasting service.

Anacom has approved the methodology for setting and reviewing the reference speeds associated with coverage obligations in the 800MHz band for companies participating in the (4G) multiband auction, which, in May 2015, was subject to public consultation and prior hearing proceedings.

Apart from the above, the last major initiatives regarding spectrum management were the refarming of the 900MHz band in 2010 and the multiband auction of 2011. The multiband auction allocated the rights of use for frequencies in the 450MHz, 800MHz, 900MHz, 1,800MHz, 2.1GHz and 2.6GHz bands. The auction was launched following a memorandum of understanding concluded on 17 May 2011 between the government and the International Monetary Fund, the European Central Bank and the European Commission, after possible distortions in the mobile electronic communications market were identified.

In August 2014, the first assessment of the mobile electronic communications market under the multiband auction regulation was published. The main conclusions resulting from the assessment were that the spectrum combinations of MNOs are very similar and do not

32 Approval given to national strategic plan for the radio spectrum, available at www.anacom.pt/render.jsp?contentId=1393464#.V9g3nU_fM3E.
lead to competitive distortions; the refarming process did not confer an advantage to MNOs, because they all held rights of use for frequencies in equivalent amounts of spectrum in the 900MHz and 1,800MHz bands; and the allocation of rights of use in the scope of the multiband auction did not contribute to creating distortions.

According to these conclusions, Anacom holds that there are currently no grounds for any regulatory intervention with regard to the allocation of spectrum, and spectrum is still available to allocate according to market needs.

V THE YEAR IN REVIEW

2018 saw the conclusion of Altice’s intent to enter into an agreement to acquire Media Capital on 14 July 2017. The concentration would consist of MEO gaining exclusive control of Grupo Media Capital, SGPS, SA (GMC) through the acquisition of the entire share capital of Vertix, SGPS, SA, a company that holds shares representing 94.69 per cent of the capital stock of GMC; and the launching of a public acquisition transaction covering the representative shares of the remaining 5.31 per cent of the share capital of GMC. The acquisition, notified to the Portuguese Securities Market Commission on 18 August, arrived two years after the acquisition of PT Portugal by Altice, which raised a series of concerns regarding the concentration of several media companies into a single group and its competitive implications in the sector. For this operation to be possible, not only the opinions of the regulators, ERC and Anacom, had to be heard, but also the opinions of those with an interest in the purchase’s operation, namely related companies and those with an indirect interest.

The decision to clear the acquisition, for a turnover of €440 million, fell to the AdC, which had to consider whether this concentration operation undermined the principles laid down in the competition law, or if it would open the way for Altice to exercise a dominant position in the telecommunication, media and advertising sectors.

Within the designated period, Anacom delivered to the AdC its opinion on the operation of concentration between MEO and Media Capital, which would translate into a complete vertical integration of the value chain, internalising into the same group the commercial relations between the production of content, the wholesale supply of television and radio channels, and advertising on and distribution of the TV service. In its opinion, Anacom concluded that the deal would lead to susceptibility of creating significant barriers to effective competition in the various electronic communications markets, where final consumers would be the ultimate losers. As such, the concentration should not be allowed under the terms that were proposed.

While the operation itself was subject to more ‘twists and turns’ than are here summarised, notwithstanding, as of 19 July 2018 the AdC declared the termination of the proceeding relating to the Altice/Media Capital concentration. This termination decision was taken by the AdC in response to MEO’s request for withdrawal of the notification procedure for the concentration, which was adopted on the assumption that the concentration in question would not materialise. Among other aspects, according to the analysis carried out by the AdC, Altice would have, as a result of Grupo Media Capital’s control, a level of economic power that would give it the capacity and incentive to implement several strategies to close the markets to competitors, which would result in a significant increase of costs for its competitors in the pay-TV and multiple-play services markets. These cost increases – which
the Commission estimated could exceed, in certain scenarios, €100 million per year – would lead to a decrease in competitive market pressures, ultimately reflected in the final consumer prices.

Once again, we emphasise Anacom’s intervention in ordering changes to offers that violate net neutrality and roaming rules. These measures are designed to prevent discrimination between content or applications, or both, included within general data allowances (made subject to blocking or delays upon depletion of these allowances), and other content or applications, or both, covered by specific data allowances or not subject to data traffic limits (not made subject to blocking or delay when the overall data cap is reached). Such discrimination undermines the principles of open internet, which is prohibited by the TSM Regulation (Article 3). We are waiting for the rollout, as Anacom also set a deadline of 30 working days for operators to outline how they will comply with this decision, and what conditions they impose on entities interested in including applications or content, or both, in zero-rated and similar offers, which shall be published.

The government has updated its digital agenda through Resolution No. 25/2015 of 16 April in order to align it with the Digital Single Market Strategy for Europe and the Partnership Agreement for Portugal 2014–2020.

Key measures, all of which are to be implemented by 2020, are as follows:

a. the development of broadband infrastructure to achieve 100 per cent national broadband coverage with speeds of not less than 30Mbps;
b. the development of broadband infrastructure to allow 50 per cent of households to access broadband internet speeds equal to or greater than 100Mbps;
c. the creation of conditions that allow an increase of 55 per cent in the number of companies using e-commerce in Portugal (compared with figures for 2011);
d. the promotion among the Portuguese population of greater use of online public services to reach the European average level;
e. the creation of conditions that allow a 25 per cent increase in ICT exports in accumulated values (compared with figures for 2011); and
f. the promotion of innovation in ICT and the enhancement of R&D potential through a 10 per cent increase in direct public funding for ICT R&D (compared with figures for 2012).

Recently, the Portuguese Association for Consumer Defence (DECO) made a formal complaint to Anacom regarding MEO’s summer campaign in which clients were offered, through an SMS, 2Gb of internet until 31 August. After 31 August of the year of the offer, clients may continue the internet service for an extra €3.98 per month. DECO’s complaint relates to the requirement for customers to cancel a service that they did not request. To date, Anacom has considered that the practice followed by MEO in this campaign, whereby subscriber inaction is taken as an expression of consent, is detrimental to the interests of subscribers, and is incompatible with a range of legal provisions, and in particular those under the Electronic Communications Law. Under these terms, ANACOM has approved a draft decision ordering MEO to comply with the following conditions:

a. the immediate cessation of the campaign;
b. communication to subscribers who have already been contacted informing them that the proposals for contractual amendments will only be effective where they explicitly give their consent in writing; and

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c prohibition of the collection of any amounts associated with the additional traffic without the express consent of the subscribers.

After hearing MEO on the draft decision, approved on 18 August 2017, by a decision of 31 August 2017, Anacom determined that the provision of additional traffic (indeterminate) can only be accepted if take up of the offer results from an express and prior manifestation of consent by the customer. As such, by a decision of 31 August 2017, Anacom ordered MEO to ensure that take-up of the offer in the context of the campaign launched on 8 August 2017 is based on an express manifestation of will by its customers; and not charge or bill any sum for the provision of services to which this determination refers, without subscribers having previously manifested express consent as previously referred.

In the same decision, it was also determined that MEO should report to Anacom, within 10 working days from the date of notification, detailing the manner in which it has accomplished compliance with the stipulated measures, submitting supporting evidence of the measures undertaken, without prejudice to any other evidence that ANACOM may request.

2017 and 2018 also saw the bases of new reforms and policies being implemented regarding:

a net neutrality and roam-like-at-home principles;
b a new national strategic plan for radio spectrum (CB);
c new transparency rules in the media sector; and
d those initiatives regarding the review of the electronic communications regulatory framework that were already known about.

The National Civil Aviation Authority, ANAC, had previously approved Regulation No. 1093/2016, published on 14 of December 2016, which established the operating conditions applicable to unmanned aerial vehicles, commonly referred to as drones, taking into account, inter alia, the organisation of the airspace and the rules of the air contained in Commission Implementing Regulation (EU) No. 923/2012, of 26 September 2012, as well as the various existing conditions, with regard to the places where aircraft may or may not be used.

Notwithstanding the above-mentioned Regulation, which essentially was aimed at ensuring air safety by adopting rules of an operational nature that would allow the addressing, in a preliminary way, of the risks of the excessive use of this type of aircraft in Portugal, the issue required further legislation. As a result, Decree-Law No. 58/2018 of 23 July was approved, establishing a compulsory civil liability registration and insurance system applicable to unmanned civil aircraft (drone) systems.

Drone operators must register with ANAC in accordance with the terms of this Decree-Law within a maximum period of 60 days from the date of availability of an electronic platform for such purpose. The register is valid for a period of five years, expiring at the end of its term if it is not renewed. The fines for non-compliance vary from €2,000 to €3,500 for a natural person and between €5,000 and €75,000 for a legal person.

Regarding the Portuguese Data Protection Law, on 26 March 2018, the government introduced Law Proposal No. 120/XIII for the implementation of the GDPR. However, it was not approved. The draft bill that will revoke the previous law is still being discussed at the Parliament. Notwithstanding, on 25 May 2018, CNPD released a statement clarifying that
while the adoption of national legislation implementing the GDPR in Portugal is pending, the previous law will remain in force insofar as it does not conflict with the GDPR, and CNPD will proceed with the tasks and powers bestowed on it by the GDPR.

Meanwhile, CNPD has made available online forms to report the appointment of a data protection officer\textsuperscript{33} in compliance with the Article 37 of the GDPR, and to report data breaches.\textsuperscript{34}

CNPD also launched a public consultation of the list of the kind of processing operations that require a data protection impact assessment in accordance with Articles 35, No. 4 and 57, Letters 1, k). A period of 30 business days to submit any views began on 6 August 2018.

\section*{VI CONCLUSIONS AND OUTLOOK}

It is predicted that the government will continue to focus on network neutrality, data security and cybersecurity, privacy and data protection (particularly following the implementation of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016) in the next few years.

The security of the network and information systems will be a key issue in the future following the adoption of Directive (EU) 2016/1148 of the European Parliament and the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union, and all Member States must implement the Directive in their jurisdiction no later than 9 May 2018.

The adoption of a new ePrivacy Regulation, which continues to be under fire, is still pending, meaning it will remain on the agenda during the next year; both the European Data Protection Supervisor and the Article 29 Working Party have expressed their concerns and made recommendations. The final approved version of this Regulation is hotly anticipated.

Cybersecurity is necessarily of major interest, as the EU plans to invest nearly €486 million to build a European infrastructure of supercomputers – the EuroHPC Joint Undertaking\textsuperscript{35} – which will be essential for processing large amounts of data, thereby benefiting society in areas such as health, renewable energies and cybersecurity. Supercomputers are needed to process ever-larger amounts of data, certainly bringing benefits to society in many areas, from healthcare and renewable energy to car safety and cybersecurity. We anxiously await the development of such undertakings as, at the present time, and mainly due to a lack of resources, European scientists and industries increasingly process their data outside the EU when their needs are not matched by the computation time or computer performance available in the EU. This inevitably threatens privacy, data protection, commercial trade secrets and ownership of data, in particular for sensitive applications.

The EuroHPC Joint Undertaking will operate between 2019 and 2026. The planned infrastructure will be jointly owned and operated by its members, consisting at first of the countries that have signed the EuroHPC Declaration and private members from academia.

\begin{footnotesize}
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\textsuperscript{33} Available at https://www.cnpd.pt/DPO/.
\textsuperscript{34} Available at https://www.cnpd.pt/DataBreaches/.
\textsuperscript{35} A new legal and funding structure that shall acquire, build and deploy across Europe a world-class high-performance computing (HPC) infrastructure. It will also support a research and innovation programme to develop the technologies and machines (hardware) as well as the applications (software) that would run on these supercomputers.
\end{footnotesize}
and industry. Other members can join this cooperation at any time, provided they have paid a financial contribution. Portugal is proud to be one of the seven members that signed the EuroHPC Declaration on 23 March 2017 at the Digital Day in Rome.\textsuperscript{36}

The Law\textsuperscript{37} regarding cybersecurity measures to ensure a high common level of network and information security throughout the European Union has just been published, and we are keen to witness the unfolding of its applicability. Data protection, network and information security, and cybersecurity will certainly be the key words for the rest of 2018 and into 2019.

\textsuperscript{36} The EuroHPC Declaration, at that date, was also signed by France, Germany, Italy, Luxembourg, the Netherlands and Spain.

\textsuperscript{37} See Section III.iv.
I OVERVIEW

The TMT sector in Russia is heavily regulated, and is to a very large extent driven by political and lobbying efforts. Such unpredictability also contributes to the sometimes-controversial evolution of the regulatory landscape.

Thus, on the one hand, the governmental authorities are working on reforming the TMT sector in Russia and introducing a set of new principles that could have a significant impact on all sectors of the communications market (including by way of simplification of the licensing regime, efficient allocation of frequencies, development of communication infrastructure and universal access to telecommunications services). On the other, taking into account the current political context in Russia, recent trends in the TMT market in Russia are mainly focused around increasing legislative pressure on market players, restricting foreign investment and strengthening state control over operators, media companies and customers.

II REGULATION

i The regulators

The main regulator in the TMT sector in Russia is the Ministry of Communication and Mass Media of the Russian Federation (Mincomsvyaz).

Broadly, Mincomsvyaz is in charge of elaborating and implementing state policy in the TMT sector. It also, inter alia, participates in the legislative process (namely, by submitting bills to the government) and adopts secondary legislation in the area.

Furthermore, three state agencies that fall under the auspices of Mincomsvyaz:

a the Federal Service for Control over Communications, IT and Mass Media (Roscomnadzor) is the main licensing authority in the telecommunication sector and is in charge of mass media registrations. It also monitors the compliance of telecom operators with the established regulatory requirements;

b the Federal Print and Mass Media Agency; and

c the Federal Communications Agency, which is in charge of certification in the telecom area.

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1 Maxim Boulba is a partner and Elena Andrianova is a senior associate at CMS.
From a legal perspective, the TMT sector in Russia is strongly regulated. The main regulatory acts in the field of telecommunications are the following (this list is not exhaustive):

a Federal Law No. 126-FZ ‘On communication’, dated 7 July 2003 (Communication Law), is the key legislation in the telecommunication sector. The Communication Law provides for quite detailed regulation in the areas of communication networks and interconnection between them, licensing of telecommunication activities, allocation of frequencies, etc.

b Federal Law No. 128-FZ ‘On licensing of particular types of activities’, dated 8 August 2001, provides a general legal framework for the licensing of various types of business activities in Russia, including the provision of telecommunication, TV and radio broadcasting services;

c Federal Law No. 184-FZ ‘On technical regulation’, dated 27 December 2002, provides a general legal framework for the standardisation and certification of various equipment, including telecommunication equipment, being subject to specific regulation provided by secondary legislation;

d Federal Law No. 144-FZ ‘Law On Investigative and Search Activities’, dated 12 August 1995, is the main legal act that governs the obligations imposed on network operators in the area of monitoring and interception of communications;

e Federal Law No. 149-FZ ‘On Information, Information Technologies and Data Protection’ dated 27 July 2006 (Information Law);

f Federal Law No. 152-FZ ‘On Personal Data’ dated 27 July 2006; and

g other resolutions and orders of the government, acts of Mincomsvyaz, etc.

The media sector, being traditionally subject to a separate area of regulation under Russia’s laws, is governed by the following main legal acts:

a Law of the Russian Federation No. 2124-1 ‘On Mass Media’, dated 27 December 1991 (Mass Media Law), is the core legislation in the media sector. The Mass Media Law, \textit{inter alia}, governs in detail the activities of mass media companies and organisations, mass media registration procedures, broadcasting licensing issues and limitations on foreign participation in mass media companies (for more detail, see Section II.iii);

b Federal Law No. 436-FZ ‘On Protection of Children from Information that May Be Harmful to Their Health and Development’, dated 29 December 2010, introduces additional requirements and restrictions on mass media aimed at protecting children from any kind of destructive and inappropriate information; and

c Federal Law No. 57-FZ dated 29 April 2008 ‘On the Procedure for Making Foreign Investments in Companies which are of Strategic Importance for Ensuring the Country’s Defence and State security’ (Strategic Law). It is important to note that in terms of the Strategic Law, certain types of TV and radio broadcasting activities are viewed as strategic and, therefore, certain transactions involving the shares and assets of the companies involved in such types of activities are subject to control by state authorities and additional clearance requirements (for more detail, see Section II.iv).

\textbf{ii Regulated activities}

As regards the telecommunication sector, further to the Communication Law, a licence is a necessary prerequisite for providing telecommunication services in Russia.
More specifically, Regulation of the Russian Government No. 87 dated 18 February 2005 sets out an exhaustive list of communication service licences that must be obtained by communication service providers wishing to conduct business in Russia. This list includes the following 20 types of communication services:

- a) local phone services;
- b) intercity and international phone services;
- c) phone services in a dedicated network;
- d) intrazone phone services;
- e) local phone services via payphone units;
- f) local phone services via public access points;
- g) telegraph services;
- h) personal radio call services;
- i) mobile radio communication services in a public communication network;
- j) mobile radio communication services in a dedicated communication network;
- k) mobile radiotelephone service;
- l) mobile satellite services;
- m) provision of communication channels;
- n) data transfer (excluding voice data);
- o) transfer of voice data;
- p) telematics services (including internet services);
- q) cable broadcasting services;
- r) on-air broadcasting services;
- s) wired broadcasting services; and
- t) postal services.

In accordance with the current legislation, the licensing authority for the above-mentioned communication licences is Roscomnadzor.

A communication service licence may be granted on the basis of an application or as a result of auction or tender proceedings. An auction or tender is held where the provision of a given communication service involves the use of RFs and the competent state authority establishes that the required RF allows for only a limited number of network operators to be active within the relevant territory; or the public communication network on the territory has limited resources and the Ministry of Communication and Mass Media of the Russian Federation (Mincomsvyaz) establishes that the number of network operators active within this territory should be limited.

Furthermore, additional authorisations are applicable to undertakings active in the media sector:

- a) media broadcasting programmes and channels are subject to registration as mass media carried out by Roscomnadzor;
- b) a broadcasting licence is required to distribute (broadcast) mass media products in Russia. Such licence may be held either by the holder of the mass media registration itself, or by the licensed operator acting on the basis of the broadcasting agreement with the holder of the mass media registration provided that the mass media product is broadcast by the operator without any changes to the broadcast content.
There are two main types of broadcasting licences provided by the Mass Media Law:

\( a \) a universal broadcasting licence (introduced in 2011) that may be obtained by broadcasters registered as an editor of a TV channel or a radio channel. Licence holders are entitled to conduct different types of broadcasting in various environments (satellite, cable, on-air, etc.) over the whole territory of the Russian Federation; and

\( b \) a licence that allows holders to broadcast in a particular broadcasting environment only.

Normally, broadcasting licences are issued for a term of 10 years (unless an applicant indicates a shorter term in the application form) with a possibility of renewal.

Should the provision of the services or broadcasting of mass media products also imply the use of the RF spectrum, it is also necessary to obtain specific approval on the allocation of a frequency band (for more detail, see Section IV).

iii Ownership and market access restrictions

Communication licences are only granted to Russian entities, and a foreign company cannot itself apply for a licence. The main restrictions and limitations in the TMT area in Russia relate to foreign participation and investments, namely:

\( a \) in accordance with the Mass Media Law, foreign investors cannot hold more than 20 per cent in a mass media company (i.e., a company holding a mass media registration, or a broadcasting company);

\( b \) restrictions on foreign participation also exist in the area of audience measurement for the TV sector. Thus, in terms of the Mass Media Law, foreign participation in the company in charge of audience research and surveys (to be appointed by the state authorities) is also limited to 20 per cent; and

\( c \) additional limitations on foreign participation exist in the area of online audiovisual services (online cinemas). Thus, audiovisual services can be owned by Russian legal entities or Russian citizens (who do not hold citizenship of other countries) only. Foreign investors are normally allowed to own such Russian legal entities, being the owners of audiovisual services. However, the ownership limitations are imposed on specific foreign operators, namely those foreign operators who own an informational resource whose number of users in Russia is less than 50 per cent of its total audience (number of users). Such foreign operators are entitled to own, manage or control, directly or indirectly, a share exceeding 20 per cent in the Russian owner of an audiovisual service, provided that such ownership has been cleared by the relevant government commission.

iv Transfers of control and assignments

As regards the transfer of licences, it is noteworthy that the Communication Law explicitly prohibits any full or partial transfer of a communication service licence to another legal entity or individual.

M&A transactions involving media and telecommunication companies are subject to general merger control requirements and thresholds set forth by the Russian antimonopoly (competition) legislation (namely, Federal Law No. 135-FZ ‘On Protection of Competition’,

\[ \text{For more details see Section V, ii, ‘Internet-delivered video content’}. \]
dated 26 July 2006). If the respective transaction is subject to merger control in Russia, an application must be filed by the acquirer to the Federal Antimonopoly Service (FAS). It normally takes from one to three months to receive a FAS clearance decision.

In addition, under the Strategic Law, certain TV and radio broadcasting companies are viewed as strategic. Therefore, transactions aimed at the acquisition by foreign investors (including Russian companies controlled by foreign investors) of control over such broadcasting companies or more than 25 per cent of their assets are subject to the prior approval of a governmental commission chaired by the Prime Minister (Commission).

The procedure for the review of applications under the Strategic Law is rather cumbersome and time-consuming, as the Commission only holds sessions two to three times per year. Furthermore, in terms of the Strategic Law, foreign investors are required to inform the Russian authorities on any acquisition of 5 per cent or more in strategic companies.

As regards the telecommunications sector, the Strategic Law applies to the operators (holders of communication licences) that are dominant in certain Russian telecommunication markets (for instance, the all-Russian communication market, the fixed phone services market covering more than five Russian regions or all Russian federal cities).

### III Telecommunications and Internet Access

#### i Internet and Internet Protocol Regulation

From the regulatory perspective, there is no specific regulation for internet services as such under Russia’s laws.

Communication services provided over the internet are normally subject to telecommunications licences, such as a telematics services licence or a data transfer services licence (excluding or including transfer of voice data), for the provision of communication channels.

The government adopts further rules regarding the provision of specific services so that each licence holder must provide its services under the licence according to such rules. For instance, the government has adopted specific rules for data transfer services (contained in Regulation No. 32 dated 23 January 2006) and telematics services (contained in Regulation No. 575 dated 10 September 2007). However, these rules do not provide for very detailed regulation of internet services that would significantly distance them from the existing regulations for other types of communication services.

#### ii Universal Service

The principle of universal access to communication services was incorporated in the Russian legislation (and, namely, in the Communication Law) in 2003. Encouraging universal access to communication services is one of the paramount priorities of the government’s policy in the TMT area, and is mainly aimed at ensuring access to communication services in rural areas and hard-to-reach regions of Russia (which are quite numerous due to the vastness of the Russian territory).

Currently, in terms of the Communication Law, universal service includes the following types of telecommunication services: telephone services accessible via public payphones (coin stations), interactive kiosks, data transfer services and access to the internet via public access points.

Initially, the concept of universal service covered telephone services (via public payphones) only and was focused on residential areas with more than 500,000 inhabitants.
However, following the 2014 reform, internet access services are now also included in the universal service, with the aim being to ensure internet access (at 10Mbit/s speed) in all residential areas with more than 250,000 inhabitants. One of the biggest Russian telecoms operators, JSC ‘Rostelecom’, is in charge of this project, which is currently ongoing and involves the construction of more than 200,000km of fibre-optic lines. It is expected that the project should be completed by the end of 2018.

### iii Restrictions on the provision of service

Under the general rule set forth by the Communication Law, operators are free to determine the prices for their telecommunication services. That said, prices for certain types of telecommunication services are subject to state regulation, such as:

a. under Federal Law No. 147 ‘On natural monopolies’, dated 17 August 1995, as well as Government Order No. 637 ‘On rate regulations in public telecommunication and mail services’, dated 24 October 2005, the rates for public telecommunication and mail services are subject to state regulation;

b. universal communication services are subject to state regulation on the basis of Government Order No. 242, dated 21 April 2005; and

c. following Article 20 of the Communication Law as well as Government Order No. 627, dated 19 October 2005, prices for accession services and traffic transit services rendered by operators occupying an important position in the public communication network are also subject to state regulation.

As regards customer terms and conditions, it is noteworthy that general terms and conditions for certain types of services are set forth by the government and should be complied with by service providers. For instance, the following governmental acts provide for such general terms and conditions: Government Resolution No. 575, dated 10 September 2007, sets forth general terms and conditions for providing telematics services, including mandatory provisions to be incorporated into the customer agreements; and Government Resolution No. 32, dated 23 January 2006, relates, *inter alia*, to data transfer services.

Restrictions on the content accessed by customers (network users) are mainly based on security considerations (see below).

Furthermore, the Information Law contains a complex procedure as to blacklisting of websites containing information the dissemination of which is prohibited under Russian law. Roscomnadzor is in charge of holding a specific Unified Register of Domain Names, Universal Page Selectors and Internet Addresses whose dissemination is prohibited in Russia (Register).

The Information Law also imposes additional regulatory obligations on operators providing internet access to their customers. Thus, telecommunications operators (providing internet services to their customers) should have access to and regularly upload information from the Register, and restrict access to blacklisted websites within 24 hours starting from the moment when such website is included in the Register.

Furthermore, since 1 November 2018 the Information Law specifically prohibits the use of technologies that allow access to blocked websites (for instance, VPN services, anonymous search engines, etc.).
iv Security

Overall, the right to privacy of correspondence, and telephone and other messages and communications, is based on Article 23(2) of the Russian Constitution, further to which the limitation of this right is admissible only based on a court decision, or if expressly provided for in federal laws.

To this end, the principles regarding data privacy restrictions are stipulated in the Communication Law, Federal Law No. 144-FZ ‘On Investigative and Search Activities’, the Code of Criminal Procedure, other statutes containing the necessary prerequisites, and numerous government and administrative regulations that deal with the technical aspects of lawful interception monitoring (LIM).

In terms of these regulations, network operators must cooperate with the law enforcement agencies and ensure their access to data transferred via the network. It is important to note that the current LIM regulations, known as the system of investigative and search operations (SORM), allow the Russian law enforcement agencies access to almost all types of information transmitted via a communication network. Thus, SORM covers wire-tapping on telephone lines, including mobile communications, internet traffic, as well as the collection, long-term storage, analysis and processing of customers’ and statistical data. From a technical perspective, the LIM standards imply a passive role on the part of operators, who are not supposed to know which customers are being controlled at any given time.

In addition, the Information Law provides for specific rules and restrictions aimed at minimising anonymity on the internet.

Thus, in terms of the Information Law, Roskomnadzor enjoys considerable powers in the area of bloggers’ activities: it monitors bloggers’ activities on the internet, runs a register of bloggers and requests data enabling their identification from hosting providers.

The Information Law introduced a broad definition of organisers of dissemination of information over the internet (organisers) that covers all persons responsible for the functioning of information systems and software designed and used for the receipt, transmission, delivery and processing of electronic messages via the internet. Persons falling under the category of organisers are required to comply with significant regulatory obligations. The main obligation imposed on organisers is the requirement to store users’ data (as regards receipt, transmission, delivery and processing of voice data, texts, pictures, sound information or other electronic messages, as well as information on the users) in Russia within one year as from the termination of such actions, and provide such data to the law enforcement and public security bodies, if necessary. Furthermore, from 1 July 2018, organisers have to store the actual content of text messages, voice data, pictures, videos, sound information and other electronic messages within six months as from the processing of that data. Since 1 January 2018, operators of online messaging services are required to identify the users of the messaging services, store this information in the territory of Russia and provide it to investigative authorities on request. Furthermore, in terms of the Yarovaya Law (Federal Law No. 374-FZ dated 6 July 2016, being a set of amendments to the anti-terrorist law and legislation governing the telecommunications industry, including the Communication Law and the Information Law), telecom operators are required to:

a) store in Russia for a period of three years information on the fact of the receipt, transmission, delivery or processing of voice data, text messages, pictures, sounds, video or other communications of customers (i.e., metadata);

b) store in Russia for a period of six months the actual contents of communications (voice data, text messages, pictures, sounds, video or other communications); and
provide at the request of the law enforcement agencies the above information on users and the services rendered to them, as well as any other information necessary for these authorities to achieve their statutory goals. When using message encryption and encoding, owners of internet resources will be required to provide the Federal Security Service with the keys for decoding them.

Furthermore, telecommunication services providers can also be required to cease the provision of services to a user (further to a request of the law enforcement authorities) if the user’s identity cannot be confirmed (i.e., the information regarding the user that appears in the agreement with the operator is different from the data of the actual users).

It is also important to note that in terms of Federal Law No. 152-FZ ‘On Personal Data’, dated 27 July 2006, when collecting personal data (including via the internet), an operator of personal data will be required to ensure that the recording, systematisation, accumulation, storage, clarification (updating, modification) and retrieval of Russian citizens’ personal data is conducted in databases located within Russia.

There is also specific regulation aimed at the protection of children from destructive and inappropriate information provided by Federal Law No. 436-FZ ‘On Protection of Children from Information that may be Harmful to Their Health and Development’, dated 29 December 2010. This Law introduces additional requirements and restrictions on mass media (for instance, to classify mass media products and to place specific marks on them carrying information on any potential child-restricted content) and applies to any telecommunication network.

Finally, as a result of possible computer attacks, a special law was recently adopted that deals with specific measures and requirements to be implemented and adopted to ensure the safety of the critical information infrastructure (Federal Law 187-FZ ‘On the Safety of Critical Information Infrastructure’, dated 26 July 2017. Although the practical application of this new Law is still not fully clear, the general idea behind it is that all critical infrastructural objects will be categorised depending on their economic, political and social importance (that is, there will be three categories of importance). Depending on the relevant category of importance, specific rules and requirements will apply with respect to security measures to be implemented.

### IV SPECTRUM POLICY

#### i Development

The allocation of frequency bands and frequencies in Russia is based on the following principles:

- **the use of specific frequency spectrum is granted by licence;**
- **there is a gradual move towards bringing Russian regulations on frequency allocation into line with international regulations on frequency allocation;**
- **the state shall have priority in terms of frequency allocation;**
- **the use of the frequency spectrum shall be provided on a commercial basis (i.e., for a fee);** and
- **frequency bands, frequencies and RF channels may only be allocated for a fixed period of time.**
The Communication Law establishes that electromagnetic spectrum shall be allocated by the State Commission for Radio Frequencies (Frequency Commission), subject to the approval of the government.

The frequency allocation table adopted by the government further specifies which frequencies are intended for fixed satellite services, broadcasting satellite services and mobile satellite services; and which frequencies shall be used for government purposes or civil purposes, or which are intended for shared use.

RF bands are assigned for 10 years or for a shorter term. At the request of the user of the RF spectrum, this term may be extended or reduced.

As a general rule, the following permissions must be obtained to use frequency bands in Russia: an individual decision of the Frequency Commission regarding the allocation of a frequency band; a telecommunication service licence (or licences, as the case may be); and a permit from Roscomnadzor to use specific frequencies within the allocated frequency band.

The regulatory landscape in this area has not changed much during the past few years. However, there have been some simplifications made in respect to the allocation of certain frequency bands (see below).

ii Flexible spectrum use

Although Russian laws and regulations in this area are rather strict and do not provide for much flexibility, the frequency allocation procedure has been simplified in certain ways.

For instance, very small aperture terminal stations operating in the Ka-band and Ku-band do not require individual decisions of the Frequency Commission provided that certain technical requirements and limitations are met (under Decree of the Frequency Commission No. 10-06-01-3, dated 19 February 2010, and Decree No. 10-06-01-2, dated 19 February 2014).

However, despite the above, this area is quite heavily regulated and does not provide much room for manoeuvre.

iii Broadband and next-generation mobile spectrum use

General rules apply to the allocation of spectrum for next-generation mobile services, and all necessary authorisations for such services are normally granted via tenders.

For instance, while deploying 4G infrastructure in Russia, several major mobile communication network operators and state-owned telecommunication companies have expressed strong interest in building their own 4G networks, which resulted in a strong conflict of interests in the Russian telecom market that involved communication authorities at all levels, the FAS and top state officials.

As a result, four Russian telecommunication operators have been granted authorisations for 4G services in Russia, and are in charge of the construction and development of the required infrastructure.

5G services in Russia are at the very early stages of development. Thus, Mincomsvyaz as well as major Russian communication operators are initiating research from the perspective of the development of the 5G infrastructure. The business community does not expect that the 5G infrastructure will be in place before 2020.

iv Spectrum auctions and fees

Tenders are held when the required RF allows for only a limited number of network operators to be active within the relevant territory.
The Russian legislative acts on communication also establish that users of frequency spectrum shall pay both a one-off fee and an annual fee for the use of frequencies. The level of the fees and the payment procedures are established by the government.

V MEDIA

i Restrictions on the provision of service

Content restrictions imposed on the mass media are mainly driven by moral and security reasons. For instance, the following content is prohibited:

a the calling for and promotion of violence, terrorism, any extremist activities and any type of criminal offences;

b influencing the unconscious mind;

c disclosing information and secrets protected by law; and

d the promotion of narcotics, psychiatric substances, drug precursors, etc.

ii Internet-delivered video content

The Information Law regulates the activities of the owners of online audiovisual services (online video services, online cinemas).

The Information Law, as amended in July 2017, defines the owner of audiovisual services as the owner of a website, website pages, an information system or computer programmes that are used to create or organise the distribution of audiovisual works on the internet, subject to the following criteria being met: access to such audiovisual works is provided for a fee or on the condition that the viewers also watch advertisements, or both; and the audience over 24 hours exceeds 100,000 users that are located in Russia. Certain exemptions are listed by the Law. For instance, online mass media that are registered as such in Russia, search engines and information resources where users primarily publish or post their own works and materials by themselves (social networks) are excluded from the scope of the new regulations.

In a nutshell, the owners of audiovisual services are subject to a number of obligations and requirements, namely:

a not to allow the dissemination of certain information such as extremist materials;

b to install specific software that determines the number of users;

c to make publicly available a valid email address to receive legally significant messages, as well as details of the owner of online audiovisual services; and

d to provide for age-based classifications of content.

Roscomnadzor maintains a specific register of audiovisual services, and may request from the potential owners of unregistered audiovisual services all information that is required to add the service to the register.

There is also a number of ownership requirements and limitations as to foreign participation in the owners of online audiovisual services (see Section II.iii).

VI THE YEAR IN REVIEW

The main trend and key legislation and policy developments in the TMT sector in Russia relate to further limitations of online privacy in Russia and the amplification of state control in the sector, namely new requirements as regards online messaging services and further control over blocked websites.
VII CONCLUSIONS AND OUTLOOK

The development of the TMT sector in Russia is to a very large extent driven by the political context, and is mostly aimed at strengthening state control over the communication sector and limiting privacy.
I  OVERVIEW

The government continues to recognise and places much emphasis on the importance of TMT in society. For the fiscal year ending March 2019, the government is projected to launch tenders in the information and communications sectors worth approximately S$2.6 billion, a slight increase from the S$2.4 billion set aside in FY2017. Of the S$2.6 billion earmarked for the 2018 fiscal year, more than S$1 billion has been allocated to supporting Singapore’s digital transformation efforts. One major digital transformation project is the National Digital Identity (NDI) system, which is one of Singapore’s five strategic projects to drive the pervasive adoption of technology in society and the economy through back-end whole-of-nation enabling systems. Citizens and businesses will be issued digital credentials to transact with the government more seamlessly and securely without the need for physical tokens or SMS passwords. Another project is Singapore Tourism Board’s Singapore Visitor Centre system, which aims to help officers make more tailored recommendations to tourists. The government also plans to issue bulk tenders for companies to provide software tools and consultancy services in the area of robotic process automation to support the growth of current government services, and for Agile project development and management methodology and ICT technical specialist services to support the co-sourcing of projects in the emerging tech areas of application development, data science, ICT infrastructure, geospatial technology, cybersecurity, sensors and the IoT.

This sustained ICT expenditure will be used to speed up Singapore’s digital transformation and continue its push to become a smart nation under the Smart Nation initiative that was introduced by Prime Minister Lee Hsien Loong in November 2014. The initiative aims to transform the daily life of Singaporeans by more fully integrating life with technology and making technology more accessible to the masses. The government has indicated that it will adopt a whole-of-government, whole-of-nation approach to this, and has set up a dedicated Smart Nation Programme Office under the Prime Minister’s Office to promote the greater integration of technology. The futuristic vision of the initiative is seen in the intention to develop, inter alia, technologies such as driverless cars, integrated 3D mapping and data analytics.

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Smart Nation infrastructure, such as the Smart Nation Platform (SNP), which aims to facilitate the sharing of resources and data among government agencies to contribute to more efficient urban and operational planning as well as improve the running of city services, is already being developed.\(^5\)

The Smart Nation initiative is the newest iteration of the government’s plans to develop ICT usage and integration in Singapore, following the successful conclusion of the 10-year An Intelligent Nation 2015, A Global City, Powered by Infocomm plan (IN2015 Masterplan), which was introduced in 2005. On 11 August 2015, the Infocomm Media Masterplan Steering Committee released the Infocomm Media 2025 report (Infocomm Media 2025), which maps out a holistic plan for developing Singapore’s infocomm media sector over the next 10 years. Infocomm Media 2025 enables and complements the Singapore Smart Nation vision and provides broad directions under three strategic thrusts to further strengthen the infocomm media landscape of Singapore. More recently on 5 June 2018, the government also released its Digital Government Blueprint for building a digital government that ‘uses data, connectivity and computing decisively to re-engineer business processes, re-architect technology infrastructure and transform services for citizens, businesses and public officers’. The Digital Government Blueprint sets the 2023 goal of getting all Singapore citizens and businesses to cross the digital divide and be able to access all government services at any time, anywhere on an internet enabled device.\(^5\) This follows the Digital Readiness Blueprint released on 2 June 2018, which sets out the government’s strategy for equipping Singapore citizens for digital access, literacy and participation, so that every citizen, young or old, will be able to be a part of the Singapore Smart Nation vision. Some recommendations in the Digital Readiness Blueprint include making access to basic digital enablers (i.e., a network-connected mobile device, internet access, a bank account with card facilities and a national digital identity) as widespread as possible, building up a basic digital skills curriculum for Singapore’s youth, further enhancing the public–private sector collaboration for increased digital participation and inclusion in the community, and promoting digital inclusion by design in Singapore’s digital ecosystem so that the impediments preventing people from using digital products and services are overcome.\(^7\)

Singapore’s success in developing its ICT industry is apparent. As of 2016, total ICT industry revenue reached S$175.8 billion.\(^8\) The number of ICT professionals has also increased year on year, with over 42,000 new ICT professionals projected to be required by the sector from 2018 to 2020, bringing the total number of ICT professionals expected to be employed by 2019 up to 273,800.\(^9\) The ICT sector is believed to contribute to approximately 8 per cent of Singapore’s gross domestic product.\(^10\) Singapore was placed first in the World


\(^10\) [https://www.todayonline.com/singapore/42000-ict-professionals-needed-over-next-3-years-yaacob](https://www.todayonline.com/singapore/42000-ict-professionals-needed-over-next-3-years-yaacob).
Economic Forum’s Global Information Technology Report 2016, which ranks countries in terms of their ability to leverage ICT as an enabler of sustainable, long-term economic growth.

As of March 2018, the number of fixed-line subscribers remained steady at approximately 1,991,700, representing a 35.5 per cent penetration. Further, as of May 2018, the amount of mobile subscribers was approximately 8.34 million (down from 8.46 million the previous year), the slight dip potentially reflecting the cessation of 2G network mobile subscriptions in 2017. Notwithstanding the slight dip, mobile population penetration as of May 2018 sits at 148.6 per cent, and there remain 5,700 dial-up internet subscribers (0.1 per cent penetration) in Singapore. Broadband internet subscriber figures decreased slightly, with approximately 12.3 million subscribers (94.7 per cent penetration by household for wired broadband and 193.5 per cent penetration for wireless broadband). By comparison, the figures on 1 April 2000 (at the start of liberalisation) were 1.876 million fixed-line subscribers, 1.63 million mobile subscribers and 1.711 million dial-up internet subscribers (no broadband services were available at that time).

II REGULATION

i The regulators

In the late 1980s, the government announced plans toprivatise the telecommunication and postal services then being provided by the Telecommunication Authority of Singapore. Singapore Telecommunications Pte Ltd and Singapore Post Pte Ltd were subsequently incorporated in Singapore on 28 March 1992, and acquired all the necessary properties, assets and liabilities held by the Telecommunication Authority of Singapore in connection with the provision of such services.

The Singapore Broadcasting Authority was set up as a statutory board under the former Ministry of Information and the Arts – currently Ministry of Communications and Information (MCI) – in 1994. Formed in response to the privatisation of Singapore’s broadcasting industry, the Singapore Broadcasting Authority played a central role in the regulation and promotion of the broadcasting industry in Singapore. The Singapore Broadcasting Authority worked closely with the Economic Development Board, the National Computer Board and the Telecommunication Authority of Singapore to develop Singapore as a regional broadcasting hub. To provide a single agency for integrated planning, policy formulation, regulation and industry development of the IT and telecommunications sectors, a new Info-communications Development Authority of Singapore (IDA) was formed as a result of the merger between the Telecommunication Authority of Singapore and the National Computer Board in 1999. The Media Development Authority (MDA) was formed on 1 January 2003 by the merger of the Singapore Broadcasting Authority, the Films and Publications Department and the Singapore Film Commission to champion the development of a vibrant media sector in Singapore. The MDA regulates content delivery across various platforms, including television, radio, videos, internet and publications.


The MCI was previously known as the Ministry of Information, Communications and the Arts, but was renamed with effect from November 2012 with the formation of a new Ministry of Culture, Community and Youth.
As part of the Infocomm Media 2025 plan, the government announced on 18 January 2016 that the IDA, MDA and Personal Data Protection Commission (PDPC) would be restructured by the end of 2016 into two new statutory boards, the Infocomm Media Development Authority of Singapore (IMDA) and GovTech. In anticipation of the formal establishment of the two new agencies, the IDA and MDA were administratively reorganised from 1 April 2016.

On 16 August 2016, the Parliament passed the Government Technology Agency Bill (GovTech Bill) and Info-communications Media Development Authority Bill (IMDA Bill). The GovTech Bill legislates the creation of GovTech, while the IMDA Bill establishes the IMDA and officially merges certain functions of the IDA with the MDA.

The new IMDA develops and regulates the converging infocomm and media sectors in a holistic way, and implements the Infocomm Media 2025 plan for Singapore. The new IMDA also deepens regulatory capabilities for a converged infocomm media sector, safeguarding the interests of consumers and fostering pro-enterprise regulations. The IMDA takes over the regulatory framework previously overseen by the IDA and MDA, such as the Telecommunications Act (Telecoms Act), the Postal Service Act, the Broadcasting Act and the Films Act. The PDPC will form part of the IMDA, and will continue to oversee personal data protection regulation in Singapore.

GovTech was established at the end of 2016 to lead digital technological transformation in the public sector. From 1 May 2017, GovTech has reported to the new Smart Nation and Digital Government Group under the auspices of the Prime Minister’s Office. GovTech has been tasked with building a more intuitive and anticipatory government through digital service delivery with technologies and ensure that people are always at the heart of digital service transformation for the public sector. As the nexus of technology and engineering capability within the government, GovTech is well-placed to help government agencies capitalise on the speed of innovation and new technology trends such as robotics, artificial intelligence, IoT and big data. The new organisation plays a vital role in supporting Singapore’s Smart Nation vision, especially in delivering the SNP and Smart Nation applications. GovTech also focuses on developing new technology capabilities as well as attracting and nurturing ICT engineering talent that will provide a strong foundation for Singapore’s Smart Nation ambitions.

Regulated activities

The Telecoms Act gives the IMDA monopoly powers to operate and provide telecommunications systems and services. The IMDA’s key functions include:

a. exercising licensing and regulatory functions in respect of telecommunication systems and services in Singapore;

b. the allocation and use of satellite orbits and RF spectrum;

c. exercising regulatory functions in respect of determinations;

d. approval of prices, tariffs and charges; and

e. the provision of telecommunication and other related services.
The IMDA is empowered to grant, modify or suspend the licences of telecommunication operators, and to sanction offences under the Telecoms Act. There is a general prohibition on the running of telecommunication services in Singapore unless they have been licensed by the IMDA under Section 5 of the Telecoms Act.

The IMDA uses a two-tiered framework for the licensing of telecommunication operators. An operator who intends to deploy or operate any form of telecommunication network, systems or facilities for the purpose of providing telecommunication or broadcasting services outside its own property boundaries to third parties (who may include other licensed telecommunication operators, business consumers or the general public) is required to possess an FBO licence. On the other hand, an operator who intends to lease telecommunication network elements (such as transmission capacity and switching services) from any FBO licensee so as to provide its own telecommunication services, or to resell or promote the telecommunication services of FBO licensees to third parties, is required to apply for a SBO licence. An SBO licence is also required to deploy telecommunication networks, systems and facilities within the operator’s own property boundaries in order to offer telecommunications services to third parties resident within their property boundaries.

The IMDA may also formulate and develop infocomm-related policies, as well as standards, codes of practices and advisory guidelines – all of which it can enforce – pertaining to issues such as licensing, interconnection, resource, assignment of spectrum rights and competition management. Mergers and acquisitions of telecommunication licensees are regulated under the Code of Practice for Competition in the Provision of Telecommunication Services 2012 (Telecoms Competition Code), which is enforced by the IMDA. Under this Code, all licensees are also required to interconnect with each other, whether directly or indirectly, to ensure seamless any-to-any communications throughout Singapore. The IMDA may grant exemptions from specific provisions of the Code where good cause is shown. Recently, the Telecoms Competition Code has also been amended for the purposes of alignment with the Singapore Personal Data Protection Act 2012 (PDPA), the key data protection provisions of which came into effect on 2 July 2014.

The IMDA is also empowered to grant licences in respect of broadcasting services and broadcasting apparatuses. No person is allowed to provide any of the licensable broadcasting services set out in the Second Schedule of the Broadcasting Act without a valid broadcasting licence issued by the IMDA. These services include free-to-air television or radio services (localised, nationwide or international), subscription television or radio services (localised, nationwide or international), special-interest television or radio services, audiotext, videotext or teletext services, VOD services, broadcast data services and online computer services. Some of the licensable broadcasting services (including audiotext, videotext and teletext services, broadcast data services and online computer services) are class-licensed by the IMDA under the Broadcasting (Class Licence) Notification (Notification).

The Code of Practice for Market Conduct in the Provision of Mass Media Services (MMCC) was issued by the then MDA in 2003 to promote fair market conduct and effective competition in the broadcasting and print sectors. The MMCC was significantly revised in 2010 to, *inter alia*, impose obligations around the cross-carriage of exclusive content in the pay-TV market, and further revisions were made to enhance consumer protection in the pay-TV sector in early 2016.

Unfair methods of competition and anticompetitive practices are expressly dealt with in the MMCC. These regulations also ensure that media players do not unfairly leverage their own or their affiliates’ significant market power in a media or non-media market.
Mergers of any dominant media player with another media player (whether dominant or not) would require the IMDA's approval for consolidation. As such, this will assist in addressing potential anticompetitive issues arising from convergence and merging of portfolios of various players in the market.

In the event a particular media resource is declared to be an essential resource by the IMDA (i.e., the resource must be used by another media licensee, but such resource cannot be created within the foreseeable future or cannot be obtained from a third party at a cost to allow it to compete efficiently), access to such essential resource must be provided on reasonable and non-discriminatory prices, terms and conditions.

iii Ownership and market access restrictions
Full market competition in the telecommunications sector was introduced in April 2000. Direct and indirect foreign equity limits for all public telecommunications services licences were removed, and licensees were free to decide on the types of networks, systems, facilities and preferred technology platform to offer their services. The limits on the number or type of licences were also removed, except when there are physical or resource constraints.

In general, there are no foreign ownership restrictions on FBO or SBO licensees. However, an FBO licensee will be required to be a company incorporated under the Singapore Companies Act. An SBO (individual) licensee may be a company incorporated or a foreign company registered under the Companies Act, while an SBO (class) licensee may (in addition) be a limited liability partnership or limited partnership.

The Broadcasting Act regulates the ownership of broadcasting companies in Singapore. A broadcasting company is a company (or a holding company) incorporated or registered under the Companies Act that holds a free-to-air licence; any broadcasting licence under which a subscription broadcasting service may be provided (in each case where such licence permits broadcast that is capable of being received in 50,000 dwelling houses or more, but does not include a class licence); or any other broadcasting licence as the Minister of Communications and Information may from time to time specify in the public interest, or in the interest of public security or order or national defence.

There are also controls on the shareholding and voting power of broadcasting companies. For example, substantial shareholdings (i.e., an aggregate of more than 5 per cent of the nominal amount of all voting shares) in a broadcasting company and other forms of controlling shareholdings are subject to the Minister's approval. Broadcasting companies in Singapore must also ensure that at least half of their directors are citizens of Singapore, unless the IMDA approves otherwise. The IMDA also has the right to approve the chief executive officer of a broadcasting company, as well as its directors and chair.

Further, there are media cross-ownership restrictions that provide that no regulated person shall be merged or consolidated with, or taken over by, any other regulated person, or any other person (not being a regulated person) carrying on business in any media industry, without the prior written approval of the IMDA.

iv Transfers of control and assignments
Generally, licences cannot be transferred from a licensee to a third party. For telecommunication licensees, the IMDA's approval is required for any consolidation involving an FBO or SBO licensee that the IMDA has declared to be a designated telecommunication licensee pursuant to Section 32A(2) of the Telecommunications Act that would result in an entity holding an ownership interest in the licensee of 12 per cent or more. For acquisitions of between 5 and 12 per
for the IMDA is required to be notified, unless such acquisitions occur by virtue of certain prescribed transactions set out in the Telecommunications (Prescribed Transactions) Order 2012.

A consolidation application needs to be filed either separately or jointly by both parties, together with a competitive impact and public interest statement. The short-form consolidation application procedure, with an abbreviated statement, may be used if the consolidation is a horizontal consolidation that will not result in the post-consolidation entity having more than a 15 per cent share in the telecommunication market in Singapore; or if the consolidation is a non-horizontal consolidation in which none of the applicants has more than a 25 per cent share of any telecommunications market, whether in Singapore or elsewhere, in which it participates.

The IMDA will not approve a consolidation application where it determines that the consolidation is likely to substantially lessen competition in any telecommunications market in Singapore or harm the public interest. The IMDA may approve the consolidation application with or without conditions.

The IMDA will ordinarily complete its consolidation review within 30 days of the start of the consolidation review period. In any case in which the IMDA determines that a consolidation application raises novel or complex issues, it may extend the review period by up to 90 days, to a maximum of 120 days. Where appropriate, the IMDA will provide the public with an opportunity to comment on a request or a consolidation application.

For media licensees, the IMDA’s prior written approval is required for any consolidation between regulated entities, including broadcasting licensees.

For the purposes of the MMCC, a consolidation means a merger, acquisition, takeover or other similar transaction that results in two entities that were previously independent economic entities becoming – as a practical matter – a single economic entity, including by way of an asset purchase or the setting up of a new joint-venture vehicle into which significant assets of the entities will be transferred. Part 8 of the MMCC requires all regulated persons seeking to enter into a consolidation with another regulated person or any other person (not being a regulated person) that provides mass media services or ancillary media services to submit a consolidation application within 30 days of the day on which they entered into a consolidation agreement.

Both entities must jointly submit a consolidation application with a statement that provides a clear, accurate and comprehensive description of the proposed consolidation, a good-faith assessment of the likely impact of the proposed consolidation on competition in any mass media services market and a discussion of why approval of the proposed consolidation would serve the public interest.

As the IMDA may make statements available to the public, applicants should put proprietary or commercially sensitive information in a separate appendix and request its confidential treatment. The consolidation agreement (and any public statement regarding the proposed consolidation) must include language expressly stating that the consolidation will not be consummated unless and until such time as the IMDA grants written approval. The IMDA will ordinarily complete its review of the consolidation application within 30 days of the start of the consolidation review period (i.e., when the applicants submit a consolidation application that contains all materials required pursuant to Part 8 of the MMCC), but this can be extended up to a maximum of 120 days where novel or complex issues are raised, and 180 days in extraordinary cases.
There is a short-form application procedure for cases in which a proposed consolidation is unlikely to raise significant competitive issues. The IMDA will generally grant approval for any application that is eligible for this procedure without significant review based on the applicant’s abbreviated description, competitive impact and public interest statement. The two cases when this procedure can be used are when the proposed consolidation is unlikely to result in the post-consolidation entity having a market share of 40 per cent or more of any media market in Singapore; or a market share of between 20 and 40 per cent of any media market in Singapore, and the post-consolidation combined market share of the largest three regulated persons or ancillary media service providers, or a combination thereof, is 70 per cent or more of any media market in Singapore.

The IMDA can impose structural and behavioural conditions as part of its approval.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation
The IMDA regulates the carriage of internet and IP-based services and the content delivered on these various platforms. For example, if one were to deploy a telecommunication network or system to provide internet or IP-based services, one would have to apply to the IMDA for an FBO licence. For provision of internet or IP-based services over leased telecommunication network elements, an SBO licence will be required.

Provision of IP telephony services in particular requires an SBO (individual) licence. Licensees must likewise adhere to the National Numbering Plan provided by the IMDA, which sets out rules and guidelines for the use and assignment of numbers to telephone services delivered over the PSTN radio network (collectively, the paging network, cellular mobile network and trunked radio network) and the internet or other IP-based network. In general, numbers beginning with ‘3’ are reserved for use in the IP telephony service, while numbers beginning with ‘6’ are reserved for use in PSTN and IP telephony services.

ii Universal service
Since 2000, the government has rolled out the Singapore ONE project to provide nationwide broadband access over ADSL and cable to households in Singapore. With full market liberalisation over recent years, the broadband household penetration rate has risen steadily from 7 per cent in December 2000 to a residential wired broadband household penetration rate of 94.7 per cent (residential wired broadband penetration rate only) in May 2018.14

In the area of wireless broadband access, the government appointed three operators to launch a nationwide wireless broadband programme called Wireless@SG in December 2006. This service aims to extend free wireless broadband access to the public in high human-traffic areas, and is available at about 7,500 hotspots around the island. Access speeds were doubled to 1Mb/s from 512kb/s from 1 September 2009 to allow users to enjoy better access to media-rich and interactive websites and bandwidth-intensive services. The most recent phase of this free Wi-Fi service (from 1 April 2013 to 31 March 2019) is offered by the three

mobile operators, Y5Zone Singapore Pte Ltd and MyRepublic.\textsuperscript{15} Interoperable SIM-based authentication for automatic log-in to the network has been implemented from 1 April 2014 to supplement the web-based and seamless secure access login methods. On 29 April 2017, it was announced that Wireless@SG would allow automatic login to non-SIM devices, which will eliminate the need to log in using usernames and passwords.\textsuperscript{16} Further, having identified Wireless@SG as a key enabler of Singapore’s Smart Nation initiative, the government has announced that the IMDA is on track to double its network of hotspots to 20,000 by 2018, reaching more locations such as public hospitals, hawker centres and government service centres.\textsuperscript{17} This is an increase from the 10,000 hotspots running at 5Mbps in 2017.

The government has also invested about S$1 billion to fund the deployment of the Next Gen National Broadband Network (NBN), a nationwide FTTH network. The Next Gen NBN is designed to be an open access network, and comprises three key industry layers. The network company (NetCo) designs, builds and operates the passive infrastructure layer, while the operating company (OpCo) designs, builds and operates the active network components to provide wholesale bandwidth connectivity to retail service providers. The NetCo must be structurally separated from the other industry layers, while operational separation is imposed on the OpCo.

It is envisioned that the Next Gen NBN will provide nationwide ultra-high-speed broadband access of 1Gb/s and beyond to all physical addresses, including homes, schools, government buildings, businesses and hospitals. The deployment of the Next Gen NBN commenced in 2009, and commercial services on the new fibre-optic network have been launched by all major telecommunication service providers. With the levelling of the playing field, a number of smaller ISPs, including MyRepublic, ViewQwest, OSINet and LGA Telecom, has joined the three existing operators in offering new high-speed packages to commercial and residential broadband subscribers. The coverage of the Next Gen NBN has reached over 95 per cent, with more than 560,000 subscribers signed up to services from approximately 15 retail service providers.

\section*{iii Restrictions on the provision of service}

Dominant licensees are subject to tariff-filing requirements in respect of certain services, such as standardised services designed for residential customers, standardised services designed for business customers, services designed for specific customers, promotional services, and certain resale and wholesale services. The IMDA will determine whether a proposed tariff is just and reasonable. Non-dominant licensees are not subject to the tariff-filing requirements. Dominant licensees are also required to provide services on non-discriminatory terms.

There is a duty imposed on FBO and SBO licensees that use switching or routing equipment to provide services to the public to interconnect with other licensees. There is also a duty on public telecommunication licensees to provide a basic telephone service to any person in Singapore who requests the provision of such service. Otherwise, licensees have the

latitude to choose the customers and the content they carry. There are no specific network
neutrality obligations currently imposed on licensees, albeit ISPs must meet the minimum
broadband quality-of-service standards to ensure a reasonable broadband internet experience
for end users. ISPs are allowed to implement reasonable network management practices and
offer niche or differentiated internet service offerings provided that they satisfy the IMDA’s
requirements on information transparency and fair competition, and do not amount to
blocking of legitimate internet content.

Network operators must take reasonable measures to prevent the unauthorised use
of end user service information (EUSI). Network operators may intercept messages for the
purpose of providing assistance to law enforcement, judicial or other government agencies.

iv Security

Regulatory and legislative policies governing the internet and IP sector as well as national
security issues have evolved in tandem to adapt to the changes on each side.

Unauthorized access to, or modification of, computer material would constitute
oxences under the Computer Misuse and Cybersecurity Act (CMCA). Unauthorized use or
interception of computer services would also constitute offenses, and enhanced punishment
is provided for offenses involving protected computers (e.g., computers used in connection
with national security or defense, law enforcement, public key infrastructure, and essential
emergency and public safety services). The CMCA was amended in January 2013 and
further amended in April 2017 to provide the government with greater powers to implement
countermeasures against cyberattacks on critical infrastructure. In particular, where the
relevant minister is satisfied that it is necessary for the purposes of preventing, detecting or
countering any threat to the national security, essential services, defense or foreign relations
of Singapore, that minister may authorise or direct any person or organisation to take
such measures or comply with such requirements as may be necessary to prevent, detect or
counter any threat to a computer or computer service, or any class of computers or computer
services. The definition of essential services was also widened to include services relating to
land transport infrastructure, aviation, shipping and health services. The amended CMCA
now criminalises the dealing in personal data obtained via a cybercrime without a legitimate
purpose (e.g., journalistic reporting) as well as dealing in hacking tools with the intention of
committing or facilitating the commission of a computer offence.

Apart from the offenses provided for under the CMCA, the government has launched
the National Cyber Security Masterplan 2018 (NCSM2018) to enhance Singapore’s
resilience against cyberthreats. The NCSM2018 aims to reinforce Singapore’s cybersecurity
by intensifying efforts in the government and critical infocomm infrastructure as well as the
wider infocomm ecosystem, which includes businesses and individuals. Complementary to
the NCSM2018 is the National Trust Framework, which was conceptualised as part of the
iN2015 Masterplan to provide a national framework that provides greater assurance and trust.
One of the key initiatives is establishing a national authentication framework, which will
enhance the security of online transactions through the deployment of a nationwide-strong
authentication platform.

A National Cyberthreat Monitoring Centre has also been established to provide the
government with the capability for early detection of potentially devastating cyberattacks
and the ability to respond to cybersecurity incidents in real time. Further, a major initiative
launched in April 2015 was the new Cyber Security Agency (Agency), Singapore’s apex
cybersecurity watchdog created to develop national cybersecurity strategy and policy, and
to coordinate cyber-related operations between the multiple government agencies and departments. The need for the Agency has only grown as the number of cybersecurity incidents in Singapore continue to increase, with notable cyberattacks such as the hacking of the Prime Minister’s Office website in 2013, and the illegal accessing of over 1,000 SingPass accounts, which store crucial citizen information and provide access to important government websites, in 2014, breaches of the IT systems of the National University of Singapore, Nanyang Technological University and Singapore Armed Forces over separate incidents in 2017, and, most recently, the theft of the personal data of 1.5 million patients of SingHealth (Singapore’s largest group of healthcare institutions), including that of the Prime Minister, on July 2018. Concurrently with the aim of increasing the strength of Singapore’s cybersecurity, the Economic Development Board and the Defence Science and Technology Agency have also stepped up efforts to recruit talent for the cybersecurity industry, with the latter conducting outreach to young Singaporeans through its Cyber Defenders Discovery Camp. The Agency carried out its first cybersecurity tabletop exercise for the banking and finance sectors, test-driving responses to hypothetical cyber incidents, in May 2015.

The Singapore Common Criteria Evaluation and Certification Scheme (SCCS), which was established in May 2005 as part of the iN2015 Masterplan, also aims to enhance cybersecurity. The SCCS allows infocomm companies to evaluate and certify their security products against the common criteria (CC) standard (ISO/IEC 15408) in Singapore. The framework of the CC is based on the Common Criteria Arrangement on the Recognition of Common Criteria Certificates in the field of Information Technology Security, a set of publicly available standards that define the criteria for evaluating IT security properties.

Material that has a subversive tendency or compromises national interests, public order or security may be prohibited under the Internal Security Act. This includes material that:

- contains any incitement to violence;
- counsels disobedience regarding the law or any lawful order;
- is calculated or likely to lead to a breach of the peace, or to promote feelings of hostility between different races or classes of the population; or
- is prejudicial to the national interest, public order or security of Singapore.

The transmission of false threats of terrorist acts (e.g., bomb hoaxes) is also penalised under Regulation 8(1) of the United Nations (Anti-Terrorism Measures) Regulations, read with Section 5(1) of the United Nations Act. In some cases, such offences are prosecuted under Section 45 of the Telecoms Act, which contains a general prohibition against the transmission of a false or fabricated message through the telecommunications system.

The Sedition Act has also been used against persons who post racist or other incendiary remarks on the internet. The Sedition Act makes it an offence for a person to:

- commit or attempt to commit any act that has or that would have a seditious tendency;
- utter any seditious words;
- print, publish, sell, offer for sale, distribute or reproduce any seditious publications; or
- import any seditious publications.

Material that may potentially fall foul of the Sedition Act includes material that excites disaffection against the government or the administration of justice in Singapore, or excites hatred or contempt against it, and material that promotes feelings of ill will and hostility between different races or classes of the population of Singapore.
Under the Internet Code of Practice (Internet Code), prohibited material is not allowed to be provided on the internet by any licensee under a class licence. The term prohibited material includes material that is objectionable on public interest, public morality, public order, public security and national harmony grounds. Similarly, the various television content codes provide that content provided on television should not undermine public security interests or public confidence in the law and its enforcement in Singapore.

The IMDA has worked with three ISPs in Singapore to provide family access networks (FANs) or filtering services that parents can subscribe to for their children. FANs assist parents who may be unfamiliar with standalone filtering software by filtering out pornographic and other undesirable sites. Parents can contact their respective ISPs to subscribe to the filtering services or can otherwise opt to purchase other internet-filtering software from the market.

The IMDA has also mandated that ISPs in Singapore are required to promote the use of internet filters, including filters for mobile devices, at the point of sale and upon renewal of the subscription agreement. It is hoped that this move will raise the awareness of parents and encourage the use of such filters to protect the young from inappropriate content. The first internet filtering service for mobile devices such as smartphones and tablets has been introduced by one of the major telecommunications service providers in Singapore.

Data protection and privacy

On 15 October 2012, the Parliament passed the PDPA, which establishes a baseline data protection framework that applies to all organisations in the private sector. *Inter alia*, it establishes notification and consent requirements for the use, collection and disclosure of personal data, establishes restrictions on the transfer of personal data abroad and places protection obligations on the private sector. The PDPA also establishes a do-not-call registry, which aims to provide individuals with a simple and efficient way to opt out of receiving unsolicited marketing messages.

On 2 July 2014, the Personal Data Protection Regulations (PDPR) came into force. The PDPR expand on, *inter alia*, the PDPA’s Access and Correction Obligation and Transfer Obligation. In particular, the PDPR require organisations to respond to each access request as accurately and completely as necessary, and as reasonably possible, within 30 days of such request being made. However, if an organisation is unable to comply with this requirement, it must (within the 30-day period) inform the applicant in writing of the date by which it will respond to the request.

Further, the PDPR require an organisation transferring personal data outside Singapore to take appropriate steps to ascertain whether, and to ensure that, the recipient of the personal data in that country or territory outside Singapore is bound by legally enforceable obligations to provide for the transferred personal data a standard of protection that is at least comparable with the protection under the PDPA.

Under the Telecoms Competition Code, there is a prohibition on all FBO and SBO licensees from unauthorised use of any EUSI. EUSI consists of all information that the licensee obtains as a result of an end user’s use of its telecommunication services, and includes the end user’s usage patterns, services used, telephone number and network configuration, location information as well as the billing name, address and credit history. Thus, unless the end user has provided prior consent, a licensee must not use EUSI for any purpose other than that as provided for in the Telecoms Competition Code.
**Spam control**

The Spam Control Act (SCA) seeks to regulate the sending of spam (i.e., unsolicited commercial communications sent in bulk) by prescribing requirements that must be met before such communications may be sent. Such requirements include the provision of an unsubscribe facility and compliance with labelling and other requirements. The SCA applies to emails and mobile messages (i.e., text or multimedia messages sent via a mobile telephone) originating from or sent to a device located in Singapore, or where the sender or receiver of the message is an individual or entity either physically present, or carrying on business or other activities, in Singapore. Sending of spam to electronic addresses obtained by way of a dictionary attack or address-harvesting software is prohibited under the SCA.

**IV SPECTRUM POLICY**

**i Development**

The IMDA is the regulatory body responsible for the utilisation of RF spectrum. It constantly monitors trends in and developments of new wireless technology, and reviews the frequency allocations whenever there is a demand for spectrum. In the past, spectrum was administratively allocated; however, the IMDA has recognised that in a liberalised environment, administrative allocation may not be the most objective, efficient or transparent means of ensuring that spectrum is effectively used. As such, the IMDA has moved towards a market-based approach by adopting an auction process where competing services in common bands cannot effectively share the same spectrum. For example, the IMDA has adopted the auction process for allocating spectrum for 3G services, 4G and wireless broadband access.

**ii Flexible spectrum use**

The spectrum of RFs in the VHF and UHF bands currently allocated for use, on a primary basis, for the provision of terrestrial broadcast services in Singapore are not all in use at any given time. Within this spectrum, there are interleaved and contiguous spectrum blocks that are not used to provide broadcast services. Such unused spectrum (white spaces) are situated below 1GHz, and radio signals within such spectrum have propagation characteristics that allow the signals to travel long distances and penetrate buildings easily. As such, the IMDA has invited interested parties to conduct trials to explore the various spectrum environments and regimes that white space technology can operate in, yet at the same time ensuring continued protection of licensed services in Singapore from possible interference during the trial period. One of the key objectives of the cognitive radio venues (CRAVE) trials is to examine how best to make use of the white space spectrum for the benefit of consumers and businesses. In April 2012, several organisations (I2R, StarHub and Microsoft) confirmed that they would lead the formation of a Singapore White Spaces Pilot Group to leverage on the CRAVE trials to establish Singapore as an innovation zone for white space technology. The pilot group intends to undertake commercial pilot deployments to explore how white space technology could supplement the existing wireless infrastructures and develop innovative consumer and business applications.

On 16 June 2014, the then-IDA issued its decision on the regulatory framework for the use of TV white space (TVWS) technology in Singapore after holding a public consultation. The then-IDA decision set out, *inter alia*, the inclusion of 700MHz band for TVWS
deployment in the future, the adoption of the geolocation database approach as the mandated method for white space devices to access TVWS spectrum space and the implementation of unique white space devices identifiers.

In mid-2014, the then-IDA concluded a public consultation that sought to canvass industry views on the allocation of long-term rights in the 3.5GHz band, and planned services and target market segments for use of these bands. However, no further information from the IMDA has been forthcoming about the results of this consultation exercise.

iii Broadband and next-generation mobile spectrum use

To address the growing need for spectrum for broadband services and next-generation mobile services, apart from the white space trials, the IMDA is also reviewing current spectrum allocations to ensure the most efficient use. For example, it has identified certain spectrums for the future expansion of 3G services. In relation to the evolution of 4G spectrum bands, the IMDA is also aware of the necessity to ensure that there is adequate lead time for existing services to migrate to alternative modes of reception where necessary. In relation to wireless broadband services, the IMDA is looking into opening more spectrum for wireless broadband services, and has identified a certain bandwidth for mobile or wireless services.

One step that the IMDA has taken to expand 3G and 4G services is the closure of the 2G mobile network in April 2017, with the spectrum previously assigned to the 2G network being reallocated to provide faster and more advanced 3G and 4G services. These 2G users have had to upgrade to the 3G or 4G networks. The IMDA stopped accepting registrations of 2G-only mobile equipment in September 2015, and consumers have been advised not to purchase such equipment.

The government indicated in July 2010 that it would go ahead with a proposed auction of a fourth lot of spectrum in the 3G band (i.e., the 1,900/2,100MHz frequency band). This fourth lot of spectrum was left unallocated during the last round of auctions in 2001, when three lots of 3G spectrum were allocated to the three mobile operators in Singapore.

Pursuant to a public consultation process leading to this decision, respondents submitted feedback indicating that they generally agreed with the allocation of the remaining spectrum. However, three out of the four respondents (namely the existing mobile operators in Singapore) objected to the market allocation (i.e., allocation by way of auction) of the spectrum lots. The mobile operators instead suggested that the then-IDA allocate the spectrum administratively to them equally as a more cost-effective approach. Nonetheless, the then-IDA took the view that the auction mechanism ensured that scarce spectrum resources would be allocated in the most efficient and transparent manner.

However, only three applications were received from the existing mobile operators during the auction process. As such, the then-IDA allocated each of the available 3G spectrum lots to the respective bidders for the reserve price of S$20 million.

Where 4G spectrum is concerned, the then-IDA issued a public consultation paper in April 2012 on the proposed framework for the reallocation of spectrum for 4G telecommunication systems and services. Following the public consultation, the then-IDA announced on 16 January 2013 that it was putting up a total of 270MHz of 4G spectrum for auction, comprising 150MHz of spectrum in the 1,800MHz band and 120MHz of spectrum in the 2.5GHz band. The three mobile operators submitted initial offers for the spectrum, but the total amount of spectrum that they bid for did not exceed the amount available in each of the spectrum bands mentioned above.
As such, on 28 June 2013, the then-IDA provisionally awarded the 4G spectrum rights to the three mobile operators. M1 obtained 80MHz of spectrum, SingTel obtained 100MHz of spectrum and StarHub obtained 90MHz of spectrum. The placement of the spectrum lots acquired by the mobile operators will be determined in the next stage of the process (the assignment stage). These spectrum rights commenced on 1 July 2015 for spectrum in the 2.5GHz band and on 1 April 2017 for spectrum in the 1,800MHz band, upon the expiration of the existing spectrum rights. The mobile operators may continue to provide mobile services (including 4G services) over their existing spectrum rights until then.

The mobile operators were required to provide nationwide 4G street level coverage by 30 June 2016, and coverage for Mass Rapid Transit underground stations and lines and road tunnels by 30 June 2018.

An additional total of 235MHz of spectrum was made available for auction for mobile services in the second half of 2016.

iv Spectrum auctions and fees

The IMDA typically uses two schemes to charge users for access to the radio spectrum: market-based charging (auctions) or cost-based charging. Auctions are used to set a market-based charge for use in frequency bands in scarce supply. In frequency bands that are congested or potentially congested, the IMDA will set fees according to the opportunity cost of the spectrum. Cost-based charges are set to recover costs incurred in administering the use of the spectrum, such as frequency coordination, radio monitoring, interference investigations and frequency database management. In any event, the IMDA has moved away from administrative allocation, where feasible, to a market-based allocation approach using auctions, especially when assigning highly contested spectrum, so as to allow market forces to set the price.

The IMDA has also decided to use a new auction format after holding a public consultation on the reallocation of 4G spectrum. In the consultation paper, the IMDA proposed the use of a clock plus auction format, which is a variant of the simultaneous multiple round action and combinatorial clock auction formats commonly used in 4G auctions in other jurisdictions. Under the clock plus auction format that the IMDA has decided to use for the main auction, bidders will specify demand for quantities of lots within specified lot categories, subject to the relevant spectrum caps. In each round, there is a single common price for all lots within a category, and this price ticks up over successive rounds until there is no longer any excess demand.

v TPG Telecom wins IMDA’s spectrum auction to become Singapore’s fourth mobile telecom company\(^\text{18}\)

In an effort to encourage a fourth mobile telecom company to enter the Singapore market, the IMDA held a highly anticipated new entrant spectrum auction (NESA) in the fourth quarter of 2016. The NESA was first open only to interested pre-qualified parties that did not operate a nationwide mobile network in Singapore, and offered a lower starting bid price of S$35 million for the 60MHz of spectrum up for auction. A general spectrum auction for additional spectrum followed thereafter at a higher reserve price, and was open to the

three incumbent mobile telecoms companies as well as any aspiring new entrants. Although previous attempts to lure a fourth mobile operator into the market have been unsuccessful, on 14 December 2016, the IMDA announced that TPG Telecom made a winning bid of S$105 million in the NESA. The spectrum rights commenced in April 2017, and TPG is required to utilise the allocated spectrum to provide nationwide street level coverage for 4G within 18 months from the start of the new spectrum rights, with road tunnels and in-building service coverage within 30 months. The entry of a new MNO is expected to enhance innovation and competition in the mobile market.

V MEDIA

i Restrictions on the provision of service

Broadcasters licensed by the IMDA are required to comply with various codes issued by the IMDA under the Broadcasting Act, including the Free-to-air Television Programme Code, Subscription Television Programme Code, Free-to-air Radio Programme Code (collectively, Programme Codes), Television Advertising Code, Radio Advertising Code (collectively, Advertising Codes) and Television Programme Sponsorship Code (Sponsorship Code).

The Programme Codes seek to impose guidelines that are congruent with national interests in upholding racial and religious harmony, observing societal and moral standards, and promoting positive family values. However, it is recognised in the Programme Codes that standards may vary according to the time of the telecast and the target audience (the watershed time for television is 10pm), as well as the accessibility or otherwise of the programme (e.g., premium channels for subscription television). The Programme Codes also require broadcasters to maintain high standards of language and speech in the four official languages of Singapore, and to refrain from using localised English or other dialects.

The Advertising Codes seek to ensure that the interests of viewers and listeners as consumers are protected. Therefore, the Advertising Codes prescribe that advertisements on television and radio must be truthful and lawful, and should not contain any claims that may be misleading. All claims and comparisons must be capable of substantiation, and should not in any way deceive or mislead. Advertisements should respect public tastes and interests, and uphold moral and social mores. In addition, the Advertising Codes stipulate that broadcasters should exercise discretion when scheduling advertisements and trailers to ensure that they are appropriate for the target audience.

The Sponsorship Code is concerned with aspects of television programme services that entail advertiser involvement in programming and promotional (rather than advertising) time. Besides exercising social responsibility, broadcasters are required to maintain editorial integrity and programming independence, and should not be influenced by the sponsor regarding either the content or acquisition of a programme.

In addition, the Broadcasting Act provides that the Minister of Communications and Information may, by an order published in the Gazette, declare any foreign broadcasting service rebroadcast in Singapore on any relevant licensable broadcasting service to be a foreign broadcasting service engaging in the domestic politics of Singapore. Currently, the nationwide subscription television services provided by StarHub Cable Vision Ltd and

SingNet Pte Ltd have been designated as relevant licensable broadcasting services. Prior approval for the inclusion of such declared foreign broadcasting service would need to be sought from the Minister, who may make the approval conditional upon restrictions being imposed on the number of persons capable of receiving such declared foreign broadcasting service. The Minister may also impose conditions requiring that the rebroadcast be suspended for such period as the Minister may, from time to time, direct.

ISPs and ICPs licensed under the Notification are required to comply with the conditions of the class licence set out in the Schedule of the Notification. These conditions stipulate, *inter alia*, that the licensee shall:

- ensure that its service is not used for, or in furtherance of, games and lotteries, the conduct of which is an offence under the Common Gaming Houses Act unless the licensee is exempted from the provisions of that Act;
- avoid the broadcast of horse-racing analyses, commentaries or tips, other than horse-racing results, for the purpose of gambling;
- ensure that its service is not used to advertise, provide or otherwise promote astrology, geomancy, palmistry or any other type of fortune-telling device;
- ensure that its service is not used for soliciting or for any other immoral activity;
- ensure that any professional advice or any specialist consultancy service offered on its service is offered by persons with qualifications recognised by the relevant professional bodies in Singapore;
- in the case of the broadcast of sound recordings, ensure that only sound recordings that are acceptable to the censorship section of the MDA are broadcast; and
- in the case of the broadcast of films or video recordings, ensure that only films and video recordings that are approved by the Board of Film Censors are broadcast, unless the film or video recording is one to which the Films Act does not apply or is one that is exempted from the provisions of that Act.

Class licensees are also subject to the Internet Code, which seeks to set out other obligations and duties of licensees. Generally speaking, the Internet Code requires all licensees to ensure that no prohibited materials (i.e., material that is objectionable on the grounds of public interest, public morality, public order, public security or national harmony, or is otherwise prohibited by applicable Singapore laws) is broadcast via the internet to users in Singapore. In considering what material should be prohibited, the factors listed below are relevant:

- whether the material depicts nudity or genitalia in a manner calculated to titillate;
- whether the material promotes sexual violence or sexual activity involving coercion or non-consent of any kind;
- whether the material depicts a person or persons clearly engaged in explicit sexual activity;
- whether the material depicts a person who is, or appears to be, under 16 years of age engaged in sexual activity, in a sexually provocative manner or in any other offensive manner;
- whether the material advocates homosexuality or lesbianism, or depicts or promotes incest, paedophilia, bestiality and necrophilia;
- whether the material depicts detailed or relished acts of extreme violence or cruelty;
- whether the material glorifies, incites or endorses ethnic, racial or religious hatred, strife or intolerance; and
- whether the material has intrinsic medical, scientific, artistic or educational value.
The IMDA has the power to order the removal of objectionable content under the Notification, and if a licensee breaches such order, the IMDA has the discretion to cancel or suspend the class licence in respect of such licensee for such period as it thinks fit, or to require the payment of a fine of such amount as it thinks fit. However, the IMDA generally applies a light-touch approach towards regulating services on the internet, and a licensee found to be in breach of the foregoing regulations will generally be given a chance to rectify the same.

The IMDA implemented a new licensing regime for certain online news websites that have been subject to an individual licensing regime from 1 June 2013 in order to place them on more consistent regulatory footing with traditional news platforms. This new licensing requirement applies to websites that regularly report on issues relating to Singapore (on average at least one article per week on Singapore news and current affairs over a period of two months) and have significant reach (at least 50,000 unique IP addresses from Singapore per month over a period of two months). Since the implementation of the new licensing regime, the IMDA has assessed that 11 local news websites fall under the new licensing regime, including nine from the main newspaper publishers and broadcasters in Singapore (Singapore Press Holdings and MediaCorp), and one operated by Yahoo! News. The latest addition to the list is the current affairs site Mothership.sg.

Instead of being automatically class-licensed under the Notification (as is currently the case), the news websites subject to the new licensing regime will need to be individually licensed, and have to put up a performance bond of S$50,000 with the IMDA. While it is expected that the prevailing content regulation requirements will not change, the new licence will also provide greater clarity on what the IMDA would consider prohibited content, and impose a requirement for licensees to comply with the IMDA's direction to remove infringing content within 24 hours.

The new licensing framework invited a considerable amount of criticism from political and social activists, as well as ordinary members of the public. The IMDA is currently discussing details of the licensing regime with the three affected companies. It remains to be seen whether the IMDA would be forced to address such criticisms in the implementation of the regime.

**ii Internet-delivered video content**

Given the widespread availability of broadband access in Singapore, internet-delivered or OTT video content has gained much popularity as compared with broadcast video distribution. The increasing number of consumers accessing internet video content, along with other new media-rich content and applications, has led to an increased demand for bandwidth in Singapore.

There is a general consensus among network operators in Singapore that the demand for bandwidth, including over mobile broadband, will continue to grow steadily. Network operators are still grappling with business models that would allow them to monetise such transmission or otherwise allow them to recoup the investment sunk into infrastructure upgrading to meet such increased bandwidth demand.

**iii Mobile services**

The growing demand for mobile media services and media-rich services has fuelled the need for mobile broadband access in Singapore. An advanced communications infrastructure (Heterogeneous Network) is recognised as a key pillar of one of the strategic thrusts set out in
Infocomm Media 2025, building upon one of the key objectives of the iN2015, which was to increase the availability of wired and wireless broadband infrastructure in Singapore (see the Wireless@SG and Next Gen NBN initiatives discussed above).

Despite the higher costs per minute of mobile calls to fixed-line calls, mobile phone subscriptions have been increasing at a steady rate and have far surpassed the number of fixed-line subscriptions. The decrease in fixed-line penetration rates since July 2002 suggests that households may have replaced their fixed lines with their mobile phone lines.

The IMDA continues to recognise that certain spectrums may require review to address the growing need for spectrum for broadband services and next-generation mobile services.

VI  THE YEAR IN REVIEW

i  Public Sector (Governance) Act regulates the sharing of personal data of Singaporeans by government agencies and public sector officers

With effect from 1 April 2018, the Public Sector (Governance) Act (PSGA) on 8 January 2018 introduced a consistent governance framework across government agencies, including formalising the data-sharing arrangements between public sector agencies (which are excluded from the ambit of the PDPA). The PSGA provides more safeguards to protect the usage of citizens’ personal data by government agencies. Under the PSGA, public sector officers who share the personal data of Singaporeans, make use of such data to benefit themselves or re-identify anonymised data without authorisation can be fined up to S$5,000 or imprisoned for up to two years, or both. The PSGA recognises the importance of intergovernmental sharing of raw data to improve policy analysis, planning and formulation, and lists seven specific purposes for which data can be shared between public sector agencies, such as to improve the efficiency of policy planning. Centralised agencies will also be set up to ensure that raw data will be properly anonymised before being released to appropriate government agencies for analysis and policy work.20

ii  PDPC releases guidelines to clarify the usage of passenger-facing video cameras by cab and private-hire car drivers

On 9 April 2018, the PDPC released advisory guidelines developed in consultation with the Land Transport Authority of Singapore (LTA) regulating the use of in-vehicle recording devices (IVRD). The safeguards imposed by LTA in conjunction with the PDPC include requiring that:

a  adequate security measures be implemented to protect passenger’s personal data;

b  a prominent notice about the use of IVRDs be displayed to passengers;

c  drivers be prohibited from uploading any IVRD recordings on social media; and

d  allowing passengers to request to have access to the IVRD recordings.21

iii Proposed New Healthcare Services Act

The Ministry of Health, having sought public feedback on the draft Healthcare Services Bill earlier in 2018, will be repealing the former Private Hospitals and Medical Clinics Act and replacing it with a new Act later this year. This legislation is directed at enhancing oversight and creating better safeguards for patients in light of the emergence of new care models and healthcare services, such as telemedicine. One proposed key aspect of the new Act is that it will be mandatory for all healthcare institutes, including laboratories, to input patient data in the National Electronic Health Record (NEHR), which is a record of patient data shared across all healthcare providers to enable better continuity of patient care. Safeguards will be put in place to ensure the confidentiality of the NEHR and to ensure that the privacy rights of patients are not eroded, and patients can opt out of using healthcare providers having access to their information on the NEHR.\(^{22}\)

However, in light of the recent 2018 cyberattack on SingHealth, the plan for mandatory contributions to the NEHR has been temporarily suspended.\(^{23}\)

iv Cyberattack on SingHealth

In July 2018, the personal particulars of 1.5 million patients were stolen by sophisticated hackers in a directed and coordinated attack on the Prime Minister. These hackers had infiltrated the computers of SingHealth, Singapore’s largest group of healthcare institutions. Preliminary investigations showed that one SingHealth front-end workstation was infected with malware through which the hackers gained access to the database. Of the 1.5 million patients that were affected, 160,000 people, including Prime Minister Lee Hsien Loong, had their outpatient prescriptions stolen.

In response, SingHealth has imposed a temporary internet surfing separation on all of its staff’s work computers, and mandatory contributions to the NEHR has been put on hold.\(^{24}\) The PDPC continues to investigate what has been Singapore’s worst cyberattack to date, and a government Committee of Inquiry has been convened to conduct an independent external review of the incident to make recommendations for better safeguards for critical systems.\(^{25}\)

v Singapore and France reaffirm commitment to collaborate in innovation at the France–Singapore Year of Innovation 2018

Singapore and France have deepened their collaboration in innovation in areas such as FinTech and smart cities at the France–Singapore Year of Innovation 2018. French Minister for Higher Education, Research and Innovation Frederique Vidal signed four agreements during her visit in Singapore, which were to renew joint laboratories and allow collaboration in autonomous vehicle safety research and research on smart cities.\(^{26}\)


vi  **Alibaba sets up artificial intelligence research centre in Singapore**

On 28 February 2018, Chinese e-commerce giant Alibaba opened an artificial intelligence (AI) research institute in Singapore in collaboration with Nanyang Technological University (NTU), a local university. This will be Alibaba’s first joint research centre located outside of mainland China. The institute will carry out research on AI technology for an initial five years with a pool of 50 researchers from both organisations, and aims to develop technologies to help in caring for the elderly, such as developing robot companions and sensors to detect problems.²⁷

vii  **PDPC contemplates mandating that organisations must report any breaches of personal data**

As part of the revisions to the Personal Data Protection Act, tougher breach reporting rules have been proposed to be imposed on organisations. The proposed revisions to the PDPA will require individuals affected by a breach to be notified as soon as practicable, and the PDPC to be notified no later than 72 hours after an eligible breach is identified. The PDPC, in recognising that organisations may need time to determine the veracity of suspected breaches, will give organisations up to 30 days to assess if breaches are eligible for reporting, and the 72-hours notification period will kick in after that. These changes follow the steps of mature jurisdictions such as the United States, Canada and Australia.²⁸

viii  **MCI introduces new framework for nationwide e-invoice system**

In hopes of boosting productivity and sectoral digitalisation in Singapore, a new framework for a nationwide e-invoice system was introduced in May 2018. Singapore will be adopting the Pan-European Public Procurement On-Line system, a widely used European standard, and will be the first country outside of Europe to do so. The System is interoperable and allows any company on the network to talk to others without any compatibility issues. The IMDA will be in charge of overseeing the adoption of the System, and already some 45 organisations, including private sector entities, technology solution providers and government agencies, have expressed interest in joining the System.²⁹

ix  **Sophisticated cyberattack by Iranian hackers on Singaporean universities**

Fifty-two staff accounts across four Singaporean universities (NTU, the National University of Singapore, the Singapore Management University, and the Singapore University of Technology and Design) were attacked by an Iranian hacking syndicate in March 2018. The Iranian hackers are believed to have stolen more than 31 terabytes of academic data and intellectual property from varsities all over the world at the behest of the Iranian government. Investigations showed that the incident stemmed from a phishing attack where staff members were directed to a credential harvesting website to key in their login details, which were used to gain unauthorised access to the institutes’ libraries.³⁰

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x Singapore to set up first cybersecurity start-up hub

Singapore is setting up its first cybersecurity start-up incubation hub with funding to be provided for new inventions, in light of the nation moving to find a place in the new digital economy. This hub will be located in a cluster of industrial buildings on Ayer Rajah Crescent, and has been dubbed the Innovation Cybersecurity Ecosystem @Block71. This hub aims to nurture and groom aspiring entrepreneurs to ensure that their business ideas are sound and that they have the financial and business expertise to grow their business. The hub is also targeted at helping to build robust national cybersecurity to meet national security needs and stay ahead in the arms race against cyberattackers. In a separate funding scheme to spur developments, funding of up to S$500,000 will be provided to qualifying projects by Singapore-registered companies to develop home-grown companies that could own a slice of the cybersecurity market, which it is estimated will attract spending of S$138 billion by 2020.31

xi New Cybersecurity Act

The Cybersecurity Bill was passed by Parliament on 5 February 2018, after being revised to take into account feedback gathered at the public consultation by the Ministry of Communications and Cyber Security Agency of Singapore. This Act aims to create a coordinated national approach to cybersecurity and ensure that critical information infrastructure (CII) across all sectors is protected in a consistent manner. Apart from the regulation and protection of CII, a singular licensing scheme for cybersecurity service providers has been created to replace the numerous old licensing schemes.

A key feature of the new Act is the concentration of powers in the hands of the Cybersecurity Commissioner, who will be responsible for safeguarding Singapore’s cyberspace. While some misgivings have been expressed over the broad investigative powers conferred on the Commissioner, others have argued that this power structure is necessary to create a robust command-and-control structure to effectively and speedily respond to a cyberattack.32

xii Bug bounty programme conducted by MINDEF to strengthen its internet-facing system

The Ministry of Defence (MINDEF) successfully concluded its first bug bounty programme on 4 February 2018, where selected white hat hackers were invited to test eight major MINDEF internet-facing systems for vulnerabilities and received rewards for doing so. This programme was targeted to strengthen MINDEF’s cyber defences and respond to the rapidly evolving cyber threat landscape. Thirty-five valid bugs were found, and all of them have been mitigated, which means that the flaws could no longer be exploited. A reputable US bug bounty company, HackerOne, was engaged to manage the programme.33

xiii Singaporean firms not ready to comply with EU data regulations

Consultancy firm Ernst & Young found in February 2018 poll that only 10 per cent of Singaporean companies have compliance plans to align with Europe’s General Data Protection Regulation.34

Protection Regulation (GDPR), which took effect from 25 May 2018. GDPR requirements are in certain aspects stricter than Singapore’s own PDPA, for example with regards to data subject rights. The GDPR rules will affect many sectors in Singapore, especially those that target European consumers. Under the GDPR, companies can be fined up to 4 per cent of their annual global turnover or S$32 million (whichever is greater), in comparison to the maximum fine of S$1 million under the PDPA. Many Singaporean companies are operating under the fallacy that the GDPR will not affect them if they do not have a physical presence in the EU, which has contributed to the lack of urgency to start on GDPR compliance plans.34

xiv Singapore to introduce goods and services tax on imported services

Singapore will begin to charge goods and services tax (GST) on imported services from 2020 onwards. Dubbed the Netflix tax, foreign suppliers that have a global turnover of more than S$1 million and that sell digital services to Singapore consumers that exceed S$100,000 will be required to register to pay GST in Singapore. Businesses buying imported services are eligible for a GST refund as long as the input is used to make taxable supplies of goods and services. The digital sale threshold on this tax is meant to minimise the compliance burden for small overseas vendors. The Netflix tax is estimated to bring in additional revenue of S$90 million a year. This tax will make Singapore the first country in Southeast Asia to introduce a tax on the digital economy.

VII CONCLUSIONS AND OUTLOOK

As can be seen from the foregoing, Singapore’s key strength lies in its foresight and strategic planning capabilities. Among other factors, the restructured IMDA is expected to strengthen and develop regulatory capabilities for a converged infocomm and media sector in a holistic manner, and further Singapore’s goal of establishing a value-creating economy that is well-positioned to leverage growing opportunities in the convergent telecommunications, media and technology sphere. As a small island nation, Singapore has also effectively leveraged on its size, and has successfully implemented and continued to improve a number of ambitious nationwide projects, such as Wireless@SG and the Next Gen NBN initiatives.

The ubiquity of ultra-high-speed broadband access, coupled with the drive to promote next-generation interactive multimedia applications and services delivered through the IPTV platform, heralds an exciting period of transition into a new generation of services for both businesses and consumers. This can be seen from the steadily increasing take-up rate of total fibre-optic broadband, which as at May 2017 stood at approximately 1.19 million subscribers.

For Singapore to compete effectively at the global level, the government recognises that seamless, trusted and intelligent infocomm infrastructure will be crucial. The government has continued to encourage the development of new green data centre technologies, and has supported the establishment of a data centre park in Singapore so as to attract multinational corporations and other premium data centre operations to Singapore, and to strengthen
its position as an economic hub. The government has also devoted increasing resources, effort and attention to its cybersecurity efforts with the continued development of resilient infrastructure, such as:

\( a \) the launch of the Defence Cyber Organisation and planned launch of the Government Security Operations Centre;

\( b \) the strengthening of the legislative tools it has to combat cyberthreats with the new cybersecurity bill;

\( c \) the development of a vibrant cybersecurity ecosystem through public–private partnerships such as the Alliance of Public–Private Cybercrime Stakeholders, and strong government support for Honeywell’s industrial cybersecurity centre and the National Cybersecurity R&D Laboratories;

\( d \) equipping Singapore citizens for digital access, literacy and participation as part of the Digital Readiness initiative.

Adopting a new mindset that it is not if a significant cyber-threat will occur, but rather when, Singapore had also taken the controversial step to ring-fence or air-gap key government systems from the internet and unauthorised devices. This has proven particularly prescient given the significant increase of cyberattacks (both successful and thwarted) that Singapore has faced over the past few years. This is only likely to worsen as Singapore’s increased reliance on ITC technologies as it achieves its goal of becoming a Smart Nation makes Singapore a more vulnerable and prominent target. Singapore continues to intensify its efforts to defend against and prepare to respond to cyberattacks, and by adopting a risk-based approach to cybersecurity and building in sufficient flexibility and redundancies, it has made itself significantly more prepared for any cyberattack and the new digital landscape than most nations. The Prime Minister’s Office has also set up a Smart Nation Programme Office that aims to bring citizens, the government and industry players together to identify issues, co-develop solutions, prototype ideas and deploy them effectively to transform Singapore into a Smart Nation. This initiative focuses on the development of infocomm-based integrated networks, capabilities and solutions for urban environments with a systems-of-systems approach that enables synergies within the whole government, and integrated insights that will contribute to the optimisation of key national resources across interdependent and inter-related city systems. The Smart Nation vision aims to harness ICT, networks and data to support better living and stronger communities, and to create more opportunities.

Further, Singapore has enacted an overarching data protection law in the form of the PDPA, which should help to strengthen and enhance Singapore’s position as a trusted data hub. We believe that the PDPA strikes the right balance in protecting the interests of consumers against the need for businesses to collect, use and disclose personal data. The PDPC continues to update and release new advisory guidelines to guide and inform organisations and individuals on data privacy, use, collection and disclosure. The PDPC also continues to look at further amending the PDPA to keep it updated and enable Singapore to continue exploiting growing opportunities in the world of big data, and allow businesses to harness value from information, arguably the most precious commodity in this era.
I OVERVIEW

This chapter provides a general overview of the electronic communications, audiovisual and internet access regulations in Spain. Given the complexity and constant evolution of these sectors, this summary is not intended to be comprehensive, but simply to outline the main aspects of the regulations, as well as recent news and trends.

Electronic communications

Following the consolidation process of the electronic communications market in Spain through mergers and acquisitions, which resulted in the convergence of fixed and mobile operators (e.g., Orange and Jazztel, Vodafone and ONO, Yoigo, Pepephone and Másmóvil), and broadband and pay-TV operators (e.g., Telefónica and DTS), the Spanish market has continued a process of deep transformation due to the convergence of technologies, devices and platforms. On top of that, OTT services have significantly increased their market share, as evidenced by the recent replacement of the Directive on Privacy and Electronic Communications by:

a a new European regulation on the protection of natural persons with regard to the processing of personal data that applies, inter alia, to OTT and IoT services addressed to end users in the EU; and

b the European Commission’s Proposal for a Directive to amend the Audiovisual Media Services Directive,\(^2\) which is likely to be passed shortly and which, among other things, establishes specific rules for OTT audiovisual services that, inter alia, create a level playing field with the traditional audiovisual services, as alternative audiovisual platforms are growing fast, replacing traditional means of accessing content (e.g., Netflix, HBO, Amazon, Sky and Huawei’s OTT audiovisual platforms have entered the Spanish market since 2015).

As regards the regulatory framework, although the General Telecommunications Law,\(^3\) which has been the main piece of legislation governing the telecoms sector since 2014, provided for the development of its own ancillary regulations, most of the former Law’s ancillary regulations are still in force. As an exception, in February 2017 the government passed Royal Decree 123/2017, of 24 February, on the regulation of the use of the radio spectrum, which

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1 Pablo González-Espejo is a partner at Uría Menéndez.
3 Law 9/2014.
sets out the general regime for the use of spectrum and repealed the 2008 Royal Decree in this regard. Additionally, Royal Decree 381/2015 on measures against unauthorised traffic and irregular traffic for fraudulent purposes, and Royal Decree 330/2016, which implements Directive 2014/61/EU on measures to reduce the cost of deploying high-speed ECNs, were issued on 2016.

In compliance with its periodic duty to analyse the electronic communications markets, the National Markets and Competition Commission (NMCC) has followed the deregulation tendency of other European countries and begun its fourth review and analysis of the electronic communications markets. In particular, in January 2017 the NMCC issued a resolution on Markets 1/2007 and 2/2007 (Markets 1 and 2), lifting Telefónica's obligations as a holder of significant market power on the retail market for access to fixed telephony as the requirements to be a relevant market subject to ex ante regulation are no longer being met. However, regarding the wholesale market for call origination in the fixed network, the NMCC still considers that the wholesale market is not really competitive and imposes certain obligations on Telefónica (including providing separate accounts, non-discrimination and transparency measures, etc.). In addition, in April 2017 the NMCC issued a resolution to deregulate access to mobile network markets (Market 15), lifting the obligation on the main three network operators (Telefónica, Vodafone and Orange) to provide virtual mobile operators (OMVs) with reasonable access to their mobile infrastructure on the basis that, according to the NMCC, this market is already competitive. In addition, throughout 2017, the NMCC reviewed Telefónica's main reference offers and prices as an operator designated as having significant market power, including disaggregated virtual access to the fibre optic loop, the new broadband ethernet service, the wholesale offer for access to manholes and conduits, and the reference offer for leased lines.

In the context of its duties as referred to above, the NMCC has also issued three recent resolutions regarding the regulation of the telecommunications market:

- Resolution ANME/DTSA/003/17 listing the operators who shall be considered as principal in the fixed and mobile telephone services in the national market;
- Resolution ANME/DTSA/002/17/M2-2014 approving the definition and analysis of the market of termination of vocal calls in individual mobile networks (Market 2/2014); and
- Resolution ANME/DTSA/001/17 approving the definition and analysis of the wholesale leased trunk line market.

Since the publication of the Spanish Digital Agenda in February 2013, the Ministry of Economy and Enterprise (MINEE) has published several reports that keep the original agenda up to date and address final users of telecommunication services. In August 2017, the MINEE opened a public consultation to obtain feedback on the drafting of a Digital Strategy for an Intelligent Spain, the preliminary results of which were released in November 2017.

In compliance with the European mandate regarding the liberalisation of the 800MHz band (the first digital dividend), in March 2015 the MINEE announced the conclusion of the liberalisation process in favour of telecom operators for the provision of LTE and 4G services. Additionally, in May 2017, Decision (EU) 2019/899 on the use of the 470–790MHz band in the EU was enacted, seeking to promote the development of a 5G network and the improvement of mobile connections (the second digital dividend).
ii Audiovisual

In September 2014, a new technical plan for DTTV was passed regulating the new allocation of spectrum to DTTV services and certain aspects of the release of frequencies of the digital dividend to telecom operators. As a result of a public tender called during the first half of 2015, the government allocated six new DTTV channel licences (three SD and three HD) in October 2015 that were launched in April 2016. Those licences were challenged in court, but they were finally confirmed by the Spanish Supreme Court in a decision issued in January 2018.

In November 2015, the NMCC also passed a proposal that recommends introducing certain flexibility to the spectrum cap of high bandwidths if certain conditions are met.

Finally, the imminent formal approval of the proposal of a directive to amend the Audiovisual Media Services Directive (which was already approved by the European Parliament) will surely require the amendment of the current national regulation on audiovisual media services dated 2010.4

iii Internet

Following a ruling of the Grand Chamber of the European Court of Justice (CJEU) dated 12 May 2014 on case C131/12, which involved Google and the Spanish Data Protection Agency (AEPD),5 consultations and proceedings on the right to be forgotten have spread, and the AEPD has published a subsection on this right on its website. Recent case law from the Spanish Supreme Court has interpreted such ruling, providing a new approach as regards the definition of an entity against which the right to be forgotten should be exercised. Furthermore, as a consequence of such ruling, the right to be forgotten has been included in the recently adopted EU Regulation on the protection of natural persons with regards to the processing of personal data6 (GDPR).

Since its creation in December 2013, the Spanish National Institute of Cybersecurity (INCIBE) has been quite active in building digital confidence in the Spanish market, particularly and in cooperation with the AEPD, with regards to the protection of privacy and cybersecurity.

Additionally, Spain has recently transposed the NIS Directive7 into the Spanish legal system through Royal Decree-Law 12/2018, of 7 September.

II REGULATION

i The main sources of regulation

The main sources of regulation applicable to the TMT sector in Spain are:

a the General Telecommunications Law;
b the General Audiovisual Law;
c the e-Commerce Law;

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4 Only its formal approval and publication by the Council is pending.
5 Google Spain, SL and Google Inc v. the Spanish Data Protection Agency and Mario Costeja Gonzalez.
the GDPR, the Data Protection Law and its ancillary Regulation approved by Royal Decree 1720/2007, of 21 December;

the Data Retention Law;

the National Markets and Competition Commission Law; and

Royal Decree-Law 12/2018, of 7 September, transposing the NIS Directive.

There have also been several administrative orders, instructions, recommendations and guidelines issued by the government, the relevant ministries and the NRAs that develop these laws.

ii The NRAs

The NMCC is an independent public body in charge of supervising market competition in Spain, as well as certain relevant markets including the electronic communications and audiovisual markets. Its main functions as regards the electronic communications market are to establish and supervise the fulfilment by operators of their obligations, to promote fair competition and the plurality of the offer of ECSs, and the resolution of disputes between operators. The NMCC has, *inter alia*, the power to define the relevant electronic communications markets, to advise on the regulation of the electronic communications market, and to exercise certain supervisory and sanctioning powers. Among its functions regarding audiovisual matters, the NMCC is in charge of monitoring compliance by TV service providers with the quota and financing obligations set out in the General Audiovisual Law as well as with advertising restrictions.

The State Secretariat for Digital Progress (SEAD), which is part of the MINEE, holds certain powers regarding electronic communication, audiovisual and other TMT matters, and is responsible, *inter alia*, for:

- proposing general policies and regulations on the electronic communications and information society;
- the promotion and development of TMT infrastructure and services;
- the management of domain names under the Spanish country code (.es);
- the management and control of TMT scarce resources (such as spectrum), including the processing and granting of licences for private spectrum use; and
- keeping the Spanish National Registry of Audiovisual Operators.

As regards certain matters included in the TMT laws that relate specifically to personal data protection and to the submission of commercial electronic communications, some control and sanctioning powers have been granted to the AEPD, which is the independent authority responsible for the enforcement of data protection regulations. The AEPD has the power to grant authorisations set out in the data protection regulation, to hear claims concerning personal data protection, to publish databases that are registered with the Spanish Data Protection Registry, and to exercise sanctioning powers for infringements under the data protection, e-commerce and electronic communications regulations. In addition, some autonomous regions (Catalonia and the Basque Country) have set up regional authorities whose functions are limited to the processing of personal data by regional public entities.
iii Regulated activities

Electronic communications

According to the General Telecommunications Law, telecommunications are services of general interest to be provided under conditions of free competition regardless of the imposition of certain public service obligations on operators. Under the General Telecommunications Law, no licence is required for the provision of ECSs and the operation of networks, but formal notice must be provided to the MINEE before these activities can begin. The prior notice must include corporate and identification data and documentation, a declaration of compliance with the applicable laws, a description of the services that are to be provided or of the networks that are to be exploited, and an approximate date of when the activity is expected to start. The MINEE has 15 days to reject a notification if it does not comply with the requirements established in the General Telecommunications Law and its ancillary regulations. If the requirements are met, the MINEE will automatically register the notifying party with the General Operators Registry. Every three years, operators must notify the MINEE of their intention to continue or discontinue providing electronic communication services.

An administrative authorisation or concession is required to make private use of the radio electric spectrum in Spain. The procedure to obtain an authorisation or concession for spectrum use is set out in Royal Decree 123/2017, which distinguishes between general authorisations, individual authorisations and public concessions. According to Royal Decree 123/2017, operators must submit a spectrum use application together with a technical proposal to the MINEE (through the SEAD), in response to which the SEAD must issue a resolution granting or rejecting the application. As a general rule, as a prerequisite for obtaining a spectrum concession, applicants must prove their status as registered electronic communications operators; however, the SEAD may limit the concessions in certain frequency bands in order to guarantee the efficient use of spectrum or when demand for the spectrum exceeds the offer. In those cases, the relevant concessions will be awarded through public tender processes.

In addition, operators interested in obtaining numbering use rights must submit an application to the MINEE, which will decide whether to grant or refuse these rights according to the National Numbering Plan and other regulations within three or six weeks (in the case of competitive selection procedures) following the submission of the application.

Audiovisual communications

The provision of audiovisual communication services is only subject to a prior notification to the relevant administrative body, be it national or regional, depending on the coverage of the service. Exceptionally, DTTV services and any other audiovisual services (including radio) that require the use of terrestrial radio waves must obtain a licence through a public tender process called by the government (for nationwide broadcasting) or by the regional governments (for regional and local broadcasting). Licences are granted for 15-year terms and are subject to subsequent 15-year term renewals if the audiovisual service provider meets all the required conditions.

If the provision of audiovisual services requires spectrum use, such use is subject to the prior reservation of the corresponding spectrum pursuant to a public resolution by the SEAD.
iv Ownership and market access restrictions

Electronic communications

Under the General Telecommunications Law, there are no limitations – even for foreign entities – on ownership. The only limitation is imposed not on ownership but on the provision of direct ECSs by foreign (non-EU) entities in Spain, with such provision requiring a reciprocal treaty.

Royal Decree-Law 6/2000, of 23 June, on urgent measures to improve competition in the goods and services markets, provides for certain restrictions on the ownership of certain types of telecommunications service providers. Individuals and legal entities holding, directly and indirectly, 3 per cent or more of the total share capital or voting rights of two or more principal operators in, *inter alia*, the fixed-line and mobile telephony markets cannot exercise their voting rights in excess of 3 per cent of the total in more than one operator without the prior authorisation of the NMCC. Furthermore, no individual or legal entity may appoint, directly or indirectly, members of the management body of more than one principal operator in, *inter alia*, the fixed-line or mobile telephony markets without the prior authorisation of the NMCC. Additionally, individuals or legal entities considered principal operators may not exercise more than 3 per cent of the voting rights of another principal operator or appoint, directly or indirectly, members of the management body of any principal operator without the prior authorisation of the NMCC.

Finally, Royal-Decree 458/2011, as amended by Ministerial Orders ITC/2499/2011 and IET/173/2014, establishes certain thresholds on the holding of frequencies by each operator (spectrum cap), and some temporary restrictions on the transfer or assignment of spectrum in certain frequency bands.

According to Royal Decree 123/2017, certain restrictions exist preventing anticompetitive hoarding from restricting the total amount of frequencies to be used by the same operator or group of operators, or providing time limits on the utilisation of the rights of use.

Audiovisual communications

According to the General Audiovisual Law, the following requirements must be met to be granted a TV or radio licence that uses the spectrum as a means of transmission.

Natural persons and legal persons must be citizens of a country within the European Economic Area (EEA) or a country that allows Spanish citizens to hold equivalent licences, and they must have a legal representative domiciled in Spain. For legal persons, any foreign (non-EEA) stake in their capital must also comply with the reciprocity principle, and the individual stake of any non-EEA natural or legal person cannot directly or indirectly exceed 25 per cent of the share capital, while the total non-EEA stake must be below 50 per cent of the share capital.

In addition, there are some constraints on aggregate holdings in TV and radio service providers that are intended to guarantee pluralism in those markets. In relation to TV service providers, individuals and legal entities are forbidden from holding a significant stake in more than one operator providing national television audiovisual communication services

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8 That is, a direct or indirect holding of 5 per cent of the share capital or 30 per cent of the voting rights, or a lower percentage if such percentage is to be used to appoint, within 24 months following the acquisition, a number of members to the board of directors representing more than half of the total.
if the average number of viewers of the television channels broadcast by the audiovisual communication service providers in question exceeds 27 per cent of the total viewers in the past 12 consecutive months. Individuals and legal entities are not allowed to acquire a significant stake or voting rights in more than one provider of television audiovisual communication services when national providers, in aggregate, hold rights to use the spectrum exceeding the technical capacity corresponding to two multiplex channels; and regional providers, in aggregate, hold rights to use the spectrum exceeding the technical capacity corresponding to one multiplex channel.

Moreover, individuals or legal entities holding a stake in a national provider of television audiovisual communication services cannot acquire a significant stake or voting rights in another provider of the same service if the acquisition prevents the existence of at least three different private providers of national television audiovisual communication services so as to ensure pluralism in the media.

With regard to radio licences, no individual or legal entity may control, directly or indirectly, more than 50 per cent of the private licences for the terrestrial radio services within the same coverage area. Furthermore, no individual or legal entity may control, directly or indirectly, more than five of these licences within the same coverage area. In addition, no person is allowed to control more than 40 per cent of the total licences in an autonomous community where there is only one licence per licence area. Nor is any person allowed to control more than one-third of the licences with total or partial nationwide coverage.

The transposition in Spain of the Directive to amend the Directive Audiovisual Media Services Directive, once it will be approved, will require the amendment of some of the above provisions.

v Transfers of control and assignments

Electronic communications

There is no express regulation on the transfer of control of an operator or of its telecoms business to a third party. When a telecoms business is assigned to a third party, the latter must ensure that it has previously notified the MINEE of its intention to provide the services in question or operate the relevant network.

The transfer of authorisations or concessions or the assignment of rights to use the spectrum are regulated under Royal Decree 123/2017, and require the prior authorisation of the MINEE or the SEAD. In particular, no transfer or assignment of the spectrum can take place if it is proven that it will restrict market competition or if restrictions to prevent anticompetitive hoarding would be exceeded. The authorisation procedure differs somewhat for transfers and assignments of certain spectrum use rights (particularly, rights on the special use of public spectrum granted by general and individual authorisations or those granted as public concessions cannot be transferred). There are also different formalities that apply depending on whether the relevant title over the private use right is transferred or the right assigned.

Regarding numbering use rights, the holders of these rights may assign them (including the management or marketing of the numbers) to other telecommunications operators with the prior authorisation of the MINEE and provided that the application specifies the intended use of the numbering rights being assigned.
Audiovisual

The General Audiovisual Law repealed the notification procedure for transfers of interests in companies holding a TV licence that use the spectrum as a means of transmission. In addition, for the first time it allows and regulates legal transactions involving audiovisual communication licences. Under this regulation, these transactions require the prior authorisation of the relevant public authority (once the applicant has provided evidence of compliance with all applicable legal conditions) and the payment of a fee.

Finally, it should be noted that mergers within the TMT sector may be subject to the authorisation of the NMCC or the European Commission if the thresholds set out in the competition regulations are exceeded.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

IP-based services are not subject to a separate regulatory structure, but are regulated under the traditional electronic communications regulation, the General Telecommunications Law and its ancillary regulations.

Internet services that do not qualify as ECSs or the operation of telecom networks, such as the provision of mere content services, are excluded from the scope of the General Telecommunications Law and its ancillary regulations, and are regulated by the e-Commerce Law.

ii Universal service

The General Telecommunications Law establishes that electronic communications operators may be requested to provide certain universal services that cover a range of ECSs that must be provided to all users at a reasonable price and be of a certain quality, regardless of their geographical location.

According to the General Telecommunications Law, the availability of functional access to the internet, allowing bandwidth communications at a downlink speed of at least 1Mb/s, is part of the universal service. The Law has empowered the government to review this speed taking into account the market conditions as well as the social, economic and technological developments.

To reinforce the development and use in Spain of internet and broadband services, the government and the old Telecommunication Market Commission (CMT) issued certain decisions with the aim of encouraging the provision of broadband services (e.g., restructuring the wholesale price offering) and the deployment of NGA networks by alternative operators, improving the technical conditions for the deployment of networks by using the main operator’s infrastructure. Among these decisions, a new plan developing the Spanish Digital Agenda was approved by the government in February 2013, and a plan with specific measures for the development of ultra-fast networks was published in June 2013. By the same token, the Digital Agenda 2016 Annual Report insists on the significance of the promotion of high-speed networks, focused in high-speed networks (30Mb/s), ultra-fast networks (100Mb/s) and 4G, and remarks that the objectives set for 2015 by the Digital Agenda as regards the ultra-fast networks were achieved.

Additionally, in August 2017 the MINEE opened a public consultation to obtain feedback on the drafting of a Digital Strategy for an Intelligent Spain based on the results obtained from the implementation of the Digital Agenda, which preliminary results were
published in November 2017. According to those results, a majority of the population (52 per cent) considered that the strategy planned by the government was accurate because it covered the areas that most concern the citizens. Finally, in the context of the above-mentioned Digital Agenda, the MINEE recently published Order ECE/1016/2018, of 28 September, establishing the rules for the granting of subsidies to pilots on 5G technology.  

## iii Restrictions on the provision of service

Regarding restrictions on pricing, the only regulated retail price that was in place in 2012 (i.e., the maintenance fee for telephone line rental) was liberalised as a result of the review of the market for access to the public telephone network at a fixed location carried out by the CMT in December 2012. After 2016, Telefónica ended the freezing and such retail price was fully liberalised. The NMCC has also imposed restrictions on wholesaler prices charged by Telefónica to the alternative operators for the use of its infrastructure and networks.

For operators with significant market power, the NMCC may impose additional obligations to ensure transparency regarding interconnection and access, non-discrimination (i.e., the operator applies equivalent conditions to operators providing equivalent services) and wholesale price control. In this regard, Telefónica has issued, *inter alia*, price and service level offers validated by the NMCC and available to other operators, including:

- a reference interconnection offer (time-division multiplexing over IP);
- a reference offer for leased lines;
- disaggregated virtual access to the fibre optic loop;
- the new broadband ethernet service; and
- the wholesale offer for access to manholes and conduits.

In addition, all operators must respect end users’ rights, which are established in the General Telecommunications Law, and developed by Royal Decree 899/2009 and the Improvement of the Telecommunication Users Support Plan published in May 2015 by the NMCC, which aims to improve the current regulations on these matters and the quality-oriented culture when providing electronic communication services and to develop the inspection plans for 2015 to 2016 (the plans for 2017 and 2018 have been successively published by the MINEE following the requirements set forth in the General Telecommunications Law and its implementing regulations). Ministerial Order IET/1090/2014 regarding the quality of services of electronic service providers was also issued in June 2014.

The limits on unsolicited calls, emails and texts are scattered mainly among the General Telecommunications Law and its ancillary regulation (Royal Decree 424/2005), the e-Commerce Law, the EU and Spanish Data Protection Law and its ancillary regulation (regarding individuals), and the Consumers and Users Defence Law.

As a general rule, direct marketing activities require the subject’s prior and informed consent. This consent must be explicit if the direct marketing is sent by e-communication means, fax or email, or through automated calling systems.

Regarding unsolicited calls for commercial purposes, when not carried out through fax, email or through automated calling systems, these may be carried out provided that recipients

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9 This initiative is framed in the Spanish 5G National Plan launched by the SEAD for the period running from 2018 to 2020.
have not objected to them (e.g., upon the collection of the data, when the recipients have avoided appearing in telephone directories or are not registered in anti-marketing lists) and that they are offered a simple and free-of-charge objection procedure.

iv Security

Spanish legislation recognises general principles such as homeland security, law enforcement, network security, and freedom of access to information and self-expression either as inspiring principles or in specific rules. They are also measured and applied by the rulings of Spanish courts.

In particular, operators that provide public ECSs or networks must guarantee the secrecy of communications, which is a fundamental right under the Spanish Constitution. The protection of personal data and privacy is mainly regulated by the GDPR, the Data Protection Law and its ancillary regulation (Royal Decree 1720/2007), although all the other TMT rules referred to in this chapter also contain specific provisions to ensure the applicability of data protection in the relevant sectors. The Data Protection Law is currently being reviewed to ensure that it complies with the GDPR,\(^\text{10}\) which has been enforceable as from 25 May 2018. While such broader modification is drafted, Royal Decree-Law 5/2018, of 27 July, has been approved in order to implement certain urgent measures to adapt Spanish laws to the EU data protection legislation.

Electronic communications operators also have the obligation to retain certain electronic communications data (traffic and locational data, and data that enables the identification of users) pursuant to the Data Retention Law.

With regard to cybersecurity, the NIS Directive has recently been implemented in Spain by Royal Decree-Law 12/2018, of 7 September, and it includes the appointment of competent authorities (most likely, the already developed INCIBE, which is the Spanish public entity in charge of cybersecurity) and computer security incident response teams. Cybersecurity concerns in Spain were readdressed by a reform of the Spanish Criminal Code in March 2015 (effectively in force since July 2015) and a reform of the Criminal Procedure Code in October 2015. Among other developments, these amendments provide for the possibility of police officers disguising themselves on the internet to obtain evidence of remote registrations of computer hardware and for the regulation of technological investigation measures in criminal proceedings.

Finally, INCIBE has been quite active in building digital confidence by, among other activities, publishing various guidelines and reports since June 2015 (the most recent guidelines were published in May 2018) regarding, inter alia:

\(a\) the secure storage of information, digital identities and online reputation;
\(b\) how to manage an information leak;
\(c\) cybersecurity in e-commerce;
\(d\) secure deletion of data; and
\(e\) how to manage risks related to security measures.

IV SPECTRUM POLICY

i Development

The radio spectrum is a public domain commodity that is owned, managed and controlled by the state (through the MINEE). The general rules and principles on the regulation of the spectrum are set out in the General Telecommunications Law.

Royal Decree 123/2017, *inter alia*, is intended to make spectrum use and its assignment more flexible, as well as to promote services and technological neutrality. Particularly, it clarifies the different types of use of spectrum (i.e., common, special and private) and titles granting the use of spectrum depending on said types. This Royal Decree is aimed at adapting regulations regarding the use of the radio spectrum to the General Telecommunications Law. Royal Decree 123/2017 also foresees the possibility of sharing the right of use over the radio spectrum among various titleholders in the same geographical area and seeks to simplify certain administrative procedures that, along with the mutualisation of exclusive rights of use, aim to make use of the spectrum more efficient and flexible.

Another key piece of legislation is the National Chart of Frequency Attribution (last updated in 2018), which allocates frequency bands to the different categories of services in accordance with technical characteristics.

ii Flexible spectrum use

Several measures have been implemented in Spain to make the use of the spectrum more flexible and to accommodate such use to the current and new uses of technology. Following the European Commission’s recommendations, the government announced in 2009 its intention to reserve the 800MHz band (the first digital dividend), previously reserved for TV services broadcasted through the former analogue system, for ECSs (particularly for mobile broadband services). This release became possible as a consequence of the digital switchover, which was completed in April 2010 and was intended to enable a more efficient use of the spectrum according to the current spectrum uses. As set out on Section I.i, in March 2015 the MINEE announced the conclusion of this liberalisation process.

Along the same lines, Royal Decree 458/2011 of 1 April on actions related to the spectrum for the development of the digital society imposes certain measures as regards the 900MHz and 1,800MHz bands, such as the technology neutrality principle. Royal Decree 805/2014 approved a new technical plan for digital television, reallocating bandwidth for DTTV services and electronic communication services in accordance with EU recommendations. In November 2015, the NMCC approved a proposal that recommends introducing certain flexibility to the spectrum cap currently applicable in high bandwidths if certain conditions are met. In May 2017, Decision (EU) 2019/899 on the use of the 470–790MHz band in the EU was enacted seeking to promote the development of a 5G network and the improvement of mobile connections (the second digital dividend).

Finally, as set out in Section III.ii, a new plan developing the Spanish Digital Agenda was approved by the government in February 2013, whose specific plans were updated in June 2014. This plan highlights the need to optimise spectrum use in Spain. To achieve this goal, the plan proposes certain measures:

- to increase the flexibility in its use, such as access to ultra-fast mobile broadband;
- to facilitate and simplify the regulation of the management and use of the spectrum by encouraging, for instance, the secondary market;
to review the current use of spectrum to identify those frequency bands that are underused; or
to evaluate the spectrum needs for an effective development of the NGA networks.

iii Broadband and next-generation mobile spectrum use
The growing need for spectrum for broadband services and next-generation mobile services is being addressed within the new spectrum reorganisation and assignation process explained above.

iv Spectrum auctions and fees
As explained above, whenever the efficient use of spectrum needs to be guaranteed and demand for the spectrum exceeds the offer, spectrum use licences are granted through public tenders.

In addition to other fees applicable to electronic communications operators, the reservation of spectrum use for private purposes is subject to the payment of an annual fee, as set out in Annex I of the General Telecommunications Law. The amount of this reservation fee is calculated according to the number of spectrum reservation units multiplied by the value assigned to each unit, following certain parameters set out annually in the relevant law.

The amount of the fee will mainly depend on the type of service to be provided, the category of band reserved, the equipment and technology used, the level of use and congestion of the bands, the geographical areas, the market value of the reserved frequency and the revenue that the beneficiary may obtain.

V MEDIA

i Restrictions on the provision of service
As a general rule, audiovisual service providers enjoy programming freedom; however, the General Audiovisual Law establishes certain service obligations and restrictions to protect other general interests such as those of consumers, children’s rights, cultural and linguistic diversity, and political pluralism in the news. The main restrictions and obligations imposed on TV service providers are as follows.

Quota obligations
At least 51 per cent of annual broadcasting time (excluding, inter alia, news, sports events and advertisements) of each channel or set of channels must be reserved for European works. Moreover, 50 per cent of that quota must be reserved for European works in any of the official Spanish languages. Regarding annual broadcasting time, 10 per cent must be reserved for independent producers of European works, and half of this 10 per cent must have been produced in the past five years. With respect to non-linear audiovisual services over which a service provider has editorial responsibility, 30 per cent of the catalogue of programmes must be reserved for European audiovisual productions, and half of that 30 per cent for European audiovisual productions must be in any of the official Spanish languages.

Financing obligations
TV service providers whose programming includes full-length feature films, television films and series, documentaries, animated series or short films produced less than seven years ago
must contribute, on a yearly basis, 5 per cent of the total income from the previous fiscal year (6 per cent for public broadcasters), according to their accounts, to the pre-financing of the production of certain audiovisual works such as full-length feature films, television films and series, documentaries, animated series and short films. Recent judgments of the Spanish Constitutional Court in case STC 035/2016 dated 3 March 2016, and of the Supreme Court in case STS 1665/2016 dated 7 July 2016 have confirmed the legality of this obligation on the grounds that it does not violate the principle of freedom of individual enterprise. The General Audiovisual Law has been developed by Royal Decree 988/2015, which regulates the legal regime applicable to this financing obligation for European audiovisual works.

Payment obligation
According to the RTVE Financing Law\footnote{Law 8/2009 of 28 August on the financing of the Spanish Radio and Television Corporation.} and Royal Decree 1004/2010, since September 2009 private audiovisual communication services operators must pay 1.5 per cent (for pay-TV) and 3 per cent (for free-to-air TV) of their television and other audiovisual communication services revenue on a yearly basis for the financing of the public broadcaster RTVE, since advertising has been banned from RTVE’s broadcasting. This obligation was challenged by one of the Spanish audiovisual operators (DTS Distribuidora de Televisión Digital, SA) before the CJEU. By a decision dated 10 November 2016, the CJEU confirmed that the European Commission’s authorisation of such financing obligation is compliant with EU legislation (case C-449/14 P).

Advertising restrictions
While there are no specific advertising restrictions on radio services (other than those set out in the General Advertising Law),\footnote{Law 34/1988 of 11 November on advertising.} TV service providers must fulfil certain advertising-related obligations, which for linear services include the obligation to broadcast a maximum of 12 minutes of commercials per hour. The General Audiovisual Law has been developed by Royal Decree 1624/2011 on certain aspects of television commercial communication (self-promotion, telepromotion and sponsorship).

Other content-related restrictions and obligations
There are also specific content-related restrictions, including those intended for the protection of children, that are of the utmost importance. First, audiovisual services providers must not use children’s voices and images without their consent or that of their parents or legal guardians. Secondly, the broadcasting of content that may seriously impair the development of minors (e.g., pornography or gratuitous acts of violence) is forbidden, and other content that may also be harmful for minors (such as gambling) may only be broadcast within certain time slots. The law also establishes reinforced protection for certain time slots that are considered to be accessible by children. Furthermore, to facilitate parental control, all audiovisual service providers must use digital encryption to classify their content, and TV service providers must use an age rating system according to the guidelines issued by the relevant authorities. In July 2015, the NMCC published the Guiding Criteria for the Classification of Audiovisual
Content, which indicate content that is harmful, and on the other hand beneficial, to minors. Under the Criteria, and depending on the content of a programme, a grade is given that ranges from ‘for all audiences’ to ‘not suitable for minors under 18 years old’.

With regards to sports content, additionally to the provisions of the General Audiovisual Law with regards to exclusivity agreements for the broadcasting of relevant sport events, Royal Decree-Law 5/2015 sets out the rules for the commercialisation of certain Spanish football content, and establishes the criteria to distribute the relevant income among organisers and participants in various competitions.

The NMCC also supervises the enforcement of these content restrictions in the audiovisual communication market. In fulfilling this duty, it has been exercising its sanctioning powers very intensively since 2016 and up to the present date against TV services providers for breaching the Advertising Law and the Guiding Criteria for the Classification of Audiovisual Content.

**Disabled persons**

There are further obligations (i.e., subtitling, audio-description and deaf sign language quotas) aimed at guaranteeing disabled people access to TV services.

**ii Non-linear services**

Stand-alone non-linear services (e.g., VOD streaming services) in 2018 are fully consolidated among Spanish users and the market as a whole. In some cases, these services operate independently, while in others they operate through market arrangements with telecom companies.

The consolidation of web-based streaming services has opened a debate regarding the law applicable to providers that operate in Spain under the EU freedom to provide services rules, as for some issues the General Audiovisual Law will apply, while others may be subject to the e-Commerce Law. Thus far, the NMCC has not issued any specific instructions in this regard. The European Commission took the lead on this issue by launching the Proposal for a Directive amending the Audiovisual Media Services Directive of the European Parliament and the Council, which establishes specific rules addressing these kinds of services and whose approval and publication by the Council is imminent.

**iii Mobile services**

The provision of mobile television audiovisual services and other ancillary services has been specifically regulated in the General Audiovisual Law. According to this regulation, the provision of mobile television services requires operators to obtain a licence on the same terms as those set out for general audiovisual services as detailed in Section II.iii.

**VI THE YEAR IN REVIEW**

The most significant development in electronic communications over the past few years has been the approval of the General Telecommunications Law, which is still being developed.

Regarding the audiovisual sector, although no major laws have been passed in recent months, the allocation of six DTTV channels (three SD and three HD) in October 2015, which commenced broadcasting in April 2016, has entailed a significant change in the
competitive private television landscape. This year has also been marked by the NMCC’s continuous intense sanctioning activity in the audiovisual sector, which has mainly been for breaches of advertising-related obligations.

While the consolidation process reached its peak in 2016, the sector is far from being calm, as the main operators reacted against OTT, requesting further regulation of these services in line with that applied to traditional telecom operators to try to safeguard their competitive position; those requests led to the drafting and approval of a Directive amending the Audiovisual Media Services Directive, which sets up certain new rules that will apply both to OTTs and traditional telecom operators.

As regards to OMVs, the NMCC has deregulated their market on the basis that it has already achieved a reasonable level of competitiveness. The deregulation involves the removal of the obligation for the main three network operators (Telefónica, Vodafone and Orange) to provide OMVs with reasonable access to their mobile infrastructure.

VII CONCLUSIONS AND OUTLOOK

Looking ahead, and despite the apparent state of calm in the market (at least in terms of legislative activity), there are certain events that will have a significant impact on the Spanish TMT market in the coming months, such as the implementation of the NIS Directive through Royal Decree-Law 12/2018, of 7 September, and the execution of the GDPR, the move against OTT and the development of further regulations on e-commerce. Additionally, the approval of the Proposal for a Directive amending the Audiovisual Media Services Directive points to the European authorities’ existing preoccupation with OTT services providers and IoT services addressed to end users in the EU.

Furthermore, the NMCC’s structure is currently under review, and whether the NMCC should again segregate into sector-specific NRAs is under discussion. No laws have been enacted yet in this regard, but this could entail bringing back the former CMT or the creation of a similar NRA.

Finally, the intense consolidation process in the telecoms and audiovisual market experienced in recent years has reduced significantly the number of players in the market. As a result of these transactions, it is expected that the already consolidated operators will use their joint efforts to bring about fast technological developments in a context where the division between platforms and content is becoming increasingly unclear.
Chapter 22

SWITZERLAND

András Gurovits and Victor Stancescu

I  OVERVIEW

Conditions on the Swiss telecommunications market are quite stable. While in the fixed broadband market the traditional telecom operators, as well as CATV providers and public utilities, are pushing forward development and deployment of broadband networks, the mobile telecommunications market is still dominated by three mobile operators: Swisscom, Sunrise and Salt. Another remarkable development affecting the Swiss mobile market was the government’s announcement of the release of further mobile RFes for use by mobile operators as from 2019. This announcement is a response to the constantly increasing volume of data transmitted on mobile networks and the expected launch of the next mobile communication standard, 5G.

In the media sector, the approval by the competition as well as media supervisory authorities of the joint venture between the Swiss Broadcasting Corporation SRG SSR, Swisscom and Ringier in the field of joint marketing of advertising content still attracts wide public attention and draws criticism from market players as well as economic and legal experts. The Swiss Federal Administrative Court (FAC) declared the supervisory authority’s approval of the joint venture void. This decision was appealed against, and the appeal proceedings before the Swiss Federal Tribunal are currently pending.

On the legislative side, the revised Swiss Federal Act on the Surveillance of Mail and Telecom Traffic (BÜPF) came into force in March 2018. Further, a draft proposal for the revision of the Swiss Federal Telecommunications Act (TCA) was issued by the Swiss Federal Council on 6 September 2017. On 20 June 2018, the Federal Council launched a legislation process for the new Federal Act on Electronic Media, which shall replace the existing Federal Law on Radio and Television (RTVA). The Federal Council’s efforts to combat cybercrime through implementation of various measures, both at the legislative level and through state action, must be mentioned. Further, the Swiss people have clearly rejected the No Billag initiative (see Section VI.ii), which would have meant the abolition of federal television and radio fees and would have led to a profound change in the Swiss media landscape.

II  REGULATION

i  The regulators

The relevant regulatory framework for telecommunications services in Switzerland is set forth mainly in the TCA and its implementing ordinances (Ordinance on Telecommunications...
Services (OTS), Ordinance on Telecommunication Installations, Ordinance on the Addressing Resources of Telecommunications Services, Ordinance on Frequency Management and Radio Licences), the BÜPF and its implementing ordinance (VÜPF), the RTVA and its related ordinance (RTVO), as well as, in respect of antitrust matters, in the Swiss Cartel Act (CartA).

The Federal Communications Commission (ComCom) is the regulatory authority in the telecommunications market, and currently has seven members. The Federal Council elects the members, who must all be specialists in the field. Despite being elected by the Federal Council, the members of ComCom are independent of directives of the Federal Council. The tasks of ComCom include, inter alia, the granting of licences for the use of RFs, the award of universal service licences and the setting out of access conditions if telecommunications service providers fail to reach an agreement. ComCom produces annual reports about its activities for the attention of the Federal Council. ComCom may seek the assistance of the Federal Office of Communications (OFCOM).

OFCOM, in particular, ensures the compliance of market participants with the law and their telecommunications licences, and is competent to issue those telecommunications licences in respect of which ComCom is not competent. If OFCOM detects infringements of the telecommunications law, it shall intervene and order corrective measures that may include restriction, suspension or withdrawal of a licence (or propose such measure to ComCom if ComCom is the licensing authority).

The Swiss Competition Commission (ComCo) is the Swiss regulator in antitrust matters in accordance with the CartA. ComCo may have to consult with ComCo and seek its opinion on potential effects on the telecommunications markets if the question of (potential) market dominance becomes relevant for ComCom in its application of the TCA. This may, in particular, be the case in connection with the determination by ComCom of the terms of interconnection and access agreements if the providers are unable to reach an agreement by themselves, as well in connection with the grant of radio telecommunications licences that, according to the TCA, must not eliminate or significantly restrict effective competition. Moreover, ComCo may come into play in the telecommunications markets in cases of unlawful restraints of competition or unlawful practices of dominant undertakings, or in cases of concentrations of undertakings if the relevant statutory turnover thresholds are met.

ii Regulated activities

In Switzerland, anyone who wishes to use the RF spectrum must obtain a licence. Any licence applicant must have the necessary technical capacities, and undertake to comply with the applicable legislation, in particular the TCA and the RTVA, the relevant implementing
ordinances as well as the licence conditions. While ComCom is the licensing authority for nationwide radio communications licences, OFCOM is competent in respect of the grant of other licences of somewhat lesser importance, such as point-to-point frame relay licences.

A licence can only be granted if sufficient frequencies are available under the National Frequency Allocation Plan. A radio communications licence shall, as a rule, be granted on the basis of a public invitation to tender if enough frequencies are not available to meet all applicants’ current and future needs. This is usually the case in respect of nationwide radio communication licences. The licence grant procedure shall respect the principles of objectivity, non-discrimination and transparency, and shall ensure the confidentiality of all information provided by applicants. If more applicants participate than licences are available, the process is usually conducted by means of an auction procedure, although it would also be possible for the authorities to launch a ‘beauty contest’, where the specific qualitative and quantitative criteria of the applicants would be assessed and measured.

A ComCom licence is also required to provide a universal service. In respect of the grant of such licence, an invitation to tender shall also be issued, and this tender procedure shall also be in line with the principles of objectivity, non-discrimination and transparency. However, if it is clear from the outset that the tender will not proceed under competitive conditions, or if no suitable candidates are available, ComCom may appoint one or more undertakings as providers of the relevant universal services.

Otherwise, the regulation of the Swiss telecommunications market is rather liberal. The TCA only requires a provider that intends to offer telecommunications services in Switzerland to notify OFCOM. The OTS provides a number of clarifications of, and exceptions to, such duty of notification. Exempt from the duty to notify OFCOM are, inter alia, foreign providers of international telecommunications services that use other providers (having notified their services to OFCOM) to terminate their connections in Switzerland.

The radio and television market is subject to more intense regulation. The RTVA, for instance, requires anyone who intends to broadcast a Swiss programme to notify OFCOM, and to obtain the relevant licence issued by the Federal Department on the Environment, Transport, Energy and Communications (UVEK). In addition, the law imposes on broadcasters a number of restrictions in terms of content and advertising as well as fee-splitting and coverage areas. Moreover, licensed broadcasters have to pay an annual licence fee.

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7 Article 23, Paragraph 1 of the TCA.
8 Article 24, Paragraph 1 of the TCA.
9 Article 24, Paragraph 2 of the TCA.
10 Article 14, Paragraph 1 of the TCA.
11 Article 14, Paragraphs 3 and 4 of the TCA.
12 Article 4, Paragraph 1 of the TCA.
13 Article 3 of the OTS.
14 Article 3 of the RTVA.
15 Article 45 of the RTVA.
16 Article 4 et seq. and Article 9 et seq. of the RTVA.
17 Article 38 et seq. of the RTVA.
18 Article 22 of the RTVA.
iii Ownership and market access restrictions

Swiss telecommunications law is, as a rule, liberal, and it does not impose high entry barriers. As already explained, the only formality to be fulfilled by telecommunications service providers is the notification of OFCOM. Only those who intend to provide a universal service or to use the frequency spectrum require a licence.

Swiss telecommunications law does not, as a rule, preferentially treat Swiss entities over foreign telecommunications providers. Ownership restrictions apply in respect of mobile telecommunications licences in that the granting of such licences may not eliminate or materially restrict competition,19 which means, in practical terms, that one and the same operator cannot (directly or indirectly) hold more than one licence entitling it to operate a nationwide mobile telecommunications network. Consequently, any application by an operator for a second nationwide mobile telecommunications licence would have to be disregarded, and should two providers that each hold such licence merge, they would have to return one licence.

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According to the Federal Telecommunications Operator Act (TUG), the Swiss Confederation must hold a majority stock in the incumbent, Swisscom,20 which is the successor of the former PTT Telecom. This is a somewhat hotly disputed statutory provision, as many market players consider that the fact that the Swiss Confederation is still the majority owner of the incumbent increases the risk of its giving preferential treatment to Swisscom over competitors that are completely privately held.

The RTVA provides that any licence applicant must, as a rule, be resident or domiciled in Switzerland. No provider shall hold more than two television licences and two radio licences. In addition, in the absence of any international obligations to the contrary, any operator controlled from abroad or with foreign participation may be refused a licence if the corresponding foreign state does not grant reciprocal treatment.21 Moreover, the RTVA sets out specific statutory provisions for the Swiss Broadcasting Corporation (SRG SSR), which is the national radio and television broadcaster. SRG SSR shall fulfil a constitutional mandate in the field of radio and television and provide a service for the Swiss community.22

iv Transfers of control and assignments

According to the TCA, every transfer of a licence requires the consent of the licensing authority. A consent of the licensing authority must also be sought in the case of an economic transfer of a licence (i.e., in the case of a change of control in the licence holder).23 ComCom's consent is required in the case of a transfer of a universal licence and a nationwide radio communications licence, while a transfer of other radio licences must be approved by OFCOM.

A transfer of a radio or television licence under the RTVA requires the consent of the UVEK.24 A consent is also needed in the case of an economic transfer of the licence, which is, under the RTVA, deemed to be given if more than 20 per cent of stock in the licence holder is transferred.

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19 Article 23, Paragraph 4 of the TCS.
20 Article 6, Paragraph 1 of the TUG.
21 Article 44 of the RTVA.
22 Articles 23 and 24 of the RTVA.
23 Article 24d of the TCA.
24 Article 48 of the RTVA.
Clearance may also be needed under the CartA if the relevant turnover thresholds are met. In addition, merger control clearance is also needed, irrespective of the turnover of the undertakings concerned, if one of the undertakings concerned has been held, in a final decision pursuant to proceedings under the CartA, to be dominant in a market in Switzerland, and if the concentration concerns either that market or an adjacent or upstream or downstream market.\(^{25}\)

### III TELECOMMUNICATIONS AND INTERNET ACCESS

#### i Internet and internet protocol regulation

Under Swiss law, a telecommunications service means the transmission of information for third parties by means of telecommunications techniques (i.e., by sending or receiving information, through fixed or mobile networks, by means of electrical, magnetic or optical signals or other electromagnetic signals).\(^{26}\) Internet services, in particular VoIP services, thus qualify as telecommunications services, and are subject to regulation in accordance with the statutory provisions of the TCA and the pertaining implementing ordinances.

Against this background, providers of telecommunications services over the internet are, for instance, required, like other providers:

-\(a\) to make the relevant notification to OFCOM;
-\(b\) to have the required technical capabilities for the provision of the services in question;
-\(c\) to comply with the provisions of the TCA and the pertaining ordinances to ensure price transparency;
-\(d\) to respect specific pricing conditions for value-added services;
-\(e\) to ensure the confidentiality of the communications of their subscribers; and
-\(f\) to ensure access to emergency services.

In respect of the latter, however, the law foresees some relief for VoIP providers in that correct routing of emergency calls, if not technically possible for every location, must be ensured only for calls from the main location identified in the subscription contract.\(^{27}\)

#### ii Universal service

The universal service licence, which was valid until the end of 2017, was awarded to Swisscom by ComCom. In December 2016, ComCom awarded to Swisscom a renewed universal service licence for the period from 2018 to 2022. ComCom abstained from conducting a public tender because a survey had revealed that none of the other providers was interested in obtaining the licence and providing the universal service.

The universal service comprises, *inter alia*, the public telephone service, access to emergency call services and the data transmission service.\(^{28}\) The various universal services are subject to price regulation and may not exceed the prices set out in the OTS.\(^{29}\)

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\(^{25}\) Article 9, Paragraph of the CartA.

\(^{26}\) Article 3 of the TCA.

\(^{27}\) Article 30, Paragraph 1 of the OTS.

\(^{28}\) Article 15, Paragraph 1 of the OTS.

\(^{29}\) Article 22 of the OTS.
At the choice of the subscriber, the universal service provider must provide universal services by means of a connection to a fixed network termination point that includes a voice channel, a telephone number, an entry in the public telephone service directory and broadband internet access with a guaranteed transmission speed of 2000/200kbit/s.\(^{30}\)

The state does not subsidise the development of broadband infrastructure such as FTTH, such development being pushed forward by the market players. Apart from the traditional telecommunications and CATV providers, public utilities have also entered the broadband infrastructure market. According to the Federal Office for Statistics, as at June 2017, 45.8 out of 100 households had subscribed to broadband services, which exceeds the OECD average of 30.6 out of 100 households.

### iii Restrictions on the provision of service

As discussed above, the universal licence holder is bound by statutory maximum prices.\(^{31}\) Likewise, value-added services are subject to certain statutory price ceilings.\(^{32}\) Other than that, retail prices are not regulated in the Swiss telecommunications market. Providers are, however, obliged to ensure price transparency. They must, in particular, inform a caller if, in the case of a call between customers of different mobile telecommunications providers, higher prices are charged than for calls to the same provider’s customers. The same duty of information applies if customers are charged higher prices for calls to numbers in company-wide telecommunications networks than for calls to numbers with geographical codes.\(^{33}\) These duties do not apply in the case of value-added services, international calls and international roaming.

At the wholesale level, providers of telecommunications services with a dominant position in the market must provide other providers access to their network and services in a transparent and non-discriminatory manner at cost-oriented prices. The forms of access to be granted include:

- fully unbundled access to the local loop;
- fast bitstream access for four years;
- rebilling for fixed network local loops;
- interconnection;
- leased lines; and
- access to cable ducts, provided sufficient capacity is available.

On the other hand, there is no obligation to ensure access in relation to the broadcasting of radio and television programme services.\(^{34}\) Interconnection services to be provided in accordance with Swiss law include:

- the origination, termination and transit of calls;
- identification of the calling line and of the connected line, and suppression of this information;
- access to value-added services; and

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\(^{30}\) Article 16, Paragraph 2 of the OTS.

\(^{31}\) As per Article 22 of the OTS.

\(^{32}\) As per Article 39 and 39a of the OTS.

\(^{33}\) Article 10 of the OTS.

\(^{34}\) Article 11 of the TCA.
the physical connection between the telecommunication installations of different providers as required for the connection of the services.\textsuperscript{35}

Non-discrimination means that the dominant provider must not treat other providers less favourably than its own business units, subsidiaries or other partners, and that the difference between the access prices offered by the dominant provider and its end-customer prices would allow another (comparable and efficient) provider to achieve cost-covering revenues.\textsuperscript{36}

Determination of a cost-oriented price is a rather complex matter, and the OTS provides detailed guidance.\textsuperscript{37} The underlying principle is that the dominant provider shall ensure that its calculation of the access price is based on the costs that an efficient provider would incur, on a forward-looking basis. Such costs shall correspond to the replacement costs of modern equivalent assets. To determine such costs, the long-term additional costs of the network components used, as well as the long-term additional costs caused by the access services, shall be taken into account. The dominant provider may then add, on top, a premium calculated as a proportional share of the relevant joint and common costs (the constant mark-up) as well as a return, at a rate customary in the market, on the capital used for investments.\textsuperscript{38} The OTS also foresees a certain price floor.\textsuperscript{39}

If telecommunications services providers (TSPs) do not agree within three months on the access conditions, ComCom shall determine the conditions at the request of one party and based on the proposal made by OFCOM. ComCom shall, in particular, take into account those conditions that would promote effective competition, as well as the effects of its decision on competition in the market.\textsuperscript{40}

With few exceptions, prices are not regulated in Switzerland. (Mobile) telecommunications operators are generally free to determine their prices, including wholesale (such as mobile termination rates (MTRs)) and retail prices. Particularly, MTR and international roaming prices have given rise to discussions and calls for regulatory intervention. However, to date, the regulatory authorities have not intervened in respect of MTRs, as the view prevails that reductions of MTRs over time as determined by operators have so far resulted in lower retail prices, thus meaning that regulatory intervention has not been necessary. However, the TCA would allow ComCom, based on a request from an operator, to regulate MTRs (or other types of interconnection or access) on a cost basis if another operator is held to be dominant in the relevant market. Since the Swiss Competition Commission has already found that the nationwide mobile networks of each operator are to be seen as a distinct product market where every operator has a market share of 100 per cent, it cannot be excluded that, in future, the authorities will hold the mobile operators to be dominant and oblige them to interconnect, in particular, to offer MTRs at regulated cost-based prices. As regards international roaming, some developments are underway that are discussed in Section VI.

\textsuperscript{35} Article 61 of the OTS.
\textsuperscript{36} Article 52 of the OTS.
\textsuperscript{37} Articles 54 to 54c of the OTS.
\textsuperscript{38} Article 54 of the OTS.
\textsuperscript{39} Ibid.
\textsuperscript{40} Article 11a of the TCA.
iv Security

Chapter 7 of the TCA is about telecommunications security and data protection. The basic rule is that no one who provides (or has provided) a telecommunications service may disclose to a third party information relating to its subscribers’ communications or enable a third party to do so. This basic rule is complemented by a number of further provisions regulating the secrecy obligations in more detail, such as rules on unfair mass advertising, use of location data, outsourcing of data processing, caller line identification, the use of traffic data, and protection against unauthorised interception and interference. In addition, the provisions under the Data Protection Act that aim to protect personal data of individuals and legal entities apply.

The protection of minors is dealt with in the OTS. The pertaining rules provide that telecommunications service providers shall prevent access by persons under 16 years (provided their age is known to the provider) to value-added services, as well as SMS and MMS services with erotic or pornographic content. To determine whether access shall be prevented, providers of mobile telecommunications services shall, upon conclusion of a new telecommunications services contract or the sale of telecommunications equipment, record the age of the principal user if he or she is less than 16 years of age; and request, in the case of doubt, the production of a valid passport or other identity card allowing the age of the user to be assessed.

Surveillance of telecommunications traffic is subject to the BÜPF and the VÜPF. The BÜPF applies in cases of criminal investigations, in the context of the Federal Act on International Judicial Assistance in Criminal Matters as well as in the context of a search for a missing person. It applies to all telecommunications service providers (holding a licence or being obliged to notify their services) as well as ISPs. It entitles the competent authority to order a wide range of measures that may facilitate the relevant investigation or search. The revised BÜPF came into force on 1 January 2018 and introduced the following main changes:

a Extension of scope of the BÜPF: the revised law applies to a much higher number of service providers (TSPs). In particular, providers of derived communication services that permit one-way or multiple-way communication (e.g., email services, chatrooms, providers of platforms, OTT service providers, retailers of SIM or similar cards) is subject to the revised statute, as are individuals and companies that open their access to telecommunication networks to third parties, for example by means of wireless LAN access (e.g., providers of company networks or public access points).

b New obligation for resellers of SIM cards: the duty to identify purchasers and retain copies of their passport, ID, or Swiss residence or work permit.

c Establishment of a centralised data processing system, instead of the former system of physical transmission on a data storage device from the Surveillance Office to the prosecution authority.

d Duty to disclose information about telecommunication services: broader and specific information about telecommunication services customers must be collected and stored until six months after termination of the business relationship.

41 Article 43 of the TCA.
42 Articles 45a to 45c and 46 of the TCA.
43 Article 41 of the OTS.
44 See, in particular, Articles 13 to 15 of the BÜPF.
Surveillance duties for TSPs: stricter surveillance duties have been introduced. Upon request by the Surveillance Office, TSPs must provide access to their premises and systems, and disclose identification data, the content and traffic data of specific telecommunication and telecommunication marginal data in real time. A retention period of six months applies.

Surveillance duties for other companies and individuals: non-TSPs have to comply with limited duties, but must tolerate surveillance measures and, upon request, permit access to their data processing systems.

Non-compliance and sanctions: upon request of the Surveillance Office, TSPs have to prove, at their own cost, that they comply with the BÜPF and are in a position to fulfil their obligations. A fine of up to 100,000 Swiss francs has been introduced for non-compliance with various provisions of the revised BÜPF.

In September 2017, the revised Federal Intelligence Service Act (NDG) came into force. The NDG regulates the tasks, activities and competencies of the Federal Intelligence Service (NDB) and the duties of other authorities and private operators. The goal of the NDG is to detect and prevent imminent dangers to national security (e.g., by terrorism, prohibited foreign intelligence activities or attacks against critical infrastructure). Besides the surveillance of postal and telecommunications traffic based on the BÜPF that the NDB can order a TSP to perform, the NDB can request cable network operators to support the NDB with regard to technical access information, transmission of signals and the removal of applied encryptions in the context of cross-border transmissions. Private operators can challenge an order to cooperate before the FAC.

Swiss law provides specific rules for services in extraordinary circumstances and restrictions on telecommunications traffic in such circumstances. In particular, TSPs may be ordered to provide, in such circumstances, specific services to cover the telecommunications needs of the armed forces, civil defence, police, rescue services and civilian authorities, including services under the universal service, high-speed data transmission, leased lines and pager services. Further, the Federal Council or the UVEK, respectively, may order the surveillance, restriction or interruption of telecommunications services if an extraordinary situation or vital national interests so require.

No specific law is in force for the combating of and protection against cyberattacks. Under current legislation, rather, various provisions can be found in the different laws that can be seen as (also) addressing, at least indirectly, the cybercrime issue. The TCA, for instance, requires that telecommunications services must be of high quality, competitive in the international context and reliable. In addition, the Data Protection Act requires that personal data (of both individuals and legal entities) be protected by appropriate measures. It is up to providers to ensure compliance with these legal requirements, thus providing a certain level of protection against unauthorised access to and use of telecommunications data.

45 Article 43 of the NDG.
46 Article 83 of the NDG.
47 Article 47 of the TCA and Article 90 of the OTS.
48 Article 48 of the TCA and Article 94 et seq. of the OTS.
OFCOM has published a (currently non-binding) Guideline on Security and Availability of Telecommunication Infrastructures and Services recommending TSPs to implement, monitor and update an information security management system as described in international standards relating to information security, a business continuity plan and a disaster recovery plan, and to comply with international security recommendations in the ICT sector.

The obligation of telecommunications service providers to immediately inform OFCOM of major disruptions of their networks has been specified by OFCOM in its Technical and Administrative Prescriptions for the Reporting of Network Faults: operators have to include into their report, inter alia, a description of the disruption, the categories of causes (cable rupture, energy, hardware, software or human failure, cyberattack, malicious interference) and the measures taken to end the disruption.

The Swiss Federal Council acknowledges that cyberattacks are a serious threat to the entire Swiss society and that the current legislation is insufficient to cope with the relevant risks. Therefore, in April 2018 it launched a new national strategy for the protection of Switzerland against cyber risks. On 18 April 2018, the Federal Council adopted the newly developed National Strategy for the Protection of Switzerland against Cyber Risks (NCS) for the years from 2018 to 2022. The strategy builds on the work of the first NCS (2012 to 2017), expands it where necessary and complements it with new measures to address today’s situation. The strategy defines seven aims:

\[a\] development of competencies, knowledge and abilities to recognise and assess cyber risks at an early stage;

\[b\] development of measures to reduce cyber risks;

\[c\] creation of capacities and organisational structures to combat cyber incidents;

\[d\] Switzerland’s resilience to cyber risks with regard to critical infrastructures, services and goods;

\[e\] protection against cyber risks should be perceived as a joint task of society, the economy and the state;

\[f\] commitment to international cooperation to enhance cybersecurity; and

\[g\] cyber incidents shall be carefully analysed and appropriate measures shall be taken on the basis of the findings.

To achieve the strategic goals, various measures shall be implemented in different areas. The NCS distinguishes 10 fields of action (such as, e.g., competence and knowledge building; standardisation and regulation; criminal prosecution; and cyber defence), which address various aspects of cyber risks. A total of 29 measures are defined in these fields of action (such as, for example, expansion and promotion of research and educational competence;
examination of the obligation to report cyber incidents; creation of a central cybercrime department; and the ability to implement active measures in the cyber space in accordance with the NDG).

IV SPECTRUM POLICY

i Overview

The Swiss frequency spectrum is managed by OFCOM, which takes appropriate measures to ensure that the spectrum is used efficiently and without interference. OFCOM shall further ensure equitable access on the basis of the National Frequency Allocation Plan, which is subject to approval by the Federal Council.53

As of 1 January 2018, OFCOM published its updated frequency spectrum strategy, which is part of the National Frequency Allocation Plan.54 The goal of the paper is to discuss how the frequency spectrum might be used by radio services in the near and distant future, and analyses aspects such as:

- the availability of the frequency band for commercial and non-commercial applications;
- allocation of the frequency band to one specific mobile service or to multiple services;
- the requirement to obtain a licence for the utilisation of the frequency band;
- harmonisation of the frequency band; and
- the availability of frequency ranges for civil or military use.

The Swiss frequency spectrum strategy identifies a number of strategic moves. The overall strategic step in respect of frequency management is a move away from the command and control principle towards market-controlled instruments, with the aim of meeting the expectations of market players that future use of frequency will provide the greatest possible flexibility. In respect of public mobile telecommunications, Switzerland shall harmonise the frequency bands as per pan-European standards in order to keep pace with technical developments such as the introduction of LTE-advanced versions (allowing for, e.g., data transfer rates per sector up to 1GBit/s in the downlink and 500MBit/s in the uplink), as well as the strategic performance targets for the long-term development of UMTS through to the fourth generation (International Mobile Telecommunications-Advanced) as developed by the standardisation organisation 3GPP. Another strategic measure encompasses the harmonisation of civil and military applications with the long-term goal of ensuring joint use of the frequency ranges by civil and military users.

ii Spectrum auctions and fees

As a rule, the use of radio telecommunications licences is subject to a fee imposed by the licensing authority. The fee shall be calculated on the basis of:

- the frequency range allocated, the class of frequency and the value of the frequencies;
- the bandwidth allocated;

53 Article 25 of the TCA.
c the territorial scope; and

d the temporal scope.

If a licence is granted by way of an auction, the licence fee shall correspond to the amount of the bid, less administrative charges for the invitation to tender and the granting of the licence. The licensing authority may determine a minimum bid. In addition, the licence holder is subject to administrative charges that shall cover the costs of the competent authority for its decisions and services, for example in connection with:

a the registration and surveillance of providers;

b decisions concerning access, interoperability or the joint use of installations;

c the granting, surveillance, amendment and cancellation of universal service licences and radio telecommunications licences; and

d the management, assignment and revocation of addressing resources. 55

To respond to the further demand for transmission capacity triggered by the constantly increasing volume of data transmitted on mobile networks, in June 2018 ComCom launched the tender procedure to allocate new mobile networks. The auction is expected to be held in January 2019 and shall be designed to allow all interested companies to participate in and bid for the frequencies for the 5G rollout. The frequencies are to be allocated for 15 years. ComCom aims to ensure that consumers in Switzerland will continue to have access to high-quality, innovative and cost-effective mobile communications services in the future. The following frequencies will be part of the auction: 700MHz, 1,400MHz, 2,600MHz and 3,500–3,800MHz. 56

V MEDIA

i Restrictions on the provision of service

Transmission of information by means of telecommunications techniques, including the transmission of radio and television programme services, is regulated under the TCA. 57

Content, on the other hand, is subject to regulation by the RTVA. Supervision under the RTVA is split between OFCOM and the Independent Complaints Authority (ICA).

While OFCOM ensures that the RTVA (including its implementing ordinances) and the relevant licence terms and international treaties are complied with, the ICA shall deal with complaints about the content of programmes. 58 The RTVA, however, provides that the ICA may not undertake any supervisory measures regarding production and preparation of programme services, thus not allowing any kind of censorship. Likewise, the ICA is not permitted to order provisional measures (such measures potentially being available through requests for protective measures before the state courts). Further, the ICA does not act ex officio, and becomes active only upon complaints having been lodged against radio and television programmes. 59

55 Articles 39 and 40 of the TCA.


57 Article 2 of the TCA.

58 Article 86, Paragraph 1 of the RTVA.

59 Article 86, Paragraphs 2, 4 and 5 of the RTVA.
The Federal Council has launched the legislative process for the enactment of a new media law called the Federal Act on Electronic Media (BGeM). The new Act shall replace the RTVA (see Section VI.ii).

ii Digital switchover

Legislation in Switzerland favours switchover from analogue to digital content. The must-carry obligations for specific programmes were abolished as per the end of 2014, and in respect of one specific programme as per 21 March 2015.60 Further, the RTVA does not oblige cable network operators and other telecommunication services providers to offer, in parallel, digital and analogue techniques. Telecommunications providers with mere digital offerings (such as Swisscom TV) are not obliged to also make an analogue offering. To further the provision of digital content, cable network operators are also permitted to focus exclusively on digital programmes, provided, however, the cable network operators make a basic digital offering that is comparable with the analogue offering and does not cause extra cost for subscribers.61

According to a presentation made by representatives of the national Swiss broadcaster SRG SSR and representatives of private radio stations, the industry plans to phase out FM radio broadcasting by 2024. By 2024, all radio programme services in Switzerland shall be broadcast only digitally, and mainly on DAB+ platforms.62 This development is progressing: since spring 2016, digital radio use is higher than that via VHF. This will allow the gradual switch-off of VHF to begin as planned in 2020. On 25 October 2017, the Federal Council adopted a partial revision in the radio and telecommunications sector to facilitate this transition. It also decided that the current radio licences should be extended. In spring 2017, digital radio use (DAB+ and internet) accounted for 57 per cent of total usage, which is 8 percentage points more than in autumn 2015, while VHF use fell to 43 per cent in the same period.63

The shift to digital transmission in Switzerland is thus ongoing, and a continual increase in the quality and variety of providers’ offerings is expected.

iii Internet-delivered video content

Use of digital techniques enables providers to deliver and further develop customised services such as VOD and time-shifting and replay services that, due to the availability of broadband internet at affordable prices in nearly all of Switzerland, are accessible by the vast majority of Swiss users. While in times of traditional analogue broadcast of radio and television programmes, consumers were dependent on fixed schedules and the content provided by providers, the new techniques allow a shift towards individualised consumption of radio and television content.

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60 Article 8a of the Ordinance of UVEK on Radio and Television in conjunction with Article 54, Paragraph 1-bis of the RTVO.
Mobile services

The growing demand for mobile media services has resulted, in particular, in the introduction of the new mobile frequencies in the 700MHz, 1,400MHz, 2,600MHz and 3.5GHz ranges (see Section IV.ii) as well as in the Swiss Radio Spectrum Strategy (see Section IV.i). The rollout of more sophisticated networks using new generation protocols such as LTE enables providers to provide mobile services carrying broadband content.

VI THE YEAR IN REVIEW

i Market developments

On the Swiss media market, the joint venture (under a Swiss corporation called Admeira Ltd) of Swisscom, SRG SSR and private media undertaking Ringier for the joint marketing of advertising content has been the source of controversy and criticism. The planned concentration was notified with ComCo for merger control purposes. On 16 December 2015, ComCo issued its decision, according to which it approved the concentration. It argued that while the collaboration between these three important market players would create a strong new undertaking, it would still not eliminate effective competition, so that according to the applicable law, the concentration has to be approved. However, OFCOM issued an interim order in accordance with the RTVA preventing SRG SSR from entering the market and exploiting new advertising activities such as targeted advertising under the joint venture. On 28 February 2016, the Federal Department of the Environment, Transport, Energy and Communications (DETEC) then gave the green light for the joint venture to move on from a media law perspective. However, in its decision of the same date, OFCOM maintained its position. The case subsequently had to be assessed by the FAC, which declared on 29 September 2016 DETEC’s approval of the joint venture void in proceedings initiated by the Swiss Media Association and several media companies not being part of the joint venture.

The FAC has ordered that DETEC has to reopen the assessment of whether SRG SSR’s joint venture activity may be subject to conditions or prohibited; and admit the complainants (the Swiss Media Association and several media companies) as parties to such assessment procedure. The background is that DETEC is bound by statutory law\textsuperscript{64} to impose conditions on or prohibit an SRG SSR activity if it adversely affects the fulfilment of SRG SSR’s constitutional programme service mandate or substantially limits the development potential of other media undertakings in Switzerland. In November 2016, SRG SSR appealed the FAC’s decision with the Swiss Federal Tribunal, which in February 2018 protected the decision of the FAC, and ruled that the merger of SRG SSR, Swisscom and Ringier by participating in the Admeira joint venture company was void and that the merger proceedings had to be repeated, granting party rights to its competitors and to the Swiss Media Association.\textsuperscript{65}

The joint venture and its approval by the regulatory authorities were subject to wide coverage in the media, and led to strong criticism from market players as well as economic and legal experts. The joint venture raised, in particular, concerns as to the participation of undertakings owned by, and under the control of, the Swiss Confederation in liberalised markets. While SRG SSR is generating its income from mandatory reception fees that every Swiss household has to pay, Swisscom can essentially benefit from a parent guarantee from

\textsuperscript{64} Article 29 of the RTVA.

\textsuperscript{65} Swiss Federal Tribunal 2C_1024/2016 of 23 February 2018.
the state, given that its majority stock is held by the Swiss Confederation. Moreover, in a set-up where state-owned undertakings participate in the markets, the state itself is operating in various functions – as owner, regulatory or supervising body and customer – thus triggering complex governance structures and issues.

As a consequence of the decision of the Swiss Federal Tribunal and the strong criticism from stakeholders, SRG SSR subsequently sold its 33 per cent stake in Admeira in June 2018 to Swisscom and Riniger.

Mention must be made of the merger of AZ Medien and Neue Zürcher Zeitung, and the takeover of media marketer Goldbach by Tamedia. ComCo has raised no objections to either project.66

In February 2018, Sunrise submitted an application for regulated access to a virtual unbundled local access line (VULA). VULA is an alternative to physical unbundling and resembles a bitstream offering. With VULA, a continuous broadband data connection can be provided from the local exchange to the customer, also via a hybrid line (consisting of optical fibre and copper cable). ComCom rejected Sunrise’s application in its decision of June 2018. According to ComCom, Sunrise’s aim would stimulate competition, which would be welcome; however, due to the lack of a legal basis, ComCom does not see itself to be in a position to approve the application.67 With this statement, ComCom is now passing the ball to the Parliament, which, as part of the ongoing revision of the TCA, has the option to introduce the obligation to grant technology-neutral and virtual access to the network of a market-dominant operator.

ii Legislation

On 19 November 2014, the Swiss Federal Council issued a report on recent developments in the Swiss telecommunications market and on challenges for the Swiss legislator resulting from such developments. The Federal Council proposes a number of revisions to the TCA. DETEC prepared a draft amendment to the TCA. The draft was published as part of a public consultation process where the cantons, political parties and further interested undertakings were invited to submit their comments. Following the consultation, the Federal Council issued a draft proposal for the revision of the TCA on 6 September 2017. The draft legislation will now be dealt with by the Transport and Telecommunications Commission of the National Council.

The Federal Council’s proposed amendments to the TCA relate to the following topics:

- definition of the term TSP and the notification duties of providers;
- improvement of the net infrastructure;
- safeguarding of services diversity;
- international roaming;
- protection of consumers and young people; and
- security of telecommunications equipment and installations.

Under the draft, the term TSP is proposed to be defined more widely so as to also cover those providers who use the internet for new business proposals and business models that


would otherwise not be subject to regulation. On the other hand, the current duty of TSPs to notify themselves to the regulator would be abolished, as the supervision of providers by the regulator would be strengthened.

In respect of the net infrastructure, the initial proposal by the government to give ComCom competence to intervene *ex officio* if it becomes aware of an apparent violation of the access regime was abolished due to strong criticism during the consultation. Pursuant to the draft, as of today, ComCom shall intervene only if so requested by a party. For the improvement of access conditions to the broadband infrastructure, the draft proposes that the Federal Council may implement rules for dominant providers to grant to other providers technology-neutral access to the local loop, which may include introducing price limits. In respect of mobile networks, the draft intends to achieve a more flexible usage of the spectrum that is available to operators, as well as improvements in respect of the joint use of the infrastructure by operators. The revised law also provides basic rules and principles regarding the administration and use of internet domain names, in particular of the top-level domain ‘.ch’. Finally, the Federal Council proposes that the supervision of providers in respect of the availability of their networks and their services should be strengthened, and that the Federal Council shall have the power to request operators to implement measures that increase the resilience of their network infrastructure.

In respect of net neutrality, the draft follows a conservative approach for the time being, proposing that operators shall have the duty to disclose to the public if certain types of content are treated differently, thus increasing transparency in this area. Further measures are reserved for the future should this become necessary. Finally, the liability of operators (which is currently dealt with by a separate legislative initiative) shall be strengthened, and the proposed rules include the duty of an operator to block unlawful content if so requested by the authorities.

In respect of international roaming, the draft enables the Federal Council to combat disproportionately high end user prices.

The draft further proposes new rules that allow increased protection against unfair practices in telemarketing and to restrict, for example, spoofing. In respect of protection of young people, the new law shall provide for a duty of providers to advise customers on protective measures.

The draft also proposes new statutory provisions on technical measures for equipment and installations to ensure conformity with the relevant EU directives. Further, the monitoring and intervention rights of the authorities shall be strengthened to allow for more efficient measures against jammers.

The Swiss Confederation shall remain the majority shareholder in Swisscom. The Federal Council thus continues to allow the conflict arising from the fact that, on the one hand, it is the majority shareholder of the largest provider in the Swiss telecommunications market and, on the other, that it is the legislator, regulator and supervising authority of such market.

It is to be expected that the present draft legislation will be subject to amendments. In July 2018, the Transport and Telecommunications Commission of the National Council, which is dealing now with the draft legislation, called for the incorporation of the principle of signal integrity. Without the consent of the organiser, telecommunications service providers shall in future only be permitted to disseminate programme signals simultaneously, unmodified and in full. In particular, the Commission’s aim is to allow Swiss TV channels to negotiate themselves the conditions for the inclusion of their programmes in time-shifted
television with the TV broadcasters concerned. Further, the Commission is not satisfied with the conservative approach regarding network neutrality. According to the Commission, telecommunication service providers shall be obliged to guarantee network neutrality to end-consumers and thus to treat content and data equally in telecommunications transmission.\(^{68}\)

On 4 March 2018, the Swiss population voted on the No Billag initiative, which intended to abolish radio and television broadcasting fees and clearly rejected the initiative (71.6 per cent of the population). Billag collects the reception fees on behalf of and for the account of the Swiss Confederation from private households and companies.\(^{69}\) According to the initiative committee, no one should be forced to pay compulsory fees for services that they do not use at all. The opponents of the initiative, to which both the Federal Council and the majority of the Parliament belonged, saw in the initiative the cancellation of the public service mandate, the existential endangerment of many television and radio stations, the threat of dependence on international corporations and private funding sources as well as an impairment of media diversity and opinion-forming in Switzerland. As a result of an intense voting campaign and public criticism of the SRG SSR, measures were announced to increase efficiency and save 100 million Swiss francs over the next four years, including through a reduction of approximately 250 full-time jobs.\(^{70}\)

On 20 June 2018, the Federal Council granted approval for the opening of the consultation on the draft of the new BGeM. Interested parties had until 15 October 2018 to submit their comments. The new law is intended to enable online media to contribute to and promote public media services in addition to radio and television. A full public service mandate for the SRG SSR shall be maintained, while other private media providers will continue to receive funding for media services relevant to the free formation of opinions. A new state-independent commission shall be set up to issue the work assignments and supervise the assignees. This should ultimately serve a diverse, complete and high-quality Swiss media landscape. The new law is intended to replace the existing RTVA. This reorganisation is considered necessary because progressive digitalisation has led to a change in media offerings and use.\(^{71}\)

Further, on 1 June 2018 the Federal Council submitted its report regarding state-recognised digital identities to the Parliament.\(^{72}\) With a state-recognised digital identity, users should be able to use the internet safely and with full control over their own data. The Federal Council therefore wants to issue clear rules for digital proof of identity (E-ID). The Parliament will have to decide how to proceed with this proposal.

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\(^{69}\) The annual income from television and radio licence fees amounts to approximately 1.4 billion Swiss francs.


VII CONCLUSIONS AND OUTLOOK

The Swiss telecommunications market may be deemed liberal. The law does not provide for high entry barriers for service providers, except in the mobile telecommunications sector where, due to the scarcity of frequency spectrum, a licence is needed to use frequencies and operate mobile networks. Notwithstanding liberalisation, the incumbent, Swisscom, has been successful in maintaining a uniquely strong position, and in particular in the mobile sector, where it still owns a market share of around 60 per cent. This uniquely strong market position may be maintained at least in the mid-term, as the legislator has no plans to implement legislative measures that may strengthen competitive pressure on Swisscom.

The joint venture between SRG SSR, Swisscom and Ringier was scrutinised by ComCo and the media regulatory authorities, both from a competition and media law perspective. As a consequence of the decision of the Swiss Federal Tribunal, which ruled that the merger of SRG SSR, Swisscom and Ringier is void and that the merger proceedings have to be repeated, SRG SSR sold its stake in the joint venture to Swisscom and Ringier.

MTRs and international roaming pricing systems remain two heavily debated issues. The current law does not allow *ex officio* or *ex ante* intervention by the regulator. The revision of the TCA, which the Federal Council initiated by issuing its report on the telecommunications market at the end 2014, does not foresee any material change to the current MTR and national roaming pricing systems. The legislator continues to prefer refraining from further intervention in this field, and to allow the market to determine prices and relevant conditions. It will be interesting to see whether the expectations of the legislator will be met in this regard, and whether prices will reach levels seen in EU Member States without any specific legislative moves.

By rejecting the No Billag initiative, the Swiss people have committed to the current system of federal television and radio fees and thus to preserve the financing of SRG SSR with state funds. This will continue to provide SRG SSR with a significant advantage in competition with foreign TV providers.
Chapter 23

TAIWAN

Patrick Marros Chu, Vick Chien and Sam Huang

I  OVERVIEW

With the trend of convergence between telecommunications and media, Taiwan’s existing regulatory regime is out of date, and even hinders the sound development of the TMT sector. To achieve the policy goals of deregulation and fostering market competition, the competent authority, the National Communications Commission (NCC), has formulated a set of policies and proposed amendments of mainly applicable laws to encourage new entrants and eliminate the hurdles for conducting TMT businesses.

Nevertheless, in the wake of emerging OTT services, which are not regulated under the current TMT regulatory regime, the difference in regulation level between the traditional telecom and media operators and OTT service providers has been raised by the former operators, and they are striving for the introduction of a policy wherein ‘the same legal requirements should apply to services with the same nature’. In this context, the NCC is now also considering how to reach a balance in terms of deregulation and fairness of competition.

II  REGULATION

i  The regulators

Prior to 22 February 2006, the telecom and broadcasting media sectors in Taiwan were regulated by the Directorate General of Telecommunications, the Ministry of Transportation and Communications (MOTC) and the Government Information Office, Executive Yuan, respectively. With the trend of convergence, in the spring of 2006 the two authorities were consolidated into a new independent regulatory agency, the NCC, which is composed of seven full-time commissioners who are appointed by the Premier of the Executive Yuan with the consent of the Legislative Yuan. These seven commissioners serve a four-year term, and may be reappointed for a second consecutive term.

The NCC’s principal duties include, inter alia:

a  developing relevant regulations and policies;
b  processing applications for licences;
c  overseeing the telecom and broadcasting industry;
d  allocation of spectrum and RF;
e  setting information security standards and technical specifications; and
f  regulating the content of broadcasting.

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ii Regulated activities

To operate a telecom and broadcasting businesses, business operators have to apply for an operating licence from the NCC in accordance with the applicable laws and regulations.

According to the Telecommunications Act (TA), telecom businesses can be divided into two categories: Type I telecom businesses (Type I telecom operators) and Type II telecom businesses (Type II telecom operators). Pursuant to Article 11 of the TA, a Type I telecom operator means an enterprise that installs telecommunications line facilities and equipment to provide telecom services. The aforementioned telecommunications line facilities and equipment refer to network transmission facilities connecting the sending and receiving terminals, the switching facilities installed to be integrated with the network transmission facilities and the auxiliary facilities of both. A Type II telecom operator means a telecom operator other than any Type I telecom operator. Type I telecom operators are generally perceived as facility-based telecom operators, while Type II telecom operators are generally perceived as service-based telecom operators.

The Type I telecom businesses service categories include:

a integrated network services, local network services, long-distance network services, international network services and leased-circuit services (Article 5 of the Administrative Rules on Fixed Network Telecommunications Businesses);

b mobile communications services (Article 4 of the Administrative Rules on Mobile Communications Businesses), including digital low-power wireless telephone services, mobile data communications services and 2G mobile communications services;

c 3G mobile communications services (Article 4 of the Administrative Rules on Third Generation Mobile Communications Businesses);

d mobile broadband access services (Article 4 of the Administrative Rules on Mobile Broadband Businesses); and

e satellite communications services (Article 6 of the Administrative Rules on Satellite Communications Businesses), including satellite fixed network communications services, satellite mobile network communications services and satellite TV programme uplink services.

According to the Administrative Rules on Type II Telecommunications Businesses (Type II Regulations), generally, Type II telecom businesses can be further divided into two categories: ordinary Type II services and special Type II services. Ordinary Type II services are Type II services other than special Type II services. Special Type II services refers to international simple resales (including domestic long distance calls and international calls), VoIP services, international communication services provided to non-specific persons by leasing international circuits and other telecom services designated by the NCC.

A Type I telecom operator shall be a company limited by shares and incorporated under the Taiwan Company Act, and the chairperson of the board of a Type I telecom operator shall be a Taiwanese citizen. In addition, Type I telecom operators are subject to the minimum capital requirements.

Generally speaking, the process for obtaining licences includes two stages: first, an applicant must file a written application, business plan and other required documents with the NCC for the establishment permit; second, the applicant has to complete its corporate registration and other statutory requirements (e.g., establishing a network system) so as to submit the relevant documents to the NCC for a business licence within six months of obtaining the establishment permit.
With regard to broadcasting media business, the NCC’s prior approval is also required for conducting any of the following activities: operation of a radio or television broadcasting business (Article 10 of the Radio and Television Act (RTA)); operation of a cable radio or television broadcasting business (Article 5 of the Cable Radio and Television Act (CRTA)); and operation of a satellite radio or television broadcasting business (Article 6 of the Satellite Broadcasting Act (SBA)).

iii Ownership and market access restrictions

For a Type I telecom operator, the total direct shareholding by foreigners shall not exceed 49 per cent, and the sum of direct and indirect shareholding by foreigners shall not exceed 60 per cent. Nonetheless, there is no restriction on foreign investments in a Type II telecom operator. Therefore, foreign investors may acquire a 100 per cent equity interest in a Type II telecom operator.

Foreign investment in a radio or television broadcasting business operator is prohibited. A foreign natural person is not allowed to be a direct shareholder of a CATV operator, and the total direct shareholding thereof by foreign legal persons shall not exceed 20 per cent, and the sum of direct and indirect shareholding thereof by foreigners shall not exceed 60 per cent. Direct foreign investment in a satellite broadcasting business operator shall be less than 50 per cent of the total issued shares. On the other hand, an offshore satellite broadcasting business operator may offer programmes in Taiwan by setting up a branch office or appointing a distributor, provided that the NCC has granted broadcasting approval.

iv Transfers of control and assignments

In principle, the transfer of a licence or the assignment of a business by telecom or broadcasting operators is not allowed.

If a Type I telecom operator would like to assign all or a substantial part of its business or assets, make investments in other Type I telecom operators or merge with other Type I telecom operators, a prior approval from the NCC would be required. On the other hand, if a Type II telecom operator is merged into other Type II telecom operator or other company, the Type II telecom operator also needs to file a consolidated business plan with the NCC for approval in advance.

The NCC’s approval would be required as well for transferring shares of a radio or television broadcasting business operator. If a CATV operator intends to assign its business, merge with other CATV operators or make investments in other CATV operators, the CATV operator has to file a written re-application and an updated business plan with the NCC for approval. Additionally, neither CATV operators nor satellite broadcasting business operators shall commission the operation of a broadcasting business to a third party.

Cross-ownership among broadcasting business operators is subject to general competition laws. In addition, the CRTA stipulates that the total subscribers of a CATV operator, as well as its affiliates and directly and indirectly owned CATV operators, shall not exceed one-third of the total subscribers in Taiwan. Last but not least, on 12 July 2017, the NCC published a draft of the Anti-Media Monopoly Act (Draft Anti-Monopoly Act) for public comment that aims to set a cap for mergers or acquisitions among broadcasting businesses and national daily newspapers. However, as this is very controversial, if considering its necessity when OTT services and internet are widely used by the public, we do not expect that the Draft Anti-Monopoly Act will be enacted in the near future.
III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

Purely internet-based services are not deemed by the NCC as telecom services; hence, no telecom licence is required.

However, some of the communications services using both IP and traditional telecom networks are still regulated under the TA or the Type II Regulations. For instance, VoIP services are defined as voice services received and transmitted through the internet and provided by an operator. Although this definition is very broad, based on market practice, the NCC holds the view that providing voice communication services through an internet platform or software would not be deemed as a kind of telecomm service, and thus would not be subject to the Type II Regulations as long as there is no connection to the traditional telecommunications network (such as PSTN).

For the VoIP services that fall into categories of telecom service, these can be further divided into two types: E.164 internet telephony service and non-E.164 internet telephony service. The former is defined as the internet telephony service run by an E.164 number allocated by the NCC in accordance with the International Telecommunication Union ITU-T Recommendations, while the latter is defined as the internet telephony service that is provided without an E.164 number.

Another relevant issue regarding IP regulation that raises industry concerns is whether an OTT service should be regulated as a traditional media broadcasting service. Currently, there is no law that specifically regulates online video programme distribution services. Therefore, the provision of pure OTT services in Taiwan would not trigger any licence requirement such as those under the RTA, CRTA or SBA. It is worth noting that if an OTT service is provided in the name of a fixed network telecom operator (e.g., Chunghwa Telecom) by using the PSTN rather than the internet, and the content therein belongs to linear programmes, this kind of service would still be deemed a value-added telecom service, and a telecom licence is required. In fact, in response to the trend of digital convergence and the emphasis of the media industry on the fairness of regulations, the NCC submitted a Draft of Regulating Cable Multichannel Video Programming Distributing Platform (Draft) in 2015, which aims to regulate not only current cable operators, but also OTT operators provided that there are two or more channels distributed on the OTT platform and the quality of the programmes viewed during the transmission is ensured. The Draft was withdrawn due to the change of ruling political party, which occurred in 2016.

ii Universal service

In accordance with Article 5 of the Fundamental Communications Act (‘communications and disseminations should safeguard human dignity, respect the rights of minorities and advance balanced development of cultural diversity’), the NCC is active in its promotion of a universal service. The original scope of the universal service includes providing telephone services, public telephone services and access to data communications at preferential prices to elementary, junior high and high schools, as well as public libraries in economically challenged areas. Since the internet has become a fundamental part of the information society, alongside traditional voice services, building a ubiquitous broadband network has become a key issue of universal service. In light of the foregoing, in 2006, the NCC revised the universal service
regulation to extend the scope of this service to offering internet access services with a speed of 2Mbps to every village in Taiwan in order to narrow the digital divide between urban and rural areas.

The Broadband for All Villages and Broadband for All Tribes projects were completed in 2007 and 2010, respectively. Since the beginning of 2012, the NCC has been promoting an increase of broadband speeds from 2Mbps to 12Mbps. From 2007 to 2016, an accumulated total of 3,710 kilometres of fibre-optic cable was deployed, reaching 667 villages and tribes.²

### iii Restrictions on the provision of service

#### Telecom sector

Due to their nature as common carriers, telecom operators are required to provide telecom services in a fair and non-discriminatory manner, unless stipulated otherwise in the TA. However, in the wake of OTT’s development, the issue regarding net neutrality has also been brought to the NCC’s attention. Accordingly, in the Bill of the Digital Communications and Broadcasting Act (DCBA Bill), which has been submitted to the Legislative Yuan (i.e., the Congress) for its review and approval, digital communication or broadcasting service providers (including current telecom businesses and media businesses) should not impose any obviously unfair restriction on communications protocols and internet traffic control, and such restriction, if any, should be imposed based on the purposes of facilitating the optimisation of network transfer and access. However, whether and when the DCBA Bill will be enacted is still not clear.

With regard to price control, only a Type I telecom operator’s primary tariff (such as an internet access fee, monthly mobile communications service fee, wholesale price of the items designated by the NCC) is subject to a price cap. The currently effective price cap provides that the aggregate price increases of a Type I telecom operator during any given year shall not exceed \(\Delta\text{CPI}-X\)³, where X is a coefficient set by the NCC. As the NCC has realised that decreases in retail prices may lead to a price-squeezing effect, it has recently focused on the tariffs of the more competitive retail telecom services to intermediate and wholesale telecom services so as to facilitate competition on the retail telecom service markets.

#### Broadcasting sector

Under the current regulatory regime, a price cap of NT$600 per month per household for CATV services was set by the NCC, which cap has never been adjusted since the 1990s even though the CPI has risen substantially in the past 20 years. In addition, CATV operators are required to report the subscription tariff to local government agencies within a month after 1 August every year. The local government will examine and decide the actual subscription tariffs within the standard (i.e., NT$600) enacted by the NCC, and then make an announcement of its fee cap decision accordingly. Currently, the subscription tariffs of the local CATV operators are between NT$495 and NT$590 (i.e., below the NCC’s price cap of NT$600). However, the NCC has proposed a bill of multiple subscription tariff schemes for CATV services, which requires CATV operators to offer at least two TV programming packages with basic channels and removes the price cap of NT$600.

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³ ‘\(\Delta\text{CPI}\)’ refers to the most current annual rate of increase of the consumer price index (CPI) in Taiwan, as announced by the competent authority prior to each year of implementation.
Similar to telecom businesses, CATV operators are deemed by the regulator to be quasi-common carriers. Therefore, Article 49 of the CRTA provides that CATV service operators shall not reject, without justification, requests from the local populace to pay for a CATV service.

iv Security
With regard to telecom services, a telecom operator is entitled to refuse to provide the service only when the contents therefrom appear to endanger national security or public order. In addition, to protect network security, telecom operators are required to regularly conduct self-inspection in accordance with the NCC’s guidelines. Among other measures, telecom operators should set up an information security task force for establishing an information security management mechanism. Information security should be divided into levels A, B and C, and the operator should select a suitable security baseline according to the rating.

With regard to CATV services, the CRTA provides that foreign investments in CATV services shall not affect national security, impair overall industrial developments, hinder fair competition or restrict market competition. It is worth noting that in some recent cases regarding mergers of CATV service operators, the NCC held the view that national security may be jeopardised if the capital for the investment is related to or comes from Mainland China.

Pursuant to Article 21 of the Personal Data Protection Act (PDPA), the central competent authority has the power, in its discretion, to prohibit international transfers of personal data if:

a. it will prejudice any material national interest;
b. it is prohibited or restricted under an international treaty or agreement;
c. the country to which the personal data is to be transmitted does not afford sound legal protection of personal data, thereby affecting the rights or interests of the data subjects; or
d. the purpose of transmitting personal data is to evade restrictions prescribed under the PDPA.

To date, the NCC is the only government agency that has issued a directive to prohibit telecom and media operators from transmitting their subscribers’ personal data to Mainland China.

IV SPECTRUM POLICY
i Development
According to the TA, spectrum is allocated by the NCC to various mobile telecom service operators in accordance with the telecom licences they obtain and the Table of Frequency Allocation of Republic of China (Taiwan) promulgated by the MOTC.

The use of spectrum is still highly regulated in Taiwan. Mobile telecom service operators that are entitled to use spectrum should first apply for the NCC’s prior approval if there is any change of their use of the spectrum (including the equipment, station or network involved) as indicated in their business plan, which is a required document when applying for a telecom licence. Furthermore, unless stipulated in other regulations (such as the 4G Regulations allowing the transfer of the right to use of spectrum between 4G telecom operators with the NCC’s involvement), the right to use spectrum is not allowed to be leased, transferred, lent or

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split. Accordingly, the value of spectrum is underestimated because of the current restrictions, and the NCC has conducted several studies on the issue of opening a secondary market for spectrum.

In the bill of the Telecommunications Management Act (TMA Bill), one of the bills in response to the convergence of telecom and media industries, approved by the Executive Yuan on 16 November 2017 and submitted to the Legislative Yuan for its review, the NCC indicated that it will deregulate the use of spectrum so as to have the spectrum used efficiently. Article 58 of the TMA Bill provides that a telecom operator is allowed to transfer part of the spectrum it obtains to another telecom operator, provided that it first submits the application and the agreement between the two parties to the NCC for its approval. The TMA Bill also authorises the NCC to further promulgate relevant regulations in terms of the scope of the spectrum that may be transferred, usage of the spectrum after being transferred and the qualification of the party received, and restriction and management matters thereof.

It is widely recognised that the above-mentioned development would help to establish the secondary market for spectrum in Taiwan after the TMA Bill takes effect. The TMA Bill and other bills will substantially change the current regulatory regime of the telecom industry. However, the timeline for the Legislative Yuan to discuss the TMA Bill is not clear, and it is also uncertain whether the Legislative Yuan will pass the TMA Bill; thus, the specific requirements under the TMA Bill cannot be ascertained at this stage.

**ii Flexible spectrum use**

With the promising development of IoT services, the NCC notes that IoT services combined with the 5G service may substantially change the telecom industries and the lifestyle of the public in Taiwan. To facilitate the development of IoT services, the NCC, according to the spectrum band used and the quality of service required, divides IoT services into telecommunications grade IoT services (using Narrowband IoT, LTE for machines and massive machine-type communication for future 5G services) and non-telecommunications grade IoT services (using Bluetooth, LoRa, Sigfox, Wi-Fi, Zigbee, etc.).

With regard to non-telecommunications grade IoT services, the original spectrum used was the 922–928MHz, 2.4GHz and 5GHz bands, and a telecom licence is not required. On 22 February 2017, the NCC announced that the 920MHz–925MHz band had also become available for low-power IoT services. On 27 July 2018, the NCC further announced that 839MHz–847MHz in the 800MHz band have also become available for advanced metering infrastructure. As for telecommunications grade IoT services, these are deemed telecom services, and the spectrum they use would be the same as that obtained from the mobile service operators via auctions. The spectrum used in this regard is expected to be the bands below 1GHz.

**iii Broadband and next-generation mobile spectrum use**

The MOTC and the NCC have reached a conclusion on the spectrum plan for 5G services and IoT services. In terms of 5G services, they plan to use the 850MHz, 3.3–3.5GHz and 24GHz bands, subject to the final conclusion made at the World Radiocommunication Conference 2019 so as to avoid any inconsistency.

Considering the significant amount of testing that will be needed for 5G services, the MOTC and the NCC has also set up a special district for telecom experimental network to substantially reduce the application process and timeline for 5G testing. In addition, taking
into consideration the fact that the spectrum bands used for 5G services are those high spectrum bands, the NCC has also revised the relevant regulations to allow small cell base stations to be installed in or on public constructions, such as utility poles and light poles.

iv  Spectrum auctions and fees

The NCC held spectrum auctions for 4G services in November 2013 (700MHz, 900MHz and 1,800MHz bands), December 2015 (2,500MHz and 2,600MHz bands) and November 2017 (1,800MHz and 2,100MHz bands). A total of 610MHz bandwidth has been taken by five 4G operators in Taiwan, and as of March 2018, 4G subscription accounts for approximately 82.21 per cent of total mobile communication, which is around 23.5 million subscribers.

Furthermore, as the term of 3G services will expire on 31 December 2018, a total of 120MHz bandwidth in the 2100MHz band used for 3G service will be released for 4G service. As for the 800MHz band, which is also used for 3G services, the NCC plans to use it in other ways in accordance with the international practice. In addition, to fulfil the increasing demand for mobile broadband access, another 30MHz bandwidth in the 1,800MHz band used for 3G services will be released as well.

The NCC held an auction of the 2,100MHz band at the end of October 2017, and the winners were announced in the middle of November 2017 so as to have one year to smoothly transition from 3G services to 4G services.

To avoid the spectrum being held by a small number of operators, and thus affecting the development of the mobile telecommunication industry, the bandwidth that a single 4G operator can hold is capped at one-third of the total 4G bandwidth and one-third of the total 2,100MHz bandwidth.

In terms of the spectrum usage fees, currently, the annual fee payable is NT$10.675 million per MHz (applicable to 2G, 3G and 4G services) multiplied by the applicable bandwidth and applicable territory factor (e.g., if the mobile service is launched nationwide, the factor would be 1). To encourage 4G operators to construct mobile broadband networks in remote areas, the NCC has revised the standard charge for the utilisation fee for spectrum by providing a 5 to 15 per cent discount of the fee if the coverage rate in remote areas reaches 85 to 95 per cent.

V  MEDIA

i  Restrictions on the provision of service

The RTA and the SBA require a radio or television broadcasting business operator or a satellite broadcasting business operator to classify the programmes that it broadcasts in accordance with the Regulations Governing TV Programming Rating promulgated by the NCC, and that the programmes are easily identifiable and distinguishable from advertisements.

Radio and television broadcasting business operators and satellite broadcasting business operators are prohibited from broadcasting any programmes or advertisements invested in or produced by the government and related to a certain candidate in elections. If radio and television broadcasting business operators and satellite broadcasting business operators accept sponsorship, they shall clearly disclose the information concerning the sponsors before and after broadcasting programmes.

To develop local cultural industries, the RTA stipulates that locally produced programmes shall not be less than 70 per cent of the total programmes, and locally produced
drama programmes broadcast in the main time slots shall not be less than 50 per cent of the total drama programmes. If a satellite broadcasting programme supplier broadcasts dramas, films (including documentaries), variety shows or children’s programmes in specific time slots designated by the NCC, the ratio of locally produced programmes to the total broadcasted programmes shall not be less than 25 per cent and the ratio of new broadcast thereto shall not be less than 40 per cent (decreased to 20 per cent in the case of broadcasting films).

The SBA also requires satellite broadcasting business operators not to broadcast any programmes containing embedded marketing placed by the government, or any programmes invested, produced, sponsored or subsidised by the government without disclosure of relevant information. Furthermore, placing embedded marketing in news-related or children’s programmes is not allowed. When placing embedded marketing in other programmes, satellite broadcasting business operators shall not deliberately affect the content of such programmes, or directly encourage viewers to purchase specific products or services, or exaggerate the effect of such products; and shall disclose the information about the business operator who placed the embedded marketing before and after the programme.

ii Internet-delivered video content

With the development of technology and communications, OTT services that are being provided via the internet have not only gradually impacted the existing industries, but have also brought various challenges for regulatory bodies. It is noted that at present, the NCC does not regulate OTT TV being provided online, but has drafted the DCBA Bill as the basic principles of the internet, which introduces the spirit of internet governance and light touch as a positive response to the needs of the times.

It is worth noting that at this stage, the business scale of Taiwan OTT TV service is still not substantial, and operators are still testing the water and trying to find a profitable business model. On the other hand, as some of the TV programme content delivered through OTT TV services may raise piracy concerns, content owners are also urging the NCC to take anti-piracy measures such as revising relevant laws requiring telecom operators to block illegal websites where piracy content came from. Nevertheless, the NCC has yet to decide on adopting such an approach due to freedom of speech concerns.

VI THE YEAR IN REVIEW

China Network Systems (CNS), one of Taiwan’s largest CATV network operators, was sold in May 2018 for NT$51.5 billion to KHL Capital and Hong Tai Group, subject to the relevant authorities’ approvals. Two of the investment team’s largest shareholders are investment firms set up through the Y L Lin Hung Tai Education Foundation, which is owned by the Hong Kuo Group, a real estate developer. Currently, CNS has 12 CATV system operators and 1.13 million subscribers, or some 25 per cent of Taiwan’s CATV market.

A 60 per cent stake in CNS is being sold by Korea-based private equity firm MBK Partners, which acquired it in 2007. This is the fourth time MBK has attempted to sell CNS. Other potential buyers of CNS included Want Want China Times Group (from 2011 to 2013), Ting Hsin International Group (from 2014 to 2015) and Morgan Stanley (from 2015 to last year). The previous deals fell apart because of issues such as a concentration of ownership and allegations that government investment or Mainland China influence are involved.
The sale is pending approval by the Investment Commission, as it would involve MBK – a foreign investor – pulling out of Taiwan. In addition, the NCC and the Fair Trade Commission need to be consulted before the Investment Commission can act. It is expected the deal can be approved by the end of 2018.

VII CONCLUSIONS AND OUTLOOK

i Telecom sector

The current TA was promulgated 60 years ago. Although it has been revised several times, the regulatory structure therein obviously cannot meet market changes caused by evolving IT technologies and the convergence of the telecom and broadcasting sectors. In response to emerging OTT services and formulating a fair market competition environment, the NCC has taken the lead by drawing up and promoting the TMA Bill and DCBA Bill under a converged legal framework. Under the TMA Bill, the concept of Type I and Type II telecom businesses would be abandoned, and only those intending to provide telecom services using frequencies, numbers or rights-of-way would be required to register in advance with the NCC. In addition, current telecom operators with significant market power (SMPs) would not necessarily be SMPs under the TMA Bill, which situation would be assessed by several market parameters, such as the maturity of such SMP’s services and technologies, the geographical regions it covers, and issues in supply and demand.

The DCBA Bill, on the other hand, is in essence a guide or code of practice that has no mandatory effect on market players. The DCBA Bill stresses self-discipline by providers and users of internet services, and collaboration between the private sector and the public sector, as well as minimal use of government regulation.

ii Media sector

Due to the restriction that the government cannot invest in the broadcasting sector (including CATV business), any entity, so long as any of its share is held by the government or a government-owned fund, would not be allowed to acquire a broadcasting business. Such prohibitions have prevented a number of proposed buyouts by listed Taiwan companies, as almost all of Taiwan’s major listed companies have some portion of their shares purchased by government-owned funds.

The NCC has been aware of that unreasonable restriction, and has proposed amendments to fix this hurdle for the acquisition of broadcasting businesses. Nevertheless, as the issue of how large a percentage of shares of a broadcasting business could be held by an investment involved with government funds is quite politically sensitive, the political parties so far have not yet reached a consensus. As a result, recently several acquisition cases have been rejected by the NCC merely because of such unreasonable restriction, even where the NCC itself is of the opinion that the market would benefit from such acquisition. Without doubt, the zero-government fund restriction is a critical hurdle that the NCC has to fix for the sound development of the media sector in Taiwan.
I OVERVIEW

Known as the father of modern Dubai, the late HH Sheikh Rashid bin Saeed Al Maktoum transformed the economy of the emirate, opening Port Rashid in 1972, the Dubai World Trade Centre in 1978 and Jebel Ali Port in 1979. He believed that for Dubai and the United Arab Emirates (UAE) to continue to thrive, it needed to diversify away from its reliance on oil. That belief is still embodied in a country that has become a global hub for innovation and emerging technologies.

In 2018, Abu Dhabi was ranked top in a McKinsey study of smart cities in Africa and the Middle East. Dubai, which was named the smart city of 2017, came second.

The World Economic Forum places the UAE in first place in the Arab world for networked readiness, and the country came 22nd out of 60, and 10th in terms of momentum, in the Digital Evolution Index 2017.

The UAE is embracing digital transformation on many levels. Innovation and technology are at the heart of the government’s UAE Vision 2021, the national agenda and the ICT sector strategy.

Announced in September 2017, the UAE Strategy for the Fourth Industrial Revolution targets digital innovation and future technologies. In October 2017, the UAE announced a project, One Million Arab Coders, to impart computer programming skills to young people across the Middle East.

The country has one of the highest levels of ICT adoption globally. Internet penetration stands at 99 per cent, the country’s mobile internet connection speed ranks fifth globally, social media penetration stands at 99 per cent and mobile penetration stands at a staggering 202 per cent.

The UAE’s position as a digital and technology hub is no accident, but rather the consequence of forward-thinking government policy and prescient leadership.
Dubai announced its first ICT strategy in 1999, when a series of initiatives to support technology companies and boost technological advancements began. Dubai Internet City was followed by Dubai Media City (2000), Dubai Silicon Oasis (2005), Dubai e-government, Dubai Smart Government and, in 2014, the Smart Dubai initiative. ADSIC, the pioneering government entity responsible for the UAE capital’s ICT agenda and transformation efforts, was established in October 2005.

The UAE today is an ecosystem in which IoT systems, blockchain, hyperloop projects, 3D printing, autonomous vehicles and AI applications coexist not simply as pilots or pipe dreams but as a feature of daily life.

II REGULATION

i The regulators

Formed in 1971, the United Arab Emirates is a constitutional federation of seven emirates, each with their own laws and each subject to federal laws. Free zones within emirates may issue their own laws, applicable within the relevant free zone, but are subject to the Federal Penal Code. The free zones are often referred to as offshore while the rest of the UAE is referred to as onshore.

The regulatory framework for the TMT sector in the UAE is divided into two sub-sectors: telecommunications and technology, and media, although convergence has led to a degree of overlap.

Telecommunications and technology

The principal regulator of the telecommunications and technology sector is the Telecommunications Regulatory Authority (TRA), which was established under the law regarding the Organisation of the Telecommunications Sector (Telecoms Law).

The TRA has two stated focuses: regulating the telecommunications sector and enabling government entities in the field of smart transformation.

It is responsible under the Telecoms Law for a range of functions, including ensuring telecommunications services provided throughout the UAE sufficiently satisfy public demands and enhancing the level of service provided by the telecommunications sector.

In addition to the Telecoms Law, the TRA is also bound to act in accordance with the Executive Order, the Licensing Framework Resolution and the National Agenda.

Media

The National Media Council (NMC) is the federal authority tasked with supervising media activities in the UAE. It is mandated to:

- develop the UAE’s media policy;
- draft media legislation and ensure its execution;

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11 Article 13, Telecoms Law.
12 The Decision of the Supreme Committee for the Supervision of the telecommunications Sector No. (3) of 2004 issuing the Executive Order of the Telecoms Law.
13 TRA Resolution No. (6) of 2008 regarding the Licensing Framework.
c coordinate media policy between the emirates; and
d issue operating licences to media companies.\textsuperscript{14}

Federal Law No. 15\textsuperscript{15} (Media Law) regulates printing and publishing licensing activities in the UAE and applies to traditional media content such as newspapers, magazines and television broadcasting. A 2010 Chairman’s Resolution extended the application of the Media Law to all audio, visual, print and digital media institutions in the UAE.\textsuperscript{16}

In March 2018, the NMC established a new system to govern electronic and digital media activities in the UAE. Under Resolution No. (23), 2017 Concerning Media Content (EM Regulations), any individual or company carrying on electronic media activities\textsuperscript{17} in the UAE must obtain a licence from the NMC. The websites of licensed traditional media (i.e., television, radio, newspapers and magazines) already fall under the provisions of the EM Regulations and, as such, are not required to secure new licences.

In addition to the federal laws referenced above, some free zones in the UAE also regulate broadcasters and publishers operating within the parameters of their jurisdictions.\textsuperscript{18}

\textbf{ii Regulated activities}

\textit{Telecommunications and technology}

Under the Telecoms Law, any sale, provision or operation of a telecommunication service requires a licence.\textsuperscript{19}

Telecommunication services are defined as transmitting, broadcasting, switching or receiving by means of a telecommunications network. This includes, for example, wired and wireless telecommunications; voice, music and other audio material; and visual images.

The provision of internet services to subscribers also requires a licence,\textsuperscript{20} as clarified in Article 66 of the Executive Order.

There are two types of licences:\textsuperscript{21} individual licences for services that require substantial regulatory supervision or usage of scarce resources (e.g., spectrum); and class licences\textsuperscript{22} where there is no need to use scarce resources of spectrum and numbers or less regulatory supervision is required.\textsuperscript{23} Both licences are issued for 10-year periods.

\begin{itemize}
  \item \textsuperscript{14} UAE Federal Law No. 1 of 1972 on the competencies of ministries and powers of ministers, and concerning the establishment of the National Media Council as amended by Federal Decree Law No. 1 of 2006.
  \item \textsuperscript{15} Federal Law No. 15 of 1980 concerning Printing and Publishing and its amendments. An amendment to the Media Law was proposed in 2009, but not signed into law.
  \item \textsuperscript{16} Chairman of the NMC Resolution No. 20 of 2010 Concerning Media Content Standards.
  \item \textsuperscript{17} All online activities including e-commerce, publishing and selling of print, video and audio material ‘even if practiced on social media’.
  \item \textsuperscript{18} For example, Dubai Media City, regulated by Dubai Creative Clusters Authority, and Two Four Fifty Four, the media free zone in Abu Dhabi.
  \item \textsuperscript{19} Article 37, Telecoms Law.
  \item \textsuperscript{20} Except in the case of internet service provided onboard aircraft, which can be provided without a licence above 10,000 feet. See Aeronautical Radio Systems Regulation issued by the TRA on 14 March 2018.
  \item \textsuperscript{21} TRA Resolution No. (6) of 2008 regarding the Licensing Framework.
  \item \textsuperscript{22} Not to be confused with class licences granting a general authorisation to provide certain telecommunication services to a number of service providers providing the same class of service as used in the UK regulatory regime and other jurisdictions.
  \item \textsuperscript{23} Article 4(2)(b) of the Licensing Framework Resolution.
\end{itemize}
There are currently two licensed providers of public telecommunications services in the UAE: Etisalat and du.

The telecommunications sector is currently excluded from the scope of the most recently enacted competition law in the UAE.24

**Media**

Under the Media Law, certain activities require a licence, including operating a printing press or publishing house; circulating, selling or distributing printed material; and the publication of newspapers.25

Applications must be filed online via the NMC’s website, and the fees payable depend on the type of licence sought.

As noted previously, any individual or company carrying on electronic media activities is required to obtain a licence from the NMC.26

Restrictions apply under the Media Law and the EM Regulations in respect of the types of individuals and entities that can apply for a licence.

**iii Ownership and market access restrictions**

**General foreign ownership restrictions**

Currently, foreign companies can only operate onshore in the UAE by partnering with a UAE national or wholly owned UAE entity, with the UAE national or entity having 51 per cent ownership.27 Companies established in the free zones are exempt from this restriction, and may have 100 per cent foreign ownership.28 A limited liberalisation of the onshore position is anticipated, as further detailed in Section V.

**Telecommunications and technology**

Licence holders under the Telecoms Law (individual and class) must be a company established under the Commercial Companies Law29 whose shareholding accords with a resolution of the TRA Board.30

TRA Resolution No. 8 of 2009 restricts the foreign ownership of global mobile personal communications service licensees or public access mobile radio service licensees to 49 per cent.31

At the time of writing, there are no public constraints on aggregate holdings of spectrum and licences but, in the future, as the number of new entrants increase, there may be changes to help the TRA manage competing claims for spectrum.

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24 Federal Law No. 4 of 2012 on the Regulation of Competition. However, a sector may be listed as exempt due to another law or regulation regulating competition in that sector; for example, the TRA has authority to regulate competition in the sector.
25 Articles 3, 17, 24, 49, 54, 66 and 67 Media Law.
26 The EM Regulations.
27 Article 10, Federal Law No. 2 of 2015.
28 Article 5, Federal Law No. 2 of 2015.
29 Federal Law No. 2 of 2015.
30 Articles 28 and 29 Telecoms Law; and Articles 2(1) and 3(1) NMC Resolution No. (7) of 2008.
31 Resolution No. 8 of 2009 Regarding the Approval of Acquisition Fees and Licensing Applications.
Media

Article 2 of the Media Law (and subsequent resolutions issued by the NMC) provide that the owner of a media service must be a UAE national. This means that a media entity with foreign ownership must either partner with a UAE national or wholly owned UAE entity to set up an onshore entity or, as noted above, set up in a free zone that permits 100 per cent foreign ownership.

iv Transfers of control and assignments

Licence transfers require the written approval of the TRA. 32 There is also an express obligation to obtain the prior written consent of the TRA in the event of a merger or acquisition, transaction, contract, reorganisation, sale or other corporate venture that results in the change of control of a licensee. 33

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

The Telecoms Law makes no regulatory distinction between internet and IP services and other telecommunications services. Such services fall within the definition of a regulated activity and thereby require a licence from the TRA. That said, certain specific policies cover the provision of internet and IP services in the UAE.

For example, it is TRA policy that the provision of VOIP services requires a licence. 34 There are two exceptions: where the network is operated for the benefit of users within the same company or group; or where the network is operated for an educational purpose, research purposes or for the benefit of UAE government entities. Otherwise, the provision of IP services is not permitted in the UAE, and access to a number of these services such as Skype and Facetime are blocked. 35

ii Universal service

As noted previously, the TRA is tasked with ensuring that telecommunication services provided in the UAE are sufficient to satisfy the public demands of those who wish to make use of such services. 36 It also has the authority to create conditions on universal service in the UAE. 37 To this end and, in addition to certain financial obligations for universal service funding in each telecoms licence, the TRA has issued a regulatory policy on the promotion of universal telecommunications services in the UAE (USO Policy).

Under the USO Policy, the TRA will designate one or more licensees as having an obligation to provide universal services in the UAE (a universal service provider (USP)). A USP must ensure that consumers in permanent accommodation have access to a service

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32 Under the Telecoms Law, the Executive Order and each licence. Note, the blanket prohibition on assigning spectrum authorisations under Article 5.5 of the Radiocommunications Policy.
33 Under each provider’s licence e.g., Article 3.4.2 of the Emirates Integrated (du) licence.
34 TRA regulatory policy on voice over internet protocol. Version 2.0 issued on 30 December 2009.
35 However, licence holders Etisalat and du have both recently introduced their own VOIP-based apps, BOTIM and C’ME as part of their unlimited voice and video call services.
36 Article 13 of the Telecoms Law.
37 Ibid. Article 14.
capable of delivering basic voice, TV services and high speed data packages of at least 10Mbps. A USP may subcontract its USO to other licensees who are able to provide the services more efficiently provided that it obtains approval from the TRA.

At this stage, there are no official government subsidies for the construction of broadband infrastructure and innovative communications technologies. However, the government is heavily invested in telecommunication companies who in turn invest in deploying new broadband infrastructure. This differs from other countries and regions (including the European Union) where public funding is made directly available for broadband deployment.

iii Restrictions on the provision of service

Pricing regulation
The TRA has in place a regulatory policy on pricing\footnote{Regulatory Policy on Price Control version 2.1 issued 23rd September 2008 (the exception being in the case of a public emergency).} that prohibits a licensee from pricing in a way that is anticompetitive, and that could restrict, distort or prevent competition in the short term or in the long term; or restricts, distorts or prevents the growth and development of the telecommunication sector of the UAE.\footnote{Paragraph 3.1 of the 2008 Regulatory Policy on Pricing.}

The TRA recently published a new regulatory policy and procedure on price control,\footnote{Regulatory Policy and Procedure, Price Control, Version 1.0 issued 28 June 2017.} which provides that each licensee must request prior approval before implementing any change in price,\footnote{Ibid. Article 4.1.} including where there is a price promotion.

Interconnection
Licensees are required pursuant to the terms of their licence to permit interconnection with each other’s networks.\footnote{Public Telecommunication Licences No.1 of 2006 and No. 2 of 2006 respectively.}

There are regulations on interconnection pricing\footnote{Regulatory policy on interconnect pricing, Version 1.5 issued on 15 December 2010.} and corresponding fee schedules\footnote{Available on the TRA website: https://www.tra.gov.ae/en/search.aspx?query=interconnection%20pricing.} that either du or Etisalat may\footnote{Whether they are required to comply depends on whether they have market power (as defined in the Instructions on Cost Accounting, Accounting Separation and LRIC Modeling).} be required to comply with.

Net neutrality and monitoring
There is no net neutrality obligation in the UAE, and in the absence of one, licensees technically have the freedom to block or favour certain content over other content. Content is typically blocked on the grounds of public or political policy or as a result of TRA policies (i.e., the prohibition on VOIP services discussed above).\footnote{In 2017, the principal reason why content was blocked was because it contradicted the ethics and morals of the UAE: https://www.tra.gov.ae/userfiles/assets/KK8ILZjGR1.pdf.}

The network operators monitor content accessed through their network in order to assist with the enforcement of laws in the UAE.
Unsolicited communications

Under Article 5 of the Unsolicited Electronic Communications regulations, telecommunication licensees must establish practical measures to minimise the transmission of spam having a UAE link across their telecommunications networks. If they become aware of such spam, they are under an obligation to take all practical measures to end its transmission or breach the regulations.

For those entities which are not telecommunications licensees, there is no express obligation under the privacy laws in onshore UAE to obtain consent for marketing communications, although in practice it is recommended to do so to align with best practice in other jurisdictions such as Europe. For those operating in free zones such as the Dubai International Financial Centre (DIFC) and Abu Dhabi Global Markets (ADGM), an individual must be notified and given the right to object to its data being used for direct marketing purposes.

iv Security

Protection of national interest and law enforcement

National standards for content exist under the Media Law and NMC resolutions, including prohibitions on material that is harmful to the UAE’s interests or criticises the government or rulers of the UAE. These are discussed in further detail in Section V.

The telecommunication providers are required to assist the government with criminal enforcement. Article 8.2 of Etisalat’s licence requires that it complies with directions of the TRA or other competent authority that may be issued from time to time on public interest, safety or national security. It must also maintain call logs for its subscribers and install such equipment as the TRA needs to allow access to its network and the retrieval and storage of data for reasons of public interest, safety and national security. Likewise, satellite licensees must permit access to their premises for inspection by the TRA and otherwise comply with the directions of the TRA with regard to public interest, safety and national security.

Telecommunication licensees are required to register any mobile consumer who purchases a mobile SIM card and mobile services, including obtaining and verifying their identification details and storing such information in a database.

The UAE legislature has taken steps to protect national interests under the Cyber Crimes Law, as described in Section IV.

Personal data and privacy protection

There is no general data protection law in onshore UAE and no single national data protection regulator. An individual’s right to privacy is enshrined in the UAE Constitution and the UAE Penal Code.

47 Version 1.0 issued 30 December 2009.
48 Ibid. Article 5.2.
49 Federal Decree-Law No. 5/2012 on combating cybercrimes as amended. On 13 August 2018, HH Shaikh Khalifa Bin Zayed Al Nahyan approved Decision No.2 of 2018 with regards to the amendment and replacement of Articles 26, 28 and 42 of the Cyber Crimes Law. Not published at the time of writing, we understand that this Decision will increase the fines and penalties of imprisonment for establishing, managing, running a website or publishing information in favour of a terrorist group or that affects national security.
50 Article 31 of the Constitution confirms the right to privacy of communications.
For example, under the Penal Code it is an offence to disclose the secret of another without their consent. A company must obtain consent from individuals before collecting personal details of individuals, whether that is a consumer or an employee.

When obtaining consent electronically, companies must ensure that individuals granting consent to the use of their personal information must signify consent through some form of positive act. Collecting an individual's personal information without first obtaining consent has the potential to carry criminal liability.

More comprehensive data protection laws apply to companies incorporated in a free zone with its own data protection laws, such as the DIFC and ADGM.

Companies using tracking technologies such as cookies should be aware of the Cyber Crimes Law. Article 2, for example, creates an offence for anyone who gains access to, *inter alia*, a website, computer network or electronic information system without consent. The Cyber Crimes Law also carries criminal liability.

**Protection of children online**

To deal with an increase in crimes against children online, the UAE has established various child protection initiatives. A UAE based non-profit organisation called e-safe aims to create a safer online experience and to protect children from all types of exploitation.52

In 2016, a child protection law was issued by the government. The law obliges telecommunication companies to notify the competent authorities or concerned entities of any child pornography being circulated on the internet.54

**Cybersecurity in the UAE**

The Cyber Crimes Law was designed to prevent crimes online and promote a safer digital environment.

Offences include gaining access to an individual's electronic system without permission, invading an individual's privacy using electronic means and using a false internet protocol address for the purposes of concealing a criminal activity. Punishment for breach of the law can lead to imprisonment and fines.

The UAE established the UAE Computer Emergency Response Team to improve information security standards and practices and to protect IT infrastructure in the UAE.

**IV SPECTRUM POLICY**

**i Development**

In common with other jurisdictions, the UAE operates a licensed spectrum regime, and the TRA has in place a spectrum allocation regulation and a spectrum fees regulation.57

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51 Generally accepted to mean any personal information about an individual, including any photographs where an individual or their belongings are identifiable: Section 379.


53 Federal Law No. 3 of 2016 on child rights (wadeema's law).

54 Ibid. Article 29.

55 This would encompass the use of cookies and other tracking technologies without consent.

56 Spectrum Allocation and Assignment Regulations version 1.0 issued 30 December 2009.

57 Frequency Spectrum Fees version 3.0 issued 7 January 2016.
ii Flexible spectrum use

The UAE has implemented, and is in the process of implementing, a number of strategies with respect to spectrum licensing:

a digital dividends, which will occur when spectrum is freed up as operators switch from analogue to digital transmissions;58

b LTE standards, which may utilise spectrum more efficiently than certain alternative technologies;59

c spectrum sharing: the TRA Regulations on Spectrum Allocation and Cordless Telephony allow for spectrum sharing, and place a special emphasis on reviews and audits of such proposed sharing to ensure there is no mutual harmful interference; and

d mobile monitoring stations: the TRA has purchased a mobile monitoring station with the objective of monitoring frequencies and better managing spectrum.60

iii Broadband and next-generation mobile spectrum use

Like many other jurisdictions, the demand for broadband services has increased in the UAE. To this end, and to encourage the deployment of the new 5G broadband technology, the TRA has created a steering committee with respect to the introduction and deployment of 5G technology. To manage UAE spectrum more efficiently in the provision of 5G services, the TRA supports the use of harmonised spectrum bands for 5G, and is considering the 40GHz for 5G technology beyond 2020.61

Etisalat launched the first commercial 5G network in the Middle East and North Africa region (MENA) region in May, and du intends to roll out its 5G network later this year. To meet the growing demands for broadband services, the TRA has introduced exceptions to the blanket requirement for a spectrum authorisation for any use of spectrum in the UAE.62 For example, the provision of Wi-Fi services in public places (i.e., hotels, cafes) can be provided by any person without a formal spectrum authorisation from the TRA, provided certain conditions are met.63

iv Spectrum auctions and fees

There are currently no plans to auction spectrum in the UAE.

V MEDIA

i Restrictions on the provision of service

Telecommunications and technology

The TRA implements an internet access management (IAM) policy in the UAE, in coordination with the NMC and Etisalat and du, the licensed ISPs. The policy must be taken into consideration by the ISPs to ensure the security of the internet and to protect end users

60 Ibid. 57.
61 TRA press release: TRA Launches the 5G in the UAE, 23 December 2017.
62 Article 2.4 of the Spectrum Allocation and Assignment Regulations version 1.0 issued 30 December 2009.
63 See Article 2.2 of the WLAN Regulations.
from harmful websites that are contrary to the UAE’s religious and ethical values. Restricted content under the IAM policy includes pornography, nudity, vice and offences against the UAE. The TRA also monitors online advertising in its enforcement of the IAM policy.

**Media**

The Media Law sets national standards for media content. Restrictions include prohibitions on material that is harmful to Islam or harms the UAE’s interests; material criticising the government or rulers of the emirates or the UAE; and publishing news, photographs or comments that invade the privacy of individuals and families or destroy reputations.

A 2010 Chairman’s Resolution extended the Media Law (including the content restrictions thereunder) to all audio, visual, print and digital media institutions in the UAE. The EM Regulations 2017 reinforce the existing restrictions for media content and their extension in scope to include digital activities. The Regulations also create a Website Censorship Committee to task with ensuring websites comply with the principles and standards of media content set out in the legislation, and recommending websites to be blocked and keywords to be banned on the internet.

NMC Chairman’s Decision No. 35 of 2013 regulates the content of advertising materials. Advertisements that are produced, placed or distributed within the UAE or imported into the UAE must abide by the national standards for media content and the Media Law.

Finally, the Penal Code includes specific provisions regarding defamatory content. In addition to the federal laws above, some free zones in the UAE also regulate broadcasters and publishers operating within the parameters of their jurisdictions. Examples include Dubai Media City, regulated by the Dubai Creative Clusters Authority, and Two Four Fifty Four, the media free zone in Abu Dhabi.

**ii Internet delivered video content**

Online video subscriptions across the MENA region exceeded 1 million in 2017, up 48 per cent from the previous year. Subscriptions are forecast to grow at a compound annual growth rate of 34.4 per cent over six years, reaching 5 million in 2022.

That growth is likely to be more pronounced in the UAE, a market with high internet and mobile penetration rates, government support for internet ubiquity and the presence of a significant youth population. Relative to the country’s high gross national income per capita, broadband is also affordable for many users. In the UAE, consumers spend an average of 4.7 hours weekly on smartphones watching online videos, and 71 per cent of internet users watch films online.

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64 Comprising representatives from the Ministry of Interior, TRA and National Electronic Security Authority.
65 Article 372 deals with publicity that exposes the victim to public hatred or contempt and Article 373 deals with a false accusation that dishonours or discredits the victim in the public eye.
67 Ibid.
As in other jurisdictions, telecom operators in the UAE have suffered a decrease in revenues due to the emergence of OTT players in the market. That has led to a debate around the cost of network infrastructure roll-out, OTTs’ contribution towards such costs, and whether network operators and OTTs operate on a level regulatory playing field.

VI THE YEAR IN REVIEW

On 1 January 2017, the UAE Central Bank issued the Regulatory Framework for Stored Values and Electronic Payment Systems, which is designed to facilitate the adoption of safe, secure and user-centric digital payments in the UAE and regulate the digital payments infrastructure and other financial technologies.

In March 2017, Amazon acquired UAE-based e-commerce platform Souq.com for US$650 million.

In October 2017, Federal Decree-Law No. 18 of 2017 authorised the Cabinet of Ministers to permit foreign investors to own a majority or all the share capital of a UAE joint-stock company (JSC) or LLC. The reform represents a limited liberalisation of the restriction in Article 10 of the Commercial Companies Law, which requires an LLC or JSC to have at least 51 per cent of its share capital owned by UAE nationals.70 This is likely to encourage more global TMT companies to set up branches in the country.

On 1 January 2018, the UAE introduced VAT, following the Gulf Cooperation Council Unified Agreement on VAT. Core activities (e.g., telecommunication services, development of software, broadcasting) are subject to VAT at a rate of 5 per cent. Wireless telecommunication services and electronically supplied services are subject to VAT in the country where the actual use or benefit of these services is accrued.71

VII CONCLUSIONS AND OUTLOOK

Strategic planning and focused expenditure have created a solid platform for innovation and emerging technology in the UAE.

Dubai will host Expo 2020, which is likely to create a significant boost to the economy and TMT sector.

We anticipate that the UAE’s ambitious plans for smart cities and smart technology adoption will drive the fast uptake of 5G in the country. The wide number of 5G use cases will benefit the UAE consumer. In July 2018, du issued a whitepaper on the consumer case for the accelerated integration of 5G throughout the UAE.72

Challenges still exist. The question regarding public and private data ownership is likely to be a source of future debate, particularly in light of the Dubai Data Law,73 which allows the government to require private sector entities to provide Dubai data74 for the purposes of making that information open data.

70 Subject to certain exceptions.
71 Article 20 of the Treaty.
72 EITC Infrastructure Outlook 2021 Whitepaper, July 2018, Exhibit 2: Consumer Use Cases for 5G.
74 Any data related to the Emirate of Dubai and available to data providers.
On the content side, the predominance of free-to-air television, the high price of data packages, the lack of localised content and the low adoption rate of mobile payments remain barriers to the growth of new distribution models such as OTT. Piracy is also a concern, costing the entertainment industry in the Middle East US$500 million annually.75 While the UAE fares better than most in the region, the level of illegal copying is still significant and an obstacle to original content investment and distribution.

75 Source: OSN, 16 October, 2017
I OVERVIEW

The Office of Communications (Ofcom) and the Communications Act 2003 (Act) regulate the UK communications landscape. Ofcom’s current priorities are set out in its 2018–19 Annual Plan. They include completing the integration of Ofcom’s new responsibilities for regulating the BBC, such as publishing its first Annual Report on the BBC and preparing for future awards of spectrum for new 5G services. European Commission (Commission) Digital Single Market (DSM) proposals promise to make significant changes to the UK communications landscape, if adopted in their current form and subject to longer-term changes to national legislation as a result of Brexit.

European law and standards currently govern the UK data protection framework and impose compliance obligations on organisations that process personal data. These rules apply broadly to, inter alia, the collection, use, storage and disclosure of personal data. In general, personal data is defined as information relating to an identified or identifiable natural person who can be identified directly or indirectly from that data (e.g., names, contact information, or sensitive personal data such as health data).

These laws and regulations have undergone substantial change as a result of the General Data Protection Regulation (GDPR), which came into force on 25 May 2018 across Europe, and the UK government’s implementing legislation – the Data Protection Act 2018 (DPA) – which came into force on 23 May 2018. The legal landscape in this sector has also been impacted by the Network and Information Security Directive (NISD) (adopted by the European Parliament in July 2016 and implemented in the UK by the Network and Information Systems Regulations 2018 (NIS Regulation), effective as of 10 May 2018), which is the first EU-wide legislation on cybersecurity. The GDPR and NISD introduce significant fines based on a percentage of global turnover, similar to the regime imposed for antitrust violations. The government has committed to achieve equivalent standards for data protection in the UK post-Brexit. However, at the time of writing it is unclear exactly what type of arrangement the EU and UK will reach regarding the UK’s data protection regime in the post-Brexit period.

1 John D Colahan, Gail Crawford and Lisbeth Savill are partners at Latham & Watkins LLP. The authors would like to acknowledge the kind assistance of their colleagues Terese Saplys, Rachael Astin, Alexandra Luchian, Stewart Robinson, Pierre-Axel Aberg and Callum Rodgers in the preparation of this chapter.


II REGULATION

i The regulators and key legislation

Ofcom is the independent communications regulator in the UK. The Department for Culture, Media and Sport (DCMS) remains responsible for certain high-level policy, but most key policy initiatives are constructed and pursued by Ofcom. Ofcom has largely delegated its duties in respect of advertising regulation to the Advertising Standards Authority (ASA). The Committee of Advertising Practice is responsible for writing and updating the Non-broadcast Code and the Broadcast Committee of Advertising Practice is responsible for the Broadcast Code. On 1 November 2014, Ofcom renewed its 10-year contract with the ASA for broadcast advertising regulation until 2024.4

Ofcom’s principal statutory duty (pursuant to the Act) is to further the interests of citizens in relation to communications matters and to further the interests of consumers in relevant markets, where appropriate by promoting competition.5 This is enshrined in Ofcom’s three main objectives: ‘to promote competition and ensure that markets work effectively for consumers;6 to secure standards and improve quality; and to protect consumers from harm’.7

Ofcom’s priorities and major work areas for 2018 and 2019 are set out below:8

a to promote competition and ensure that markets work effectively for consumers by:
   • supporting investment in full-fibre network infrastructure;
   • monitoring and reporting progress on arrangements for the legal separation of Openreach from BT;
   • preparing for upcoming market reviews;
   • helping consumers and small and medium-sized enterprise (SME) businesses to engage with communications providers;
   • preparing for future awards of spectrum bands; and
   • conducting a competition assessment on the BBC’s proposals to launch a new BBC Scotland TV service;

b secure standards and improve quality by:
   • consulting on implementation of the broad USO as provided for in secondary legislation;

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5 Section 3(1) of the Act.
6 Ofcom has concurrent powers to apply competition law along with the primary UK competition law authority, the Competition and Markets Authority (CMA). Enhanced concurrency arrangements came into effect on 1 April 2014 with the objective of increasing the enforcement of competition law in the regulated sectors by strengthening cooperation between the CMA and sector regulators, including Ofcom, referred to as concurrency. The most recent Annual Report on concurrency was published by the CMA on 30 April 2018, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/703566/annual_concurrency_report_2018_cma79.pdf.
• improving mobile coverage, including consulting on proposals for new 700MHz spectrum licence obligations and requiring operators to deliver improvements in rural areas;
• publishing Ofcom’s first Annual Report on the BBC;
• reviewing guidance to public service broadcasters (PSBs) for production outside London;
• conducting a review of children’s content;
• promoting diversity and equality of opportunity in broadcasting: Ofcom will publish its second Annual Report on the UK TV industry and its first report on the UK radio industry; and
• reviewing the Electronic Programme Guide (EPG) Code and PSB prominence within EPGs;
c) protect consumers from harm by:
• reviewing the cost of calling directory enquiry services;
• identifying and addressing issues raised by migration to VoIP; and
• ensuring network operators design and operate networks in line with Ofcom’s guidance and good security and resilience practice.

Ofcom’s specific statutory duties fall into five main areas:
a) ensuring the optimal use of the radio spectrum;
b) ensuring that a wide range of ECSs – including high-speed data services – are available throughout the UK;
c) ensuring plurality in the provision of broadcasting and a wide range of TV and radio services of high quality and broad appeal;
d) securing the USO on postal services within the jurisdiction; and
e) applying adequate protection for audiences against offensive or harmful material, and unfairness or the infringement of privacy.

On 25 February 2016, Ofcom published the initial conclusions of its overarching review of the UK’s digital communications first announced on 11 March 2015.9 The review encompassed two discrete phases. Phase one focused on evidence-gathering and understanding experiences of digital communications. Ofcom started the first phase in July 2015 by publishing a discussion paper.10 The second phase resulted in initial conclusions focusing on six fundamental measures intended to facilitate the development of the UK communications market:
a) universal availability of fixed and mobile services;
b) a strategic shift to large-scale fibre deployment;
c) a step change in the quality of service;
d) significantly strengthening the independence of Openreach;
e) empowering and protecting consumers; and
f) simplifying and removing unnecessary regulation.

The next steps set out in phase two were to implement the proposed measures through the usual mechanism of regular reviews of individual markets and likewise to implement specific dedicated projects. Specific dedicated projects that have been envisaged or undertaken include:

a. Ofcom working with the government to introduce the new universal right to broadband. This culminated in the introduction of legislation for a broadband USO in March 2018, which came into force on 23 April 2018 and which Ofcom is responsible for implementing. The USO provides a legal right to request a broadband connection of at least 10Mbps download speed (discussed further in Section III.ii);

b. Ofcom continuing to provide accurate, comparable, accessible and increasingly granular coverage information, published in its annual Connected Nations reports;

c. Ofcom using its power to require operators to improve mobile coverage, for example by including licence conditions on population and geographic coverage for new spectrum releases;

d. Ofcom working with BT and industry to make BT’s underground duct system more easily accessible to competitors. Ofcom implemented these changes through the Civil Infrastructure Directive and UK transposition legislation, which came into effect on 31 July 2016. Ofcom has also made specific proposals for improving access in its Wholesale Local Access Market Review. Ofcom will also use this Review to implement regulated access and pricing policies to support investment in access networks;

e. Ofcom setting tough minimum standards for Openreach in the business market with rigorous enforcement and fines for underperformance. Ofcom fined Openreach £42 million in March 2017 for breaching contracts with telecoms providers;


g. Ofcom extending minimum standards and introducing rules to incentivise Openreach to go beyond minimum standards and deliver better service. These rules were introduced in 2016, and have been consulted on throughout Ofcom’s Wholesale Local Access Market Review, which took place from March 2017 until June 2017. The results of this Review were published on 28 March 2018, as modified, with new measures resulting from this taking effect in April 2018;

h. Ofcom setting up a working group with the communications industry to coordinate better service quality;

i. Ofcom consulting on the introduction of automatic compensation for consumers and small businesses. Upon conclusion of the consultation period, Ofcom published a statement in November 2017 that confirms that there is a need for such an automatic compensation scheme and sets out the manner in which it will be put into effect. The scheme will come into effect in January 2019, following a 15-month implementation period;

j. Ofcom developed detailed proposals on Openreach independence and discussed these proposals with the Commission in 2016. In response to Ofcom’s competition concerns, BT agreed in 2017 to Ofcom’s requirements to make Openreach a distinct company with its own staff, management and strategy, and a legal purpose to serve all of its customers equally. Ofcom published its first progress report on the legal separation of Openreach from BT in June 2018;
United Kingdom

Ofcom working with industry and third parties (e.g., price comparison sites) to improve the level of information available to consumers, and exploring a requirement for providers to publish a standard cost comparison measure alongside their tariffs;

Ofcom consulted on mobile switching in the first half of 2016, and completed a qualitative research piece on switching triple-play services (phone line, TV, broadband), in July 2016. Following a consultation in 2017, Ofcom published a statement in December 2017 that the process of switching of mobile communications services requires reform. Service providers will be required to implement the reforms detailed in Ofcom’s statement by no later than 1 July 2019; and

Ofcom consulted on proposals to streamline and update the General Conditions throughout 2016 and 2017, and set out its conclusions in statements published in September 2017, March 2018 and July 2018. All of the revised conditions came into force on 1 October 2018. Ofcom will also consider the scope for deregulation in one out of every four market reviews.

In terms of other regulators, the Body of European Regulators for Electronic Communications (BEREC), formed after the adoption of Regulation (EC) 1211/2009, is now playing an increasingly significant role at a European level. BEREC replaced the European Regulators Group, and acts as an exclusive forum and vehicle for cooperation between NRAs and between NRAs and the Commission.

The prevailing regulatory regime in the UK is contained primarily in the Act, which entered into force on 25 July 2003. Broadcasting is regulated under a separate part of the Act in conjunction with the Broadcasting Acts of 1990 and 1996. Other domestic legislation also affects this area, including:

- the Wireless Telegraphy Act 2006;
- the Digital Economy Act 2010;
- the GDPR and the Data Protection Act 2018;
- the Privacy and Electronic Communications (EC Directive) Regulations 2003 (as amended by the Privacy and Electronic Communications (EC Directive) (Amendment) Regulations 2011);
- European Regulation 2017/003 (e-Privacy Regulation), once it takes effect;
- the NISD and the NIS Regulation;
- the Freedom of Information Act 2000;
- the Enterprise Act 2002;
- the Copyright, Designs and Patents Act 1988;
- the Digital Economy Act 2017 (DEA) (although some sections of the DEA are in force, the remainder are subject to staggered commencement dates); and
- the Competition Act 1998.

The European data protection regime has undergone wholesale reform with the introduction of the GDPR, which became applicable on 25 May 2018, and the UK implementing legislation, the Data Protection Act 2018, which came into effect on 23 May 2018. This

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legislation replaces the previous Data Protection Directive\textsuperscript{12} and the corresponding UK implementing legislation, the Data Protection Act 1998, and introduces more stringent standards and an enhanced enforcement regime.

In July 2013, the DCMS published a policy paper titled ‘Connectivity, content and consumers – Britain’s digital platform for growth’ (Strategy Paper).\textsuperscript{13} In line with the government’s view that a large-scale overhaul of the existing legislation was unnecessary, the Strategy Paper focused on specific and incremental legislative changes to a number of areas, including the following:

\begin{itemize}
  \item[a] a consumer rights bill introducing a new category of digital content in consumer law, together with a set of statutory rights for the quality standards that this content should meet and the remedies available to consumers when digital content does not meet these standards;
  \item[b] changes to improve spectrum management and amendments to the Wireless Telegraphy Act 2006; and
  \item[c] amending the Electronic Communications Code (ECC) to make it easier for communications companies to use land for broadband infrastructure.
\end{itemize}

Following on from the above, the Consumer Rights Act 2015 introduced rights in respect of the quality of digital content and digital services. The Act received royal assent on 26 March 2015 and came into force in stages; it is now fully in force. The main provisions of the Act, including those relating to goods, services and digital content, came into force on 1 October 2015.

In April 2018, the government announced in the Modernising Consumer Markets Green Paper\textsuperscript{14} that it would review the regulatory model for providing various consumer-facing services, including utilities, telecoms and financial services, with a particular focus on ensuring that consumers benefit from new technology while ensuring that personal data is protected. It simultaneously launched a call for evidence on the review of competition law. The consultation closed on 4 July 2018. The government has since appointed an expert panel to examine competition in the data economy and explore what steps the government can take to ensure that new technology markets support healthy competition. The panel will run from September 2018 to early 2019 and will culminate in a final report of recommendations to the government, which will inform the development of the UK’s Data Strategy.

The DCMS issued its spectrum management strategy in March 2014, recognising the need for, among other things:

\begin{itemize}
  \item[a] a uniform system for the valuation of spectrum to set licence fees;
  \item[b] the government to work with Ofcom to encourage efficient use of spectrum, in particular in the release of spectrum, transfer of spectrum and assignment of spectrum to new users;
  \item[c] encouragement of innovation; and
  \item[d] a strategy to address increased demands on spectrum that will evolve from the growth of the IoT, M2M communication and 5G.
\end{itemize}

\textsuperscript{12} Directive 95/46/EC.
The DCMS’s strategy was followed in April 2014 by Ofcom’s spectrum management strategy, discussed in more detail below.

In August 2014, the DCMS issued a consultation paper seeking input on the goals and policies set out in a July 2013 report entitled ‘Connectivity, content and consumers – Britain's digital platform for growth’, which was explored further within a framework published in February 2014. The results of this consultation were used to develop the government’s digital communications infrastructure strategy, which was published on 18 March 2015. For the past few years, the government has made commitments in relation to broadband infrastructure, in particular superfast broadband, connectivity in rural areas and the delivery of mobile broadband connectivity. One step towards this objective came in the form of the DEA, which received royal assent in April 2017. This provided the statutory basis for the development of the new broadband USO (discussed above).

The DEA, among other things, reformed the ECC by introducing a range of measures to make it easier for network operators to deploy infrastructure (phone masts, exchanges, etc.) on public and private land. Ofcom was obliged to publish a new Code of Practice to accompany the proposed changes, to create a number of templates to be used by Code operators and landowners or occupiers, and to create standard terms that may be used by Code operators and landowners or occupiers when negotiating agreements to confer Code rights. Ofcom published final versions of these documents on 15 December 2017.

ii Regulated activities

Ofcom oversees and administers the licensing for a range of activities, including, broadly speaking, mobile telecommunications and wireless broadband, broadcast TV and radio, postal services, and the use of radio spectrum.

The Act replaced the system of individual licences with a general authorisation regime for the provision of ECNs and ECSs. Operators of ECNs and ECSs must comply with the general conditions of entitlement as specified in the Act. As well as the general conditions, individual ECN and ECS operators may also be subject to further conditions specifically addressed to them. These fall into four main categories: universal service conditions, access-related conditions, privileged supplier conditions, and conditions imposed as a result of a finding of significant market power (SMP) of an ECN operator or an ECS provider in a relevant economic market.

Use of radio spectrum requires a licence from Ofcom under the Wireless Telegraphy Act 2006 (subject to certain exemptions).

Television and radio broadcasting requires a licence from Ofcom under the Broadcasting Act 1990 or 1996. Providers of on-demand programme services have to notify Ofcom of their services in advance.

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iii Ownership and market access restrictions

No foreign ownership restrictions apply to authorisations to provide telecommunications services, although the Act directs that the Secretary of State for Culture, Media and Sport (Secretary of State) may require Ofcom to suspend or restrict any provider’s entitlement in the interests of national security.

In the context of media regulation, although the Act and the Broadcasting Acts impose restrictions on the persons that may own or control broadcast licences, there are no longer any rules that prohibit those not established or resident in the EEA from holding broadcast licences. At the end of 2011, Ofcom was asked by the Secretary of State to report on measuring media plurality in light of the proposed acquisition of British Sky Broadcasting Group Plc by News Corporation. In 2012, Ofcom submitted two reports to the Secretary of State advising on approaches to measure media plurality. Ofcom gave evidence and provided advice to the Leveson Inquiry, including advice on models of media regulation. In February 2014, the House of Lords Select Committee on Communications produced a report into media plurality, including advice on the scope and flexibility of any assessment of media plurality. The report included a recommendation that Ofcom should conduct a review of media plurality every four or five years, that there be a higher threshold for intervention and that there be a reform of the system for reviewing mergers in the media sector. The DCMS produced a Media Ownership and Plurality Consultation Report on 6 August 2014 setting out a framework to assess media plurality and commissioning Ofcom to develop a suitable set of indicators. Following on from this, Ofcom published a consultation proposing a framework for media plurality on 11 March 2015. The proposed framework built on the advice Ofcom gave to the Secretary of State in 2012, but there have been no updates since then from either the DCMS or Ofcom.

In March 2017, the Secretary of State intervened in connection with media plurality when it asked Ofcom to review the anticipated acquisition by Twenty-First Century Fox, Inc (21st Century Fox) of 100 per cent of the shares in Sky plc (Sky), a British pay-TV operator. The Secretary of State’s stated potential concerns were twofold: whether there would be sufficient plurality of persons with control of the media enterprises and whether the parties would have genuine commitment to the attainment of standard objectives in relation to broadcasting. Ofcom published its report in June 2017 and found that the anticipated transaction raised potential public interest concerns relating to media plurality due to a risk of increased influence by members of the Murdoch Family Trust over the UK news agenda and political process, with its unique presence on radio, television, in print and online. Ofcom recommended a reference by the Secretary of State to the CMA.

In January 2018, the CMA provisionally found that 21st Century Fox’s anticipated acquisition was not in the public interest due to media plurality concerns, but not due to a lack of commitment to meeting broadcasting standards. The CMA sent its final report to the DCMS in May 2018, following which the Secretary of State accepted the CMA’s recommendation that the anticipated acquisition was not in the public interest due to

18 Available at www.publications.parliament.uk/pa/ld201314/ldselect/ldcomm/120/120.pdf.
20 Available at http://stakeholders.ofcom.org.uk/binaries/consultations/media-plurality-framework/summary/Media_plurality_measurement_framework.pdf.
media plurality concerns and that the most effective and proportionate remedy would be for the Sky News channel to be divested to a suitable third party. 22 21st Century Fox then agreed to divest Sky News to the Walt Disney Company, 23 a move the newly appointed UK Culture Secretary Jeremy Wright said ‘could potentially remedy the public interest concerns identified’. 24 However, Comcast has since outbid Disney for a majority interest in Sky.

iv Transfers of control and assignments

For transactions that do not fall within EU merger control jurisdiction, the UK operates a merger regime in which the parties to a transaction can choose whether to notify a transaction prior to closing. The UK CMA monitors transactions prior to closing and has the power to intervene in un-notified transactions prior to closing or up to four months from the closing of a transaction being publicised. Where the CMA intervenes in a closed transaction it is policy to impose a hold-separate order. 25

The administrative body currently responsible for UK merger control is the CMA. The CMA consults Ofcom when considering transactions in the broadcast, telecommunications and newspaper publishing markets. 26

The Secretary of State also retains powers under the Enterprise Act 2002 to intervene in certain merger cases, which include those that involve public interest considerations. In the context of media mergers, such considerations include the need to ensure sufficient plurality of persons with control of media enterprises serving UK audiences; the need for the availability throughout the UK of high-quality broadcasting calculated to appeal to a broad variety of tastes and interests; and the need for accurate presentation of news, plurality of views and free expression in newspaper mergers. In such cases, the Secretary of State may require Ofcom to report on a merger’s potential impact on the public interest as it relates to ensuring the sufficiency of plurality of persons with control of media enterprises (as was the case, for example, in relation to the recent attempted acquisition of Sky by 21st Century Fox discussed in Section II.iii). Ofcom is also under a duty to satisfy itself as to whether a proposed acquirer of a licence holder would be fit and proper to hold a broadcasting licence pursuant to Section 3(3) of each of the 1990 and 1996 Broadcasting Acts. 27

Following the 2017 National Security and Infrastructure Investment Review Green Paper, 28 amendments to the UK’s merger control regime for transactions in the defence and technology sectors came into force on 11 June 2018. The aim of the amendments is

24 See: https://www.ft.com/content/a7d5e2be-85c8-11e8-96dd-fa5665ec55929.
25 Note, however, that changes in control of certain radio communications and TV and radio broadcast licences arising as a result of mergers and acquisitions may in certain circumstances require the consent of Ofcom.
26 The CMA and Ofcom have signed a memorandum of understanding in respect of their concurrent competition powers in the electronic communications, broadcasting and postal sectors. This is available at www.gov.uk/government/uploads/system/uploads/attachment_data/file/502645/Ofcom_MoU.pdf.
27 There is also the power to take appropriate measures nationally to protect the plurality of the media under Article 21(4) of the EU Merger Regulations (Regulation 139/2004/EC).
to provide greater powers for the Secretary of State to intervene in transactions on public interest grounds. Among other changes, under the new rules, the target turnover threshold has been lowered from £70 million to £1 million for transactions between parties operating in either the design and maintenance of aspects of computing hardware or the development of quantum technology.29

v DSM: e-commerce, online platforms, geo-blocking and telecoms

Introduction

On 6 May 2015, the Commission published a Communication on a DSM Strategy for Europe. This Strategy aims to make the EU’s single market fit for the digital age through three pillars: better online access for consumers and businesses across Europe; creating the right conditions and a level playing field for advanced digital networks and innovative services; and maximising the growth potential of the digital economy. The Strategy includes legislative proposals in a range of areas with a view to make cross-border e-commerce easier, end unjustified geo-blocking, reform the copyright regime and reduce burdens due to different VAT regimes.

The UK government published a response to the Commission’s initial 2015 DSM proposals in January 2016,30 and the Commission’s legislative proposals will be discussed by the European Parliament and the Council (to the extent they have not already been agreed). In certain areas, it is not expected that the Commission’s proposals will become binding on Member States for several years. However, in other areas, the proposals are well progressed. For instance, the new regulation on cross-border portability of online content services has applied across the EU since 1 April 2018 and allows consumers to access their online content services while travelling within the EU (discussed further in Section V.ii). This can be seen as complementary to the new data roaming rules of June 2017, which enable consumers to use their domestic mobile data allowance and rates when roaming in other Member States.

In May 2017 the Commission published its mid-term review on the implementation of the DSM, which identifies three main areas where further EU action is needed: the development of the European data economy to its full potential; the protection of Europe’s assets by tackling cybersecurity challenges; and the promotion of online platforms as responsible players in a fair internet ecosystem.31 The mid-term review also clearly emphasises the necessity to rapidly adopt the proposals for the Electronic Communications Code. As a direct response to the challenges identified in the mid-term review, the Commission announced in April 2018 that revisions are being made to Directive 2003/98/EC, which governs the use of public sector information. The aim is to tap into the huge resource of data that is currently held in the public sector, thought to be worth approximately €52 billion, and reuse it to help address a range of different societal problems such as healthcare, public transport and even artificial intelligence.32

31 Available at eur-lex.europa.eu/legal-content/EN/TXT/?qid=1496330315823&uri=CELEX:52017DC0228.
E-commerce

On 10 May 2017, the Commission published a report on the e-commerce sector enquiry. One of the main points the Commission raised was that, with the growth of e-commerce, business practices have emerged that may raise competition concerns, such as pricing restrictions and online marketplace (platform) bans. The Commission noted that it is important to avoid diverging interpretations of the EU competition rules in e-commerce markets, which may in turn create obstacles for companies to the detriment of a DSM. One significant development has been the abolition of retail roaming charges throughout the EU, effective from 15 June 2017, as part of the ongoing focus on promoting cross-border e-commerce.

Online platforms

The Commission has emphasised the role of online platforms, with one million businesses already selling goods and services via online platforms and more than 50 per cent of SMEs that operate through online marketplaces selling cross-border.33 In May 2016, it published a communication that proposed ways to foster development of such platforms and identified two specific issues for further investigation: safeguarding a fair and innovation-friendly business environment; and ensuring that illegal content online is timely and effectively removed, with proper checks and balances, from online platforms.34 In its mid-term review, the Commission identified online platforms as one of three emerging challenges, and proposed the implementation of actions to tackle these challenges.35 The result, announced by the Commission on 26 April 2018, is a proposed suite of new standards on transparency and fairness in relation to online platforms. Small businesses using online platforms had raised concerns surrounding unfair trading practices of online platforms as intermediaries of business–customer relationships (such as a business’ position in search results); therefore, the aim of these rules is to create a fair, transparent and predictable business environment for smaller businesses when using online platforms. The proposed rules include measures seeking to increase transparency, resolve disputes more effectively and establish an EU Observatory to monitor the impact of the new rules.36

Geo-blocking

On 27 February 2018, the EU adopted the Geo-blocking Regulation, which will apply from 3 December 2018. The Regulation prohibits unjustified geo-blocking, and other forms of discrimination, based on customers’ nationality, place of residence or place of establishment. The Regulation tackles the concern that geo-blocking potentially limits online shopping and cross-border trade, and leads to undesirable geographical market segmentation. Importantly, electronically supplied services offering copyright-protected content are excluded from the Regulation: territorial exclusivity is essential for the creative industries to monetise and

exploit their content, and the Commission argues that facilitating access to audiovisual services across borders is part of other initiatives under the DSM Strategy.\textsuperscript{37} For this reason, the Regulation does not affect online television, films, streamed sports, music, e-books or games. However, the Commission will evaluate the Regulation’s impact two years after its entry into force to assess the possibility of an extension of the new rules to online services related to non-audiovisual copyright-protected content.

**Telecoms**

On 14 September 2016, the Commission announced its proposals for telecoms regulation reform and plans to modernise and improve connectivity across the EU (a proposal to modernise the EU’s copyright rules was also announced: see Section V.iii). The telecoms and connectivity proposals included:

\begin{itemize}
  \item a recasting the Framework, Authorisation, Access and Universal Services Directives as one directive, the European Electronic Communications Code (Code);
  \item b upgrading BEREC to a fully fledged EU agency;
  \item c a 5G Action Plan for the development and deployment of 5G networks in Europe; and
  \item d a WiFi4EU initiative to aid European villages and cities roll out free public Wi-Fi.
\end{itemize}

Generally, the proposed Code aims to address and harmonise spectrum policy and regulation, including spectrum auction timing, across the single market in part to stimulate competition and investment in 5G networks. It also tries to address new technologies and services that are not clearly contemplated by current legislation. In the UK, the rules and timelines for the spectrum auctions were announced by Ofcom in July 2017 and the auctions were expected to begin in October 2017. BT and Three commenced judicial review proceedings challenging, \textit{inter alia}, the legality of the spectrum cap proposed by Ofcom as part of the spectrum auction. This challenge was unsuccessful, however, and the auctions took place. The results of the principal bidding stage were announced on 5 April 2018.\textsuperscript{38}

OTT services would be classified a sub-class of ECS and subject to regulations concerning security (including security audits) and interconnectivity (among end users and to emergency services). Other amendments regarding number allocation have been made to address potential competition issues with the expected advent of the IoT and M2M communication: national regulators would be allowed (but not required) to assign numbers to undertakings other than providers of ECNs and services. The Code also proposes to sweep away universal service access requirements to legacy technologies (e.g., public payphones) and replace them with a requirement to ensure end users have access to affordable, functional internet and voice communication services, as defined by reference to a dynamic basket of basic online services delivered via broadband. In addition, the Code contains additional consumer protections via proposed regulations requiring telecoms providers to provide contract summaries and improved comparison tools.

It is also proposed that the regulatory role of BEREC be enhanced with a view to improving regulatory consistency across the single market. For example, it is proposed that decisions on spectrum assignment be subject to a peer review process whereby BEREC would issue an opinion on whether a decision should be amended or withdrawn to ensure consistent


spectrum assignment. BEREC would also issue an opinion on any remedy proposed by an NRA in relation to maintaining the Code's objectives. These opinions are proposed to be persuasive rather than binding, but the Code requires that NRAs and the Commission (as relevant) take BEREC opinions into account. BEREC would also be granted legally binding powers, including a double-lock system in relation to any draft remedy proposed by an NRA (i.e., where BEREC and the Commission agree on a position regarding such draft remedy, the NRA could be required by the Commission to amend or withdraw the draft measure).

In terms of policy proposals, the 5G Action Plan proposes to bring uninterrupted 5G coverage to all major European urban areas and transportation corridors by 2025, with several interim deadlines relating to, *inter alia*, spectrum assignment and development of global 5G standards (2019). In December 2017, Urve Palo, Minister of Entrepreneurship and Information Technology, set out the deployment road map and detailed commitments, for example to transpose the Code into national law by mid-2020. The specifics of the 5G Action Plan, such as the development of 5G standards, are still evolving. There is limited guidance on funding for the 5G Action Plan, although the Code itself has stimulated to an extent such investment, and the Commission has launched the European Broadband Fund (combining private and public investments) to support network deployment throughout the EU. The Commission has also committed to exploring a proposal by a telecoms industry group to provide a venture-financing facility (jointly funded by public and private sources) for start-ups developing 5G technologies and applications.

The WiFi4EU initiative intends to assist local authorities to offer free Wi-Fi connections in parks, libraries and other public spaces by providing local authorities with small grants of up to €60,000 (from a total initial budget of €120 million) for equipment and installation costs. In May 2017, the European Parliament, Council and Commission reached a political agreement on the initiative and its funding, and as of May 2018, local communities have been able to apply for WiFi4EU vouchers to set up free public Wi-Fi networks. It is intended that this will develop into a more harmonised telecoms regulatory regime, with an advanced 5G network that could be in place by 2025.

### III TELECOMMUNICATIONS AND INTERNET ACCESS

#### i Internet and internet protocol regulation

As previously noted, the Act is technology-neutral, and as such there is no specific regulatory regime for internet services. ISPs are also ECNs or ECSs depending on whether they operate their own transmission systems, and are entitled to provide services under the Act in compliance with the general conditions and, where applicable, specific conditions.

VoIP and VoB are specifically subject to a number of general authorisation conditions under the Act, such as those related to emergency call numbers.

In the context of the net neutrality debate, the Revised EU Framework adopted a range of internet traffic management provisions allowing NRAs such as Ofcom to adopt measures to ensure minimum quality levels for network transmission services, and to require ECN and ECS operators to provide information about the presence of any traffic-shaping processes operated by ISPs. These provisions were implemented into UK law.

Prior to the Regulation on Open Internet Access coming into force in 2016, the Broadband Stakeholders’ Group published a voluntary industry code of practice on traffic management transparency in March 2011. In July 2012, major ISPs published the Open Internet Code of Practice, which commits ISPs to providing full and open internet access. The
latest Open Internet Code was published on 8 June 2016. The Code preserves the concept of an open internet while clarifying the context in which some innovative services, which could become more prevalent as the IoT becomes a reality, could be provided alongside the open internet. The Code added three new commitments: ISPs promise open and full access to the net across their range of products; firms cannot market a subscription package as including internet access if certain kinds of legal content or services are barred; and members must not target and degrade content or applications offered by a specific rival.39 Notably, Everything Everywhere (EE) opted out of signing the Code.

From April 2016, the Regulation on Open Internet Access40 put in place EU-wide rules for net neutrality, and granted end users rights to access and distribute information and content, use and provide applications and services, and use terminal equipment of their choice, irrespective of such end user’s or provider’s location (Article 3(1)). The aim is that users will have access to online content that is not subject to discrimination or interference. Likewise, companies may not pay for prioritisation, so access to an SME’s website will not be unjustly slowed down to allow access for larger companies. The requirement that all internet traffic be treated equally is subject to exceptions to:

a. comply with EU or national legislation related to the lawfulness of content or with criminal law;
b. preserve the security and integrity of the network such as to combat viruses;
c. minimise network congestion that is temporary or exceptional; and
d. filter spam (i.e., to filter unsolicited communications and allow parents to set up parental filters).

In terms of the latter, such measures need to be transparent, non-discriminatory and proportionate, and must not be maintained for longer than is necessary. Likewise, providers of internet access services must publish information on traffic-management measures in end user contracts, along with details on the privacy of end users and the protection of their personal data. Notably, NRAs are required to monitor and enforce the open internet rules, although it is for Member States to lay down rules on the penalties applicable for infringements of the net neutrality provisions. On 30 August 2016, BEREC published guidelines41 for NRAs on the implementation of net neutrality under the Regulation on Open Internet Access, in particular covering obligations to monitor closely and ensure compliance with the EU net neutrality rules to ensure equal treatment of traffic in the provision of internet access services and related end user rights.

ii Universal service

Universal service is provided under the Act by way of the Universal Service Order. The Order in the UK covers ECNs and ECSs and activities in connection with these services. Ofcom

40 Available at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R2120&from=EN.
designated BT and KCOM as universal service providers in the geographical areas they cover; however, the designation of a single universal service provider and the design of an industry cost-sharing fund are among the factors that still need to be finalised.42

Effective from April 2018, the Secretary of State published an order for a minimum affordable broadband connection to be available throughout the UK providing, *inter alia*, a download sync speed of at least 10Mbps and the capability to allow data usage of at least 100GB per month.43 This marks a major step forward in implementing a universal service in the UK.

In September 2012, as part of a scheme to create super-connected cities, the government announced £144 million in investment across 10 of the UK's largest cities to help provide them with superfast broadband. However, following legal challenges by two of the UK’s biggest networks, the government withdrew the state-aid application relating to the scheme. Consequently, public funds for the scheme had to be withdrawn in July 2013, before the DCMS diverted the allocated sums to a scheme that allowed SMEs to apply for vouchers to install faster internet connections in August 2013.44 As part of the government’s 2014 autumn statement, this scheme was extended by 12 months to March 2016 with a further £40 million of funding. In January 2014, the DCMS announced a £10 million fund for a pilot programme to extend superfast broadband to hard-to-reach areas, and in February 2014, a further £12 million was allocated to provide superfast broadband to Wales. An August 2014 report from the DCMS confirmed that the rollout of superfast broadband to 95 per cent of UK homes and businesses was on track for completion by 2017. In a Parliament briefing paper published in March 2017, it was stated that this would be completed by December 2017. As part of the Commission’s state aid clearance decision, the UK committed to undertake an *ex post facto* evaluation of the National Broadband Scheme. This was published by Oxera in March 2015.45 The Commission has approved an extension on materially the same terms, and the scheme will now be valid until December 2020. The government is committing further funds to ‘put the UK at the forefront of the global technology revolution’,46 investing £200 million to fund local projects with the aim of testing ways to accelerate the market for the delivery of new full-fibre broadband.

In June 2015, Ofcom published a report setting out its assessment and recommendations on the provision and availability of communications services for SMEs in the UK.47 Ofcom found that the availability of superfast broadband to SMEs is significantly lower than to residential premises. In its annual review for 2017 to 2018, Ofcom noted that it was key to continue to help SMEs engage in the communications market, and in 2018 it identified a lack of ICT specialism within SMEs and adequate assistance from providers as contributing factors to this lack of engagement.48

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42 Available at https://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-8146.
47 Available at http://stakeholders.ofcom.org.uk/binaries/research/telecoms-research/sme/bb-for-smes.pdf.
Access and interconnection are regulated in the UK by EU competition law and specific provisions in the Act aimed at increasing competition. The General Conditions require all providers of public ECNs to negotiate interconnection with other providers of public ECNs. Specific access conditions may also be imposed on operators with SMP. Although prices charged to end users are not regulated, Ofcom may regulate wholesale rates charged by certain operators to alternative operators for network access. This is the case, *inter alia*, for wholesale fixed termination rates, wholesale mobile call termination rates, wholesale broadband access rates, local loop unbundling and wholesale line rental services.

Ofcom imposed specific conditions on BT and KCOM in certain areas where they enjoy SMP so as to allow alternative operators to compete in the retail broadband market.49 These include an obligation to provide general and non-discriminatory network access to BT and KCOM’s wholesale broadband products to alternative operators on reasonable request; an obligation to maintain separate accounts between services to alternative operators and its own retail division as well as other related transparency obligations; and a charge control on BT to ensure that charges for its broadband wholesale products are based on the costs of provision. Network access obligations included virtual access to new fibre lines laid by BT (through its access service division, Openreach), allowing alternative operators to combine their own electronics with physical infrastructure rented from BT. Furthermore, in June 2015, Ofcom proposed a charge control on the wholesale prices BT charges for products using leased telecoms lines, which provide vital high-speed links for businesses and providers of superfast broadband and mobile services.50 In 2016, Ofcom also stated that Openreach must become more independent from BT, and proposed that Openreach become a distinct company with its own board and accountable executives. Likewise, in February 2016, Ofcom committed to making it easier for telecoms providers to invest in advanced, competing infrastructure by improving access to Openreach’s network of telegraph poles and ducts, allowing competitors to connect their own fibre-optic cables directly to homes and businesses.51

Ofcom’s aim to promote the restructuring of BT and Openreach came to fruition in March 2017, when BT agreed that Openreach should become a distinct company with its own staff, management, strategy and legal purpose. This separation will likely take some time to be fully reflected in the market. Indeed, Ofcom noted in April 2018 that many SMEs still perceive BT as having specialist access to the Openreach network for installation and fault-finding, which deters switching between providers. However, significant progress has occurred already.

### III Restrictions on the provision of service

The Digital Economy Act 2010 (DEA 2010) includes provisions that were aimed at tackling online copyright infringement as a result of file sharing. It empowers the Secretary of State to impose obligations on ISPs to limit the internet access of subscribers who engage in online copyright infringement. Under the DEA 2010, Ofcom proposed a code of practice governing the initial obligations on ISPs. A second draft was published in June 2012. However, this version, and legislation on cost sharing in relation to the new obligations on ISPs, have

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not been finalised, and it is unclear whether they will ever come into force. Instead, the government has looked to industry to develop voluntary measures. In July 2014, the DCMS announced a scheme, Creative Content UK, spearheaded by ISPs and media industry leaders and supported by a government contribution of £3.5 million, to raise awareness of copyright infringement and warn internet users whose accounts are used to illegally access and share copyright material. The subscriber alert programme, which was initially known as the Voluntary Copyright Alert Programme, has now evolved to encompass the Get it Right from a Genuine Site campaign launched in January 2017. This involves copyright owners sending evidence of copyright infringement to ISPs, which will in turn issue letters of warning to their subscribers. Rather than being threatening, these letters are intended to be educational. A number of organisations such as Sky, BT, TalkTalk and Virgin Media have signed a memorandum of understanding that will underpin the Creative Content programme.

On 28 March 2018, the government launched the Creative Industries Sector Deal, which includes various specific commitments of interest concerning the tackling of online infringement of copyright. More than £150 million will be jointly invested by the government and industry to assist the UK’s cultural and creative businesses thrive in the digital age. As part of the deal, £2 million is being committed to extend the Get it Right from a Genuine Site campaign, and rights holders and intermediaries will hold discussions to consider codes of practice on social media and user uploaded platforms, digital advertising and online marketplaces to crack down on copyright infringement.

Among the provisions of the DEA is an increased maximum penalty for online copyright infringement of 10 years.

The availability of defences for online intermediaries in respect of unlawful content is governed primarily at a European level by the E-Commerce Directive, as implemented into UK law by the Electronic Commerce (EC Directive) Regulations 2002 and applicable case law. The Directive sets out defences for intermediary information society service providers.

**iv Security**

**Privacy and consumer protection overview**

In the UK, consumers’ personal data is primarily protected by the GDPR and the Data Protection Act 2018; the Privacy and Electronic Communications (EC Directive) Regulations 2003 as amended by the Privacy and Electronic Communications (EC Directive) (Amendment) Regulations 2011 (ePrivacy UK Regulations), which implement the EU Directive on Privacy and Electronic Communication, as amended by the ePrivacy Directive; and the NIS and NIS Regulation. The GDPR has significantly changed the current UK – and broader European – data protection framework. In line with the Commission’s DSM Strategy and the reforms being brought in by the GDPR, proposals for reform of the ePrivacy Directive are also currently under consideration. In 2017, the Commission proposed a draft ePrivacy

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54 Directive (2000/31/EC.

55 Directive 2002/58/EC.

56 Directive 2009/136/EC.
Regulation (Draft ePrivacy Regulation), which is currently part way through the European legislative review process. The Draft ePrivacy Regulation is expected to come into force in 2020 at the earliest following a minimum transition period of one year.

Data protection

The GDPR imposes strict controls on the processing (including disclosure) of personal data, including:

a providing one or more listed conditions that must be met to ensure personal data is processed fairly, lawfully and in a transparent manner, such as that the individual has consented or that the processing is necessary for the purposes of fulfilling a contract;

b the requirement that data can generally only be processed for the purpose for which it was obtained, must be kept accurate and up to date and for no longer than is necessary, and must not be excessive;

c the requirement that data be kept secure (i.e., be protected against unlawful processing and accidental loss, destruction or damage);

d the restriction that data cannot be transferred to countries outside the EEA unless certain conditions are met, such as with the EU–US Privacy Shield (see ‘Litigation and EU–US transfers of personal data’ for more details), whereby personal data can be transferred to US entities that have undertaken a process of self-certification to determine that they meet an adequate standard of privacy protection and commit to seven privacy principles; and

e personal data must be processed in accordance with the rights of the data subject under the GDPR, including that individuals have a right to access the personal data held about them, and a right in certain circumstances to have inaccurate personal data rectified or destroyed, among various other rights.

As noted above, the GDPR has significantly changed the current UK – and broader European – data protection framework. The key changes under the GDPR include:

a the implementation of the new rules as a regulation, rather than a directive, such that it is directly applicable in every Member State;

b the removal of the requirement to notify or register data processing activities with national regulators; however, controllers and processors will need to keep their own record of processing;

c the introduction of an extraterritorial effect, resulting in the regulation applying not only to organisations established within the EEA, but also to organisations established outside the EEA but offering goods or services to, or monitoring the behaviour of, individuals in the EEA (although it remains unclear how this will operate in practice);

d a tightening of the requirements for valid consent, with the effect that consent will only be deemed to be valid if it is freely given, specific, informed and unambiguous;

e a stricter approach to the export of data outside the EEA, resulting from the general standards of data protection being raised throughout the Regulation as a whole;

f the introduction of mandatory data breach notification requirements (including notification to both national regulators and, in certain circumstances, to data subjects affected by a breach). On the occurrence of a breach, organisations must now inform the UK Information Commissioner’s Office (ICO) without undue delay and, where feasible, not later than 72 hours after becoming aware of a data breach;
g a right to data portability that will require the data controller to provide information to a data subject in a machine-readable format so that it may be transferred to another controller;

h maximum fines of the higher of up to €20 million or four per cent of an organisation’s annual global turnover for breaches;

i certain categories of online identifiers such as internet cookies and IP addresses may be classified as personal data; and

j new definitions termed genetic data and biometric data, which include data relating to characteristics obtained during foetal development and data that allows the unique identification of a person to be confirmed through facial images or dactyloscopic data – now categorised as special categories of personal data (i.e., sensitive personal data).

The GDPR permits certain derogations by Member States, and the DPA seeks to provide for these accordingly to accommodate various existing UK statutes. For instance:

a it includes exemptions for journalists, research organisations, financial services firms (for anti-money laundering purposes) and employers (to process special categories of personal data and criminal conviction data without consent to comply with employment law obligations);

b certain actions (with some exceptions for actions necessary for preventing crime, etc.) relating to data will be criminal offences (subject to a fine), for example obtaining, procuring, retaining or selling data against a controller’s wishes (even where lawfully obtained); intentionally or recklessly re-identifying individuals from anonymised or pseudonymised data (or knowingly processing such data); and altering records with the intent to prevent disclosure following a subject access request; and

c a parent’s or guardian’s consent will be required to process the personal data of a child who is under 13 years old (the GDPR permits Member States to set this age between 13 and 16 years old).

Litigation and EU–US transfers of personal data

There are several valid legal bases for the transfer of personal data from the EU to countries outside the EU, of which two are subject to ongoing litigation: the Privacy Shield (successor to the Safe Harbor) and standard contractual clauses (also known as model clauses).

Under the historic Safe Harbor agreement, if a US recipient of personal data was self-certified under the US Safe Harbor regime, data transfers could be made to that recipient in the US, notwithstanding the general prohibition on transfer under the European data protection legislation in place at that time, because such a recipient was deemed to have adequate protection in place. The Safe Harbor regime was challenged in Schrems v. Data Protection Commissioner. This case was brought by privacy activist Max Schrems, who argued that the EU–US Safe Harbor agreement did not provide adequate security for EU citizens in light of the revelations exposed by Edward Snowden about PRISM and United States National Security Agency surveillance programmes. The CJEU invalidated the legal basis for

57 In Patrick Breyer v. Bundesrepublik Deutschland (C-582/14), the CJEU ruled in October 2016 that where a website operator holds IP addresses and has ‘the legal means which enable it to identify the data subject with additional data which the internet service provider has about that person’, then these will be classified as personal data.
the Safe Harbor Framework on 6 October 2015 with the immediate effect that the agreement was no longer considered to provide adequate protection under the eighth data protection principle.

Following the decision in *Schrems v. Data Protection Commissioner*, the Commission and the US government entered into lengthy negotiations as to a new means of EU–US data transfers. The new EU–US Privacy Shield came into effect on 1 August 2016 following approvals by the Commission and EU Member States. Under the new Privacy Shield, US organisations commit to seven privacy principles to ensure that adequate protections are in place: the notice principle, the data integrity and purpose limitation principle, the choice principle, the security principle, the access principle, the recourse, enforcement and liability principle, and the accountability for onward transfer principle (Principles). To join the Privacy Shield, an organisation must publicly commit to and implement the Principles through a self-certification process, be subject to the authority of US law by the relevant enforcement authority and publicly disclose its privacy policy.58

The most significant changes from the Safe Harbor framework to the Privacy Shield include the following:

a individuals affected by non-compliance with the Principles can seek redress (from the organisation itself, from an independent dispute resolution body and from the national DPA) and non-compliance can be enforced by various bodies (the Federal Trade Commission (FTC), a newly created privacy shield panel and judicial redress);
b there are tighter controls on transfers of personal data;
c annual joint reviews by the Commission, the FTC and the Department of Commerce on whether the Privacy Shield meets the adequacy finding that entitles companies to transfer personal data overseas legally; and
d written assurances by the US government that any access to personal data by public authorities will be subject to clear limitations, safeguards and oversight mechanisms.

In April 2017, the European Parliament passed a non-legislative resolution stating that the Commission should review the Privacy Shield to ensure it does not undermine the EU Charter on Fundamental Rights and the GDPR. In September 2017, the first joint review of the Privacy Shield took place between the EU and US. In a report59 published following the review, the Commission concluded that the Privacy Shield continues to ensure an adequate level of protection for personal data, but that there is room for improvement. The report sets out a number of recommendations to the US authorities on how to improve the functioning of the Privacy Shield, including, for example, that the Department of Commerce should proactively search for and investigate false claims of participation in the Privacy Shield, conduct regular compliance checks and swiftly appoint a Privacy Shield Ombudsman, in addition to increasing its cooperation with the Commission on relevant legal developments in the US. The Article 29 Working Party (which has now been replaced by the European Data Protection Board) also issued a report60 on the joint review in November 2017 that highlighted commercial issues and issues relating to access by US public authorities to data transferred to the US under the Privacy Shield. The report demands that an action plan be

\[58\] Available at www.privacyshield.gov/welcome.


set up immediately (or at latest at the second joint review), and threatens to bring claims regarding the Privacy Shield adequacy decision before EU national courts if the issues are not addressed by the time of the second joint review.

In the wake of the revelation that Facebook had improperly shared the data of approximately 2.7 million European citizens with political consultancy Cambridge Analytica, despite the fact that both entities are signatories to the Privacy Shield, the European Parliament issued a resolution on 5 July 2018. The resolution notes the findings of both the Commission report and the Article 29 Working Party report, and takes the view that the current Privacy Shield arrangement does not provide an adequate level of protection. The resolution stated that, unless the US was fully compliant by 1 September 2018, the EU Commission should suspend the Privacy Shield until the US authorities comply with its terms. On 25 October 2018, the European Parliament issued a resolution in which it renewed its call to suspend the Privacy Shield. However, at the time of writing no further action has been taken, although we note that on 18 October 2018, senior officials from the Commission, EU supervisory authorities and the US government began their second annual review of the Privacy Shield. The Commission will publish a report on its findings later in 2018.

The Privacy Shield is also under scrutiny from privacy campaigners who have brought claims before the General Court (the lower court of the CJEU) contesting the Commission’s adequacy finding for the Privacy Shield on the grounds that it still does not provide a level of data protection equivalent to the level required by European data protection law.

In May 2016, Max Schrems filed a complaint with the Irish Data Protection Commissioner concerning the legal status of data transfers under Facebook’s standard contractual clauses. The Irish Data Protection Commissioner referred the case to the CJEU to determine the legal status of standard contractual clauses to transfer personal data outside the EU. The CJEU will need to consider if personal data transfer using model clauses is legal. However, on 31 July 2018, the Irish Supreme Court granted leave to Facebook to appeal the case, and, in light of the referral to the CJEU, stated that it would hear the case before the end of 2018. It is expected to take effect in 2020, following an implementation period of at least one year.

**ePrivacy Regulation**

The Draft ePrivacy Regulation would introduce further rules for the electronic communications sector, including controls on unsolicited direct marketing, restrictions on the use of cookies, and rules on the use of traffic and location data. As with the existing ePrivacy Directive, the intent with the ePrivacy Regulation is to complement the GDPR, and establish a modern, comprehensive and technologically neutral framework for electronic communications.

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The Draft ePrivacy Regulation (which is subject to further changes) aims to improve on the existing ePrivacy Directive in several ways, including:

- expanding the scope of ePrivacy laws to include OTT providers who provide services functionally equivalent to traditional telecoms providers, and apply to organisations worldwide as long as they are providing services to end users in the EU;
- reviewing the rules on the use of cookies and other tracking technologies to establish when consent should be required, and whether the standard of consent should be equivalent to that in the GDPR (e.g., it has been proposed that consent would not be necessary for cookies used for the purposes of analytics);
- tightening rules in relation to direct marketing (including business-to-business marketing);
- restricting use of content and metadata by communications providers. However, the scope of these restrictions is hotly debated, and one of the hot topics responsible for the delay in the agreement of the proposed regulation text;
- alignment of sanctions to the GDPR: for example, breach could bring liability of up to €20 million or four per cent of annual worldwide turnover; and
- unifying the ePrivacy Regulation’s enforcement under GDPR enforcement bodies.

The final Draft ePrivacy Regulation will likely arrive in the spring of 2019. It is not clear whether it will become law before the UK’s planned departure from the EU; a cautious approach would be to assume it will take effect (in its eventual form) in the UK. Given the criticism of the proposal, companies should also be prepared to see substantial changes to the draft before its passage, and the development of this law should be tracked to ensure ongoing compliance. The Draft ePrivacy Regulation must be approved by the European Parliament and European Council prior to taking effect.

**Enforcement**

The ICO is responsible for the enforcement of the GDPR, DPA and the ePrivacy Directive as well as the Freedom of Information Act 2000 (which provides individuals with the ability to request disclosure of information held by public authorities).

The ICO is increasingly focusing on enforcement generally, and on the use of monetary penalties in particular (under the GDPR, penalties of up to a maximum of 4 per cent of global turnover or €20 million, whichever is the higher, may be applied).

According to the ICO’s Annual Report for 2017 and 2018, the ICO issued the most civil monetary penalties for Privacy and Electronic Communications Regulation breaches, with 26 penalties totalling £3.28 million for a range of prohibited marketing activities. A total of 11 civil monetary penalties cumulating at £1.29 million were issued across public and private spheres for breaches of data protection principles. Prior to July 2018, the largest of these was a £400,000 fine on Carphone Warehouse following a serious cyberattack, which at the time was the joint-highest fine ever served (the other being the £400,000 fine served on TalkTalk Telecom Group Plc (TalkTalk) for security failures that permitted a cyberattacker to obtain customer data). The ICO served the maximum possible fine under the Data Protection Act 1998 (£500,000) on Facebook in July 2018 for failing to safeguard the personal data of millions of users and for failing to be transparent with those users about

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65 Available at https://ico.org.uk/action-weve-taken/enforcement/the-carphone-warehouse-ltd/.
how their data was in turn being harvested by third parties, including by political consulting firm Cambridge Analytica. Other large fines include the £250,000 fine served against Yahoo! UK Services Ltd in May 2018 for a 2014 cyberattack incident involving approximately 500 million Yahoo! user accounts worldwide. In July 2018, the Independent Inquiry into Child Sexual Abuse was fined £200,000 for revealing identities of abuse victims in a mass email.

The most common grounds for large fines and enforcement action are loss of data, other major data security breaches and, to a lesser extent, automated marketing calls. The ICO takes a serious view of the loss of data. Humberside Police were fined £130,000 in April 2018 after three disks containing footage of interviews with an alleged rape victim, plus accompanying notes and details of the alleged perpetrator, were lost.66 The Crown Prosecution Service was fined £325,000 in May 2018 after it lost unencrypted DVDs containing recordings of police interviews.67 Larger fines were issued against private companies for unsolicited marketing calls and messages. In May 2017, the ICO issued the highest-ever nuisance calls fine of £400,000 to Keurboom Communication Ltd, which was responsible for 99.5 million nuisance calls.68 In January 2018, Barrington Claims Ltd was fined £250,000 for making automated marketing calls to individuals whom it could not prove had consented to receiving such calls.69 Finally, the Energy Saving Centre Ltd was fined £250,000 in April 2018 for making unsolicited calls to subscribers who had registered with the Telephone Preference Service.70

Individual data subjects have the right under the GDPR to notify a data controller to cease or not to begin processing their personal data for the purposes of direct marketing. Under the ePrivacy UK Regulations, an organisation must obtain prior consent before sending a marketing message by automated call, fax, email, SMS text message, video message or picture message to an individual subscriber. There is a limited exemption for marketing by electronic mail (both email and SMS) that allows businesses to send electronic mail to existing customers provided that they are marketing their own goods or services, or goods and services that are similar to those that were being purchased when the contact information was provided; and the customer is given a simple opportunity to opt out free of charge at the time the details were initially collected and in all subsequent messages. The same maximum fine (of £500,000) also applies to breaches of the ePrivacy UK Regulations.

Under the ePrivacy UK Regulations, location data (any data that identifies the geographical location of a person using a mobile device) can be used to provide value-added services (e.g., advertising) only if the user cannot be identified from the data or the customer has given prior consent. To give consent, the user must be aware of the types of location data that will be processed, the purposes and duration of the processing of that data, and whether the data will be transmitted to a third party to provide the value-added service.

The consent of users of the relevant terminal equipment for the placement of cookies is required, unless a cookie is strictly necessary to provide an online service requested by a user (such as online shopping basket functionality, session cookies for managing security tokens throughout the site, multimedia flash cookies enabling media playback or load-balancing session cookies). In practice, steps have been taken by most reputable UK websites to comply

69 Available at https://ico.org.uk/action-weve-taken/enforcement/barrington-claims-ltd/.
with these consent requirements, ranging from banner notices with tick boxes, boxes that require an active step to make them disappear, to one-time banners or pop-overs giving brief information and allowing the user to take steps to disable the site’s cookies if they wish to do so before continuing to use the site.\textsuperscript{71} Between April 2016 and March 2017, the ICO received 195 reports regarding breaches of cookies rules via their website, a slight decrease from 210 received in the previous financial year ending March 2016.\textsuperscript{72} Its current approach is to focus on sites that are not doing enough to raise awareness of cookies or to obtain their users’ consent, particularly those most-visited sites in the UK. However, according to the ICO, cookies remain a low consumer threat, as the number of reported concerns about cookies was 195 compared to 167,018 concerns received about nuisance calls, text messages and emails.\textsuperscript{73} A variety of different approaches can be seen across those countries that have implemented the consent rules, although before the GDPR came into effect there was a general trend towards an implied consent approach rather than a strict express consent approach.

It remains to be seen whether the ICO’s approach towards cookies will shift given the higher standards imposed by the GDPR and the proposed ePrivacy Regulation. The GDPR introduces a higher level of consent, stating that consent should be a clear affirmative act establishing a freely given, informed and unambiguous indication of the data subject’s agreement to the processing of personal data. Silence or inactivity does not constitute consent, and consent needs to be obtained for each processing purpose.\textsuperscript{74} Further, the data subject must have the right to withdraw consent at any time.\textsuperscript{75} This means companies that use banners that do not interrupt a user’s interaction with a website (rather than those that provide notice and infer consent from continued use, for example) or that rely on implied consent (i.e., consent obtained by means of a pre-ticked opt-in box or an opt-out tick box) may need to revise this approach. Now, only opt-in consent is sufficient to demonstrate that the standard has been met. Other than functional, strictly necessary cookies, no cookies should be applied before such consent has been sought. Further, such consent should be sought on an unbundled basis (i.e., setting out, and obtaining consent for, each purpose for which cookies are used).

**Data breach notification**

The GDPR introduces a new data breach notification obligation on data controllers requiring notification to the supervisory authorities without undue delay and not later than 72 hours after becoming aware of a breach, unless the data security breach is unlikely to result in a risk to the rights and freedoms of a data subject. If a personal data breach results in a high risk to the rights and freedoms of a natural person, a data controller must inform the natural person of the data breach without undue delay.\textsuperscript{76} The GDPR also requires a data processor to notify a data controller if it becomes aware of a personal data breach. An infringement

\textsuperscript{71} Available at https://ico.org.uk/action-weve-taken/cookies.
\textsuperscript{72} Available at https://ico.org.uk/action-weve-taken.
\textsuperscript{73} Ibid.
\textsuperscript{74} General Data Protection Regulation: Recitals 26, 30 and 32.
\textsuperscript{75} General Data Protection Regulation: Article 7(3).
\textsuperscript{76} General Data Protection Regulation: Articles 33 and 34.
of these provisions can lead to an administrative fine up to €10 million or, in the case of an undertaking, up to two per cent of the total worldwide annual turnover of the preceding financial year, whichever is higher.77

Under the ePrivacy UK Regulations, providers of public ECSs (mainly telecom providers and ISPs) are required to inform the ICO within 24 hours of a personal data security breach and, where that breach is likely to adversely affect the personal data or privacy of a customer, that customer must also be promptly notified. The Draft ePrivacy Regulations intend to align this deadline with the time period set out under the GDPR (72 hours) for consistency. This should be kept under review as the Draft ePrivacy Regulation is finalised.

In addition, organisations to which the NIS Regulations apply will have to comply with its notification requirements, as set out below.

Data retention, interception and disclosure of communications data

The legislation in this area has been the subject of much change and controversy over the past few years. The powers of government authorities to intercept communications, acquire communications data and interfere with communications equipment was previously regulated by a patchwork of legislation, including the Regulation of Investigatory Powers Act 2000 (RIPA), and, until 2016, the Data Retention and Investigatory Powers Act 2014 (DRIPA). The Investigatory Powers Act 2016 (IPA) overhauls, and in some cases extends, the scope of RIPA. It has largely, but not yet entirely, amended or repealed RIPA.

On 8 April 2014, the CJEU held in Digital Rights Ireland78 that the Data Retention Directive79 was invalid as it violated an individual’s right to privacy and was disproportionate in its aims. Under the Data Retention Directive, public communications providers (e.g., providers of fixed-network telephony, mobile telephony and internet access, internet email or internet telephony) had to retain traffic, subscriber and, where relevant, location data (but excluding content data) for a period of 12 months.80 The declaration of invalidity meant that the UK’s implementing subordinate legislation, the Data Retention (EC Directive) Regulations 2009, no longer had a basis in primary law and was itself vulnerable to a finding of illegality. The government decided to reintroduce data retention laws as primary legislation by passing DRIPA. In this regard, the UK stands in stark contrast to the rest of Europe, where Germany, the Czech Republic, Romania, Austria, Cyprus, Belgium, Ireland and Bulgaria had already deemed similar provisions unlawful.

DRIPA came into force on 17 July 2014 (with a sunset clause forcing automatic expiry of its provisions on 31 December 2016) following a fast-tracked procedure that saw it pass all stages of Parliament within four days (a process that often takes months or even years) on the basis that its enactment was required for continued national security. DRIPA addressed two key issues: the obligation to retain communications data by communications providers and the extraterritorial expansion of powers under RIPA.81 DRIPA also clarified that interception capability notices under RIPA may be issued to telecommunications providers outside the UK in relation to conduct outside the UK.

77 General Data Protection Regulation: Article 83(4)(a).
78 Digital Rights Ireland and Seitlinger and o=Others, joined cases C-293/12 and 594/12, 8 April 2014.
79 Directive 2006/24/EC.
80 Judgment in joined cases C-293/12 and C-594/12, Digital Rights Ireland and Seitlinger and Others.
Following its passage into law, a legal challenge was mounted questioning the legality of DRIPA on the basis that the data retention provisions in the first part of the Act were introduced following the CJEU’s declaration that similar provisions in the Data Retention Directive were declared invalid.

In July 2015, the High Court declared DRIPA’s data retention provisions to be incompatible with EU law on the basis that they interfered with Articles 7 and 8 of the EU Charter of Fundamental Rights (the public’s rights to respect for private life and communications and to the protection of personal data). There was particular criticism about the emergency nature of the legislation as well as its fast-tracked path through Parliament. In November 2015, the Court of Appeal referred the case to the CJEU as to whether the CJEU’s judgment in Digital Rights Ireland laid down mandatory requirements of EU law with which Member States must comply.

The CJEU held on 21 December 2016 that the ePrivacy Directive and the Charter of Fundamental Rights preclude laws that require a general and indiscriminate retention of data. However, laws that place targeted data retention obligations on service providers for the purpose of fighting serious crime are permitted provided that the safeguards protecting Article 7 and 8 rights are maintained (as specified in Digital Rights Ireland). The CJEU held that national data retention laws fall within the scope of the ePrivacy Directive.

The CJEU referred the case back to the UK Court of Appeal, which delivered its final judgment on 30 January 2018. The Court of Appeal agreed that the DRIPA data retention provisions were incompatible with EU law. It declined to rule on various other issues that had been raised by the parties given the ongoing litigation relating to the IPA by civil rights groups, as described below.

Although DRIPA would itself have expired in accordance with its sunset clause, its spirit survives in the IPA, which received royal assent on 29 November 2016, just in time before DRIPA’s scheduled expiry on 31 December 2016. The IPA is similar to RIPA in various respects. For example, like RIPA, the IPA imposes a general prohibition on the interception of communications unless the interceptor has lawful authority to carry out the interception, such as where a warrant has been issued by the Secretary of State (interception warrant). However, the IPA provides a new legal framework to govern the use and oversight of investigatory powers of the executive branch. Among other things, it:

- includes new powers for UK intelligence agencies and law enforcement to carry out targeted interception of communications, bulk collection of communications data and bulk interception of communications;
- introduces an Investigatory Powers Commission (IPC) to oversee the use of all investigatory powers, alongside oversight provided by the Intelligence and Security Committee of Parliament and the Investigatory Powers Tribunal;
- requires a judge serving on the IPC to review warrants authorised by the Secretary of State for accessing the content of communications and equipment interference before they come into force (commonly referred to as a double lock feature);
- widens the categories of telecommunications operators (TOs) that can be subject to most powers by including private as well as public operators;

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82 R (Davis & Watson) v. Secretary of State for Home Department [2015] EWHC 2092.

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includes the power to require TOs to retain UK internet users’ data, including internet connection records, for up to one year (although it remains to be seen how such powers may be amended following the court rulings described below);

permits police, intelligence officers and other government department managers to see internet connection records as part of a targeted and filtered investigation without a warrant;

imposes a legal obligation on TOs to assist with the targeted interception of data and communications and equipment interference in relation to an investigation (however, foreign companies are not required to engage in bulk collection of data or communications);

places the Wilson Doctrine (a convention whereby police and intelligence services are restricted from intercepting communications of Members of Parliament) on a statutory footing for the first time, as well as safeguards for people such as journalists, lawyers and doctors involved in other sensitive professions;

provides local government with some investigatory powers (e.g., to investigate someone fraudulently claiming benefits), but not access to internet connection records;

creates a new criminal offence for unlawfully accessing internet data; and

creates a new criminal offence for a TO or someone who works for a TO to reveal that data has been requested.

The provisions of the IPA are being enacted in stages via a series of statutory instruments. To date, most portions of the IPA (other than those relating to authorisations for obtaining communications data (i.e., Part 3 of the IPA)) have been enacted. The equivalent provisions in the legacy RIPA legislation have been repealed or amended, but the remaining RIPA provisions (i.e., those that have not been expressly repealed or amended to date) continue to govern the UK interception statutory regime. The government’s intention is to repeal RIPA in its entirety in accordance with a yet-to-be-released implementation timetable. As a result, we have a rather complex regulatory landscape in which a patchwork of statutory instruments have largely, but not entirely, brought the IPA into force and amended or repealed the legacy RIPA legislation. Furthermore, in light of recent case law, it remains to be seen to what extent the IPA will survive as currently drafted. In addition to Watson, civil liberties group Liberty has mounted a legal challenge to the IPA by way of judicial review. In April 2018, the UK High Court ruled that Part 4 of the IPA, which relates to the retention of communications data, was incompatible with EU law in two respects: in the context of criminal justice, the relevant provisions allowed access to retained data that was not limited to the purpose of combating serious crime, and that access was not subject to prior review by a court or independent body. The High Court decided against making an order of disapplication, but ordered that the government must replace the relevant provisions by 1 November 2018. In response, on 31 October 2018 the government introduced the Data Retention and Acquisition Regulations 2018. However, the Regulations have been criticised as not going far enough to address the human rights concerns raised by the High Court. It remains to be seen whether any further legal challenges to the UK’s data retention regime will be mounted.

84 Ibid.
Most recently, on 13 September 2018 the European Court of Human Rights ruled in the case of *Big Brother Watch and Others v. the United Kingdom*[^86] that the bulk interception regime under RIPA and the regime for obtaining communications data from communications and service providers violate Article 8 (the right to respect for private and family life and communications) and Article 10 (the right to freedom of expression) of the European Convention on Human Rights (ECHR). The government has stated that the IPA provides better privacy protections than RIPA, but that it would give careful consideration to the Court’s ruling.

**Protection for children**

Under the GDPR, children are defined as vulnerable natural persons who merit specific protection with regard to their personal data[^87]. Consent to the processing of personal data in connection with the provision of online services to children (below the age of 16, unless a Member State provides, as the UK has done, for a lower age (which cannot be lower than 13). The DPA has set the age of children at the minimum permitted threshold (i.e., anyone younger than 13 years)) is required to be given by a person with parental responsibility[^88]. Data can also be processed based on legitimate business interests, but it is clear that it will be harder to argue that the interests of a company outweigh those of a child. The GDPR also introduces a right to be forgotten, which will make it necessary for certain service providers, such as social media services, to delete any personal data processed or collected when the user was a child[^89].

In May 2018, the government published a green paper titled Internet Safety Strategy[^90]. The paper discusses a series of proposed measures to increase the safety of the online environment in the UK, including a range of measures aimed at protecting children, such as laws related to cyberbullying and online child sexual exploitation and measures to develop children’s digital literacy. Further details of the proposed measures will be set out in a white paper on the same topic, to be published later in 2018.

The Child Exploitation and Online Protection Centre (CEOP) works to prevent exploitation of children online; it is made up of a large number of specialists who work alongside police officers to locate and track possible and registered offenders. CEOP was previously affiliated with the Serious Organised Crime Agency; however, following its abolishment under the Crime and Courts Act 2013, the Centre became part of the National Crime Agency[^91]. CEOP also offers training, education and public awareness in relation to child safety online.

Internet safety for children in the UK is also monitored by the UK Council for Child Internet Safety (UKCCIS), a group of more than 200 organisations collaborating to keep

[^86]: ECHR 299 (2018), available at https://hudoc.echr.coe.int/eng#{"itemid": ["001-186048"]}.
[^87]: General Data Protection Regulation: Recitals 38 and 75.
[^88]: General Data Protection Regulation: Article 8.
[^89]: General Data Protection Regulation: Article 17.
children safe online. Established in 2010, the UKCCIS, *inter alia*, provides advice for schools and colleges and creates guides for parents whose children are using social media.\(^{92}\) It has published a Child Internet Safety Strategy for children in the UK.\(^{93}\)

Website and software operators may apply for the Kitemark for Child Safety Online. This has been developed through collaboration between the British Standards Institution (BSI) (the UK’s national standards body), the Home Office, Ofcom, and representatives from ISPs and application developers. The BSI tests internet access control products, services, tools and other systems for their ability to block certain categories of websites (e.g., sexually explicit, violent or racist activity).

**Cybersecurity**

The Computer Misuse Act 2000 (as amended by the Police and Justice Act 2006) sets out a number of provisions that make hacking and any other forms of unauthorised access, as well as DoS attacks and the distribution of viruses and other malicious codes, criminal offences. Further offences exist where an individual supplies tools to commit the above-mentioned activities.

The government has consolidated its focus on cybersecurity through the establishment of the National Cyber Security Strategy, with a dedicated pool of funds stretching to £1.9 billion over five years until 2021.\(^{94}\) Following the passage of the Crime and Courts Act 2013, the government brought the National Cyber Crime Unit (NCCU) under the remit of the National Crime Agency. The NCCU brings together cybercrime response operations and uses information on cybersecurity threats collected from the private sector via the Cyber-Security Information Sharing Partnership. The government has put an increasing emphasis on cyber skills, education and research to enhance its future cybersecurity strategy. This includes ensuring that school children leave their education with a basic understanding of cybersecurity, supporting a Cyber Higher Apprenticeship programme and launching Cyber First, which aims to identify and educate individuals to become cybersecurity experts.\(^{95}\) In addition, in October 2016 the government opened the NCSC, which now forms part of GCHQ and offers an authoritative voice on information security in the UK,\(^{96}\) with one of its mandates being to produce advice in conjunction with the Bank of England to enable financial institutions to improve their management of cybersecurity. The government also began offering cybersecurity advice directly to businesses through publications such as 10 Steps to Cyber Security, and by establishing an information-sharing partnership whereby the

government and industry can exchange information about cybersecurity threats, in 2016. In 2017, 55 per cent of all businesses and 40 per cent of all charities undertook five or more of the 10 Steps to Cyber Security, which is similar to findings of previous years’ surveys.

At a European level, the European Parliament adopted the NISD in July 2016, which is the first EU-wide legislation on cybersecurity. The aim of the NISD is to enhance network and information system security in essential economic and digital services. It introduces, inter alia, mandatory breach notification requirements and minimum security requirements. While the GDPR’s aim is to protect personal data, the NISD focuses on protecting essential infrastructure, and is therefore not limited to personal data.

The NISD imposes obligations on two types of organisations: essential service operators (ESOs) within the energy, transport, banking, financial market infrastructure, health, drinking water and digital infrastructure sectors; and digital service providers (DSPs), including entities such as online marketplaces, online search engines and cloud computing service providers. These companies must now report breaches of cybersecurity to the national competent authorities without undue delay where the relevant incident would have a significant impact on the core services provided by a company. The NISD had been stuck in negotiations between EU lawmakers and Member States over which sectors the Directive should cover; after months of negotiations, it was decided that digital platforms such as search engines, social networks and cloud computing service providers will be subject to the Directive’s remit, albeit with lighter touch requirements. The Directive aims to ensure a uniform level of cybersecurity across the EU as part of the Commission’s wider Digital Agenda for Europe.

As of 9 May 2018, the NISD should have been implemented in each EU Member State. In the UK it has been implemented by way of the NIS Regulation, which came into force on 10 May 2018. The government has confirmed that the NIS Regulation will continue to apply irrespective of Brexit. As anticipated by a consultation released by the DCMS in August 2017, the NIS Regulation:

a applies to ESOs and DSPs with thresholds designed to capture the most important operators in their sector due to, for example, their size;

b is regulated by the ICO in respect of DSPs and, in respect of ESOs, the competent industry-specific regulator, such as the Department for Business Energy and Industrial Strategy, Ofcom and NHS Digital. GCHQ acts as the UK’s single point of contact as required by the NISD;

c requires operators to develop minimum levels of security, as well as evidence that these higher standards have been met, and notify incidents meeting specific thresholds to the relevant regulator; and

d imposes harsher penalties to mirror the GDPR, with fines up to the higher of £17 million or four per cent of annual worldwide turnover.

While the NISD applies to certain financial institutions, the NIS Regulation does not apply to entities that fall within the remit of the regulatory authority of the Financial Conduct Authority.

Authority, the Bank of England or the Prudential Regulation Authority, as these institutions have been deemed to impose requirements on financial institutions that meet the obligations under the NISD.

In respect of DSPs, the NIS Regulation does not apply to small and micro businesses (i.e., companies employing fewer than 50 people whose annual turnover or balance sheet total, or both, is less than €10 million). However, if a DSP is part of a larger group, the group’s size may need to be taken into account in determining whether the provider is excluded from the application of the NIS Regulation (depending on the level of control exercised over the provider by other group entities).

In respect of ESOs, certain sectors are exempt from some aspects of the NISD where they are obliged to comply with equivalent provisions within existing regulations (e.g., the finance and civil nuclear sectors). The competent authority has a discretion to deem a particular organisation to be an ESO even if the threshold conditions are not met. In addition, ESOs are required to register with their competent authority.

IV SPECTRUM POLICY

i Development

The current EU regulatory framework for spectrum has been in force since 2003 following the introduction of the Telecoms Reform Package. This regulatory framework, in particular the Framework Directive\(^ {100}\) and the Authorisation Directive,\(^ {101}\) requires the neutral allocation of spectrum in relation to the technology and services proposed by users (e.g., MNOs and radio broadcasters). Following on from the Telecoms Reform Package, the Commission required Member States to adopt measures including greater neutrality in spectrum allocation, the right of the Commission to propose legislation to coordinate radio spectrum policy, and to reserve part of the spectrum from the digital dividend (from the switchover to digital television services) for mobile broadband services through the Better Regulation Directive and the Citizens’ Rights Directive. In 2016, Ofcom developed a framework for spectrum sharing, highlighting the importance of considering the circumstances of each potential opportunity, covering its costs and benefits.

In the UK, Ofcom is responsible under the Act for the optimal use of the radio spectrum in the interests of consumers. This includes, \textit{inter alia}, monitoring the airwaves to identify cases of interference, and taking action against illegal broadcasters and the use of unauthorised wireless devices. The 2016 framework established three key elements when identifying potential sharing opportunities in certain bands: characteristics of use for all users that inform the initial view of the potential for sharing, and what tools may be relevant; barriers that may limit the extent of current or future sharing, despite the liberalisation of licences and existing market tools such as trading or leasing; and regulatory tools and market and technology enablers that match the characteristics of use and barriers to facilitate new and more intense sharing.\(^ {102}\)

\(^{100}\) Directive 2002/21/EC.

\(^{101}\) Directive 2002/20/EC.

Flexible spectrum use

As the uses of the radio spectrum have increased, the allocation of spectrum by the regulator has developed from a centralised system, where use was determined by the regulator, to a market-based approach, where users compete for spectrum. Currently, auctions are the primary market tool used to implement the allocation.

Spectrum trading was introduced in the UK for the first time in 2004, and is permitted under the Wireless Telegraphy Act 2006 and associated regulations. Originally, the trading of spectrum was subject to a multi-stage process that, *inter alia*, required a decision by Ofcom about whether to consent to the trade. However, the Wireless Telegraphy (Mobile Spectrum Trading) Regulations 2011, directed at making more efficient use of the available spectrum, and improvements in mobile services to meet the demand for faster and more reliable services for consumers, made significant changes to this process, removing the need to obtain Ofcom’s consent for proposed trades in most cases. In addition, under the Regulations, a licensee can transfer all or part of the rights and obligations under its licence. A partial transfer, or spectrum leasing, can be limited to a range of frequencies or to a particular area. Ofcom also plans to simplify the process for time-limited transfers in line with the Revised Framework Directive.

In April 2014, Ofcom published its Spectrum Management Strategy setting out the approach to, and priorities for, spectrum management over the following 10 years. The Strategy notes, in particular, the increasing use of wireless services across the UK and the need to meet the increased demands with which the spectrum is faced. Ofcom proposes that it use a combination of market forces and regulations to support its strategic goals, including increasing the quality of RF performance, providing greater information on spectrum use, repurposing some spectrum bands and providing for shared access to spectrum. As part of this, in September 2015 Ofcom published a consultation on using 10MHz of existing spectrum for new applications to be utilised for the IoT enabling M2M communications. Ofcom’s aim was to encourage M2M applications to use spectrum that would enable them to connect wirelessly over longer distances. Following on from the consultation, on 23 March 2016 Ofcom released a statement confirming that spectrum within the 55–68MHz, 70.5–71.5MHz and 80.0–81.5MHz bands could be used for IoT services and M2M applications.

Broadband and next-generation mobile spectrum use

Ofcom issued a call for information on spectrum above 6GHz that ended in February 2015. Following on from this, in April 2016 Ofcom consulted on improving spectrum access for consumers in the 5GHz band. Ofcom subsequently set out plans to open up a sub-band within the 5GHz frequency range for Wi-Fi, which would increase the number of 80MHz channels available for Wi-Fi from four to six to accommodate data-hungry applications and ease congestion. These extra channels, which are already being used in the

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105 Laying the foundations for next generation mobile services, update on bands above 6GHz, Ofcom, 20 April 2015. Available at http://stakeholders.ofcom.org.uk/binaries/consultations/above-6ghz/5G_CFI_Update_and_Next_Steps.pdf.
US, could be opened up within the next few years.\textsuperscript{106} In March 2017, Ofcom published its Statement on improving spectrum access for consumers in the 5GHz band, and in July 2017 published its Decision to make Wireless Telegraphy Exemption Regulations 2017; this was predominantly due to increasing demand for Wi-Fi and the role of spectrum in addressing such demand.\textsuperscript{107} The technology has provided more capacity at faster speeds for mobile services on smartphones such as video streaming, email and social networking sites. In addition to the spectrum auctions mentioned in Section IV.v, UK Government Investments (UKGI) has announced that approximately 190MHz of spectrum will shortly be auctioned by Ofcom for mobile phones.\textsuperscript{108}

\textbf{iv White space}

Free spectrum, or ‘white space’, left over from the UK’s switch from analogue to digital TV and radio, has been available for mobile broadband and enhanced Wi-Fi since 2011. A white space device will search for spectrum that is available and check a third-party database to find out what RFs are available to ensure that it does not interfere with existing licensed users of the spectrum. New white space radios use frequencies that are allocated for certain uses elsewhere but are empty locally. Flawless management of spectrum is required to avoid interferences.

Since February 2015, Ofcom has allowed the commercial use and deployment of white space broadband technology, harnessing the unused parts of the radio spectrum in the 470MHz to 790MHz frequency band.

Ofcom is in the relatively early stages of developing spectrum sharing. White space spectrum with a frequency in the spectrum bank 470MHz to 790MHz, which is not being used at particular times, is the key to developing such sharing. This would be enabled by location-aware wireless devices or databases that provide information on white space availability. Likewise, Ofcom set out in its spectrum management strategy that it would place particular emphasis on spectrum sharing. In July 2015, Ofcom published a consultation in an attempt to identify barriers to sharing, include regulatory tools to facilitate further sharing and set out how sharing would be considered on a case-by-case basis. In December 2017, Ofcom published its Review of the authorisation regime for spectrum access in which it detailed several key initiatives aimed at enabling spectrum sharing, such as the licence exemption (mentioned above) and geographic licences as well as dynamic spectrum access (DSA). DSA was first implemented with TV white spaces where valuable, unused, low frequency spectrum in the 470–790MHz band was made available to devices meeting a minimum technical specification.\textsuperscript{109}

The DSM proposals include proposals relating to spectrum management that would, if adopted in their current form, have a significant impact in the UK (see Section II.v for more details).

\begin{itemize}
\item \textsuperscript{106} Available at http://media.ofcom.org.uk/news/2016/speeding-up-wi-fi.
\item \textsuperscript{107} Available at https://www.ofcom.org.uk/__data/assets/pdf_file/0032/98159/5p8-Regs.pdf.
\item \textsuperscript{108} Available at http://media.ofcom.org.uk/news/2016/speeding-up-wi-fi.
\item \textsuperscript{109} Available at https://www.ofcom.org.uk/__data/assets/pdf_file/0019/108604/Review-of-the-authorisation-regime-for-spectrum-access.pdf.
\end{itemize}
Spectrum auctions

The first 5G spectrum auction to be completed by Ofcom took place in April 2018, with O2, EE, Three and Vodafone all winning spectrum. O2 acquired all 40MHz of the 2.3GHz spectrum being auctioned, as well as 40MHz of the 3.4GHz spectrum, making it the biggest winner in the auction. Some of the spectrum was auctioned because it was recently freed up by the government to make it available for civil use, having been previously used by the Ministry of Defence.

Another 5G spectrum auction is expected to take place in 2020, as the 2018 5G auction will not cover the anticipated demand for 5G once it is commercially available.

The last spectrum auction was initially proposed to be in 2015, when licences were to be awarded in the 2.3GHz and 3.4GHz spectrum bands. The auction was postponed to 2016, and a total of 190MHz of high-capacity spectrum was to be made available in two bands, 2.3GHz and 3.4GHz, which are those particularly suited to high-speed mobile broadband services. Ofcom planned to set reserve prices totalling £70 million for the spectrum. Most notably, there was to be no cap on the amounts bidders could buy, as Ofcom believes that buying large blocks has the potential to support fast download speeds, helping pave the way for 5G.110 However, following the Commission's decision to block the proposed acquisition of O2 by CK Hutchison (H3G), Ofcom published a further consultation in November 2016 on competition measures and on specific aspects of auction design for the award of the 2.3GHz and 3.4GHz spectrum bands.111 Ofcom subsequently announced the following spectrum caps in July 2017 to satisfy competition concerns: no operator would be able to hold more than 255MHz of immediately usable spectrum, and no operator would be able to hold more than 340MHz of the total amount of spectrum following the auction. In January 2018, UKGI (which administers the Public Sector Spectrum Release Programme through the Central Management Unit) reported that the programme has led to nearly 400MHz having been released so far, with plans to release 750MHz of spectrum from the public to the private sector by 2022 to stimulate economic growth.

Prior to this postponed auction, the most prominent auction took place in February 2013, where Ofcom announced the results for the auction of the 800MHz and 2.6GHz bands. The auctioned spectrum, which was previously used for digital TV and wireless audio devices, was cleared by retuning TV signals in July 2013 and is now used for further 4G mobile services. After more than 50 rounds of bidding, Vodafone, O2 (Telefónica), EE and Hutchison 3G UK secured various bands of the newly released spectrum. Consequently, all major mobile networks in the UK started to provide 4G services from September 2013 in addition to EE.

As Ofcom's auction process is designed to promote competition and coverage, Ofcom attached a coverage obligation to one of the 800MHz lots that was won by O2. The provider accepted the obligation to widen the coverage of its mobile broadband for indoor reception to at least 95 per cent of the population by the end of 2017, and in March 2018, Ofcom completed its assessment and confirmed that this requirement was complied with by O2.112

To ensure competition between the national operators, Ofcom introduced a floor and cap on the amount of spectrum that each operator can win, and imposed safeguard caps to

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110 Available at http://stakeholders.ofcom.org.uk/binaries/consultations/2.3-3.4-ghz-auction-design/statement/statement.pdf.
111 Ibid.
112 Available at https://www.ofcom.org.uk/spectrum/information/cellular-coverage.
prevent an operator from holding too much spectrum. To diversify the market, Ofcom also reserved parts of the spectrum for a fourth national wholesaler. The reserved lots were won by Hutchison 3G UK.

Despite the fact that the government budgeted a surplus of £3.5 billion for the auctioned spectrum, it only raised a total of £2.34 billion; however, the principal stage of the 2018 spectrum auction has already raised over £1.3 billion.

vi Emergency services bandwidth prioritisation

The Universal Services Directive, a further part of the Telecoms Reform Package, introduces several extended obligations in relation to access to national emergency numbers and the single European emergency call number (112). Prior to the Universal Services Directive, obligations to provide free and uninterrupted access to national and European emergency numbers applied to providers of publicly available telephone services only. Under this Directive, however, these obligations are extended to all undertakings that provide to end users ‘an electronic communication service for originating national calls to a number or numbers in a national telephone numbering plan’, and the UK has mirrored this wording in its revisions to General Condition 4 under the Act. Such electronic service providers are therefore required to ensure that a user can access both the 112 and 999 emergency call numbers at no charge and, to the extent technically feasible, make caller location information for such emergency calls available to the relevant emergency response organisations. In a January 2015 report entitled Citizens and communications services, Ofcom stated that it was monitoring the effectiveness of steps by the industry to improve emergency caller location information on mobile calls. This monitoring led Ofcom to commence an own-initiative investigation into Hutchison 3G UK’s compliance. Ofcom decided to impose a fine of £1.98 million as set out in Ofcom’s confirmation decision concluding the investigation. It should be noted that Ofcom’s revised general conditions for emergency services network (ESN) provider compliance came into force on 1 October 2018, amending the obligations relating to access to emergency services. The changes include extending the current requirements to ensure end users can access emergency organisations through eCalls.

In 2013, the Home Office announced the Emergency Services Mobile Communications Programme for a dedicated ESN that would provide the next-generation communication system for emergency services. However, one of the lots, relating to a contracted agreement for an MNO to extend guaranteed signal coverage to ensure mobile coverage was withdrawn in January 2015. The remaining contracts for the operation of the ESN were won by EE, who will provide the network, and Motorola Solutions, who will supply the user services (supported by Kellogg Brown Root as a delivery partner). Together they will now work to provide the UK’s emergency services with a 4G LTE mobile network, replacing the existing private terrestrial trunked radio (Tetra) system. According to the Home Office, the UK will be first in the world to deliver critical voice and data for emergency services over an enhanced

113 Available at http://www.bbc.co.uk/news/business-21516243.
and more resilient commercial 4G network.\textsuperscript{117} The new system has the key advantage of allowing emergency services traffic to be prioritised ahead of communications by the general public, and this was successfully tested in February 2018 for the first time between an EE mobile mast site in Bristol and a location in Basingstoke.\textsuperscript{118}

V MEDIA

The transition from traditional forms of media distribution and consumption towards digital converged media platforms continues to disrupt and change the commercial foundations of the entertainment and media industry in the UK. Politicians, lawyers, economists and members of the industry are all grappling with new business models to monetise content and control frameworks to provide sufficient protection for the rights of content creators and consumers alike. The Commission’s DSM Strategy has wide-ranging implications for the UK media sector (subject to changes to national law as a result of Brexit). Proposals of particular relevance to the media sector include the proposal for a regulation on cross-border portability of online content services, the proposal for amendments to the Audiovisual Media Services Directive and the Commission’s September 2016 proposals concerning updates to the European copyright law regime.

i Superfast broadband and media

Fast broadband underpins the accessibility to consumers of internet-delivered content services. The Commission has highlighted that the global internet video share in consumer internet traffic is expected to increase from 64 per cent in 2014 to 80 per cent by 2019.\textsuperscript{119}

By the end of March 2018, the government’s rollout of superfast broadband had reached 4.85 million homes and businesses across the UK. This means that the government delivered on its commitment to extend superfast broadband to 95 per cent of UK homes and businesses by the end of 2017. The focus is now shifting to exploring ways to take superfast broadband to the most remote and hardest-to-reach places in the UK (i.e., the remaining five per cent).\textsuperscript{120} Seven market test pilots ran between June 2014 and March 2016 to test ways to take broadband to remote communities. The government published its findings in February 2016.\textsuperscript{121} This is consistent with the DEA, which provides for a USO whereby consumers may request a minimum download speed of 10Mbps by 2020.

ii European DSM Strategy and media

Audiovisual Media Services Directive

As part of the DSM Strategy, in May 2016, the Commission adopted a legislative proposal to revise the Audiovisual Media Services Directive (AVMSD), which coordinates national legislation on all audiovisual media including both TV broadcasts and on-demand services.

\textsuperscript{117} Available at https://www.gov.uk/government/publications/the-emergency-services-mobile-communications-programme/emergency-services-network#devices.
\textsuperscript{118} Available at https://www.silicon.co.uk/workspace/home-office-live-emergency-tests-228817?inf_by=5b978e05671db88f6894f6.
\textsuperscript{120} Available at http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06643#fullreport.
In June 2018, the European Parliament, the Council and the Commission confirmed the preliminary political agreement reached on the proposed revisions that will apply. On 6 November 2018, the Council adopted the revised text, marking the final step in the legislative process.\(^{122}\) The revised Directive will enter into force on the twentieth day after publication in the Official Journal. Member States will then have a 21-month period to transpose the changes into national law. The revisions include:

\(a\) extending the AVMSD’s application to video-sharing platforms where the principal purpose of the service is the provision of programmes or user-generated videos, or both, to the public in order to inform, entertain or educate, and which organise content in a way determined by the provider of the service (e.g., by tagging and sequencing);

\(b\) introducing an obligation to ensure that audiovisual media service providers implement measures to protect minors from access to harmful content and protect the public from incitements to violence and hate speech;

\(c\) offering broadcasters more flexibility in television advertising – in particular, the advertising limit of 20 per cent of broadcasting time will apply between 6am and 6pm, and the same share will be permitted during prime time (i.e., 6pm to midnight) (rather than 20 per cent per clock hour); and

\(d\) an obligation on on-demand audiovisual media services to ensure 30 per cent of the works in their catalogues are European works. Furthermore, Member States will have the option to require on-demand service providers to invest in local content.

The Commission and UK government have each published notes on the implications of Brexit on the audiovisual media sector.\(^ {123}\) Subject to any agreement that the UK may reach with the EU, post-exit, the AVMSD, including the country of origin principle and the rule on freedom of reception and retransmission,\(^ {125}\) will cease to benefit services under UK jurisdiction, and the UK will be treated as a third country. According to the recitals to the current version of the AVMSD, Member States are free to take whatever measures they deem appropriate with regard to audiovisual media services that come from third countries, provided they comply with EU law and the international obligations of the EU.\(^ {126}\) Under the AVMSD, a complex test applies to determine which country has jurisdiction over a media service provider (largely based on the location of the head office, editorial decision making and the workforce). Post-Brexit, it would be possible for a media service provider to keep a UK head office but be subject to the jurisdiction of an Member State (and therefore continue to benefit from the country of origin principle within the EU), provided a significant part


\(^ {124}\) The country of origin principle is found in two places: The AVMSD (Directive 2010/13/EU) is based on the country of origin principle, whereby service providers are subject to the regulations in their country of origin only and are not subject to regulation in the destination country, except in limited circumstances (Article 2(1)). Under the Satellite and Cable Directive (Directive 98/83/EEC), this principle effectively allows broadcasters to clear rights for satellite broadcasting in one Member State and allows them to then make their satellite transmissions available in other Member States.

\(^ {125}\) Article 3(1) of AVMSD.

\(^ {126}\) Recital 54 of AVMSD.
of the workforce is located in that Member State. Separately, and along with 20 other EU countries, the UK is party to the Council of Europe Convention on Transfrontier Television, which provides for freedom of reception and retransmission. This is also relevant to the European works test, which is satisfied if a programme originates from a non-EU country that is party to the Convention. The AVMSD takes precedence among EU Member States, but the UK’s position as a party to the Convention will not be affected by its exit from the EU. Therefore, in the absence of a Brexit deal, the Convention could be relied upon as between the UK and the 20 Member States who have signed up to it.

For the seven non-Convention countries, additional licences and consents will be required, subject to local law requirements. Works originating in the UK will continue to be classed as European works. However, VOD services are outside of the scope of the Convention and, if subject to UK jurisdiction according to the AVMSD test, would need to comply with the local law requirements in each Member State in which they are offered.

**Portability Regulation**

On 9 December 2015, the Commission proposed a regulation to enable the cross-border portability of online content services. The resulting Portability Regulation was published in the Official Journal on 30 June 2017 and came into force on 1 April 2018. It allows Europeans who purchase or subscribe to audiovisual content (such as films, sports broadcasts, music, e-books and games) in their home Member State to access this content when they travel or stay temporarily in another Member State. Providers of online content services that are provided for payment (it is optional for free services) must ensure the cross-border portability of their services such that subscribers may access and use the services when temporarily present in another Member State. When verifying the subscriber’s Member State of residence, service providers must limit the means to verify residence to two means of verification in a list (such as, for example, an identity card and payment details).

However, the continued application of the Portability Regulation in the UK post-Brexit will require a reciprocal agreement with the EU. This is because the Regulation relies on a legal fiction whereby the provision of and access to the relevant service is deemed to take place in the subscriber’s country of residence, effectively disapplying the local law of the country of temporary presence.

**Copyright reform**

On 14 September 2016, in addition to the telecoms proposals outlined in Section II.v, the Commission adopted new proposals for copyright reform as part of its DSM Strategy. The Commission released proposals for a regulation laying down rules on the exercise of copyright and related rights applicable to certain online transmissions of broadcasting organisations and

127 Excluding Belgium, Denmark, Greece, Ireland, Luxembourg, the Netherlands and Sweden.
129 Article 4 of Council of Europe Convention on Transfrontier Television.
130 See Article 1(1)(n) of AVMSD.
131 Available at https://ec.europa.eu/transparency/regdoc/rep/1/2015/EN/1-2015-627-EN-F1-1.PDF.
retransmissions of television and radio programmes (Copyright Regulation);\textsuperscript{134} a directive on copyright in the DSM (Copyright Directive);\textsuperscript{135} and proposals for an additional directive and regulation to implement the Marrakesh Treaty to Facilitate Access to Published Works for Persons who are Blind, Visually Impaired, or Otherwise Print Disabled (Marrakesh Treaty).\textsuperscript{136}

The Copyright Regulation introduces a cross-border clearance mechanism for digital broadcasting by broadcasters and retransmission of broadcasts online. Currently, broadcasters transmit programmes on their services that they have licensed from others or produced themselves, but programmes will inevitably contain content that is protected by copyright and needs to be cleared for use. Through the Copyright Regulation, the Commission proposes to extend the country of origin principle – which has been in place for decades in respect of cable and satellite communications – to specific online services, including simultaneous online transmissions of a broadcast, catch-up television services and associated ancillary services such as ‘making of’ programmes. This means that broadcasters will only need to clear rights once, in the Member State from which their broadcast originates. However, it only applies to online broadcasts and does not apply generally to VOD services. The Copyright Regulation also proposes to extend the current system of mandatory collective management for retransmissions by cable of television and radio broadcasts from other Member States to other closed electronic communication networks, such as IPTV. This means that instead of negotiating individually with every rights holder, operators who offer packages of channels will be able to obtain licences from collective management organisations.\textsuperscript{137}

The Copyright Directive focuses on three areas. First, it introduces measures to achieve a well-functioning marketplace for copyright. These include proposals for:

\begin{itemize}
  \item[a] a new related right in publication that will allow publishers to charge fees for digital uses of the copyright works they have invested in the distribution of (including short extracts of the same) (Article 11);
  \item[b] a requirement on online user-uploaded content platforms to take measures to ensure the protection of user-uploaded works (e.g., by implementing content recognition software) to address rights holders’ concerns as to the value gap (between the ease with which popular content is accessed online and the arguably meagre profit that rights holders reap from it) (Article 13); and
\end{itemize}


c a mechanism for increasing the transparency to rights holders of the exploitation of their works, with an alternative dispute resolution procedure to allow authors and performers to rebalance contracts (Articles 14 to 16).

Secondly, it introduces measures to improve licensing practices and ensures wider access to content by:

a implementing legal mechanisms to facilitate easier licensing of out-of-commerce works (which are works that are not available to the public through customary channels of commerce and cannot be reasonably expected to become available) by cultural institutions to aid cultural institutions in making these works, which have significant cultural and educational value, available to the public (Articles 7–9); and

b requiring Member States to set up impartial bodies to assist in the negotiation of licensing agreements between audiovisual rights holders and VOD platforms (Article 10).

Thirdly, the Directive introduces measures to adapt exceptions and limitations to the digital and cross-border environment in relation to research organisations conducting text and data mining; the digital use of works and other subject matter for distance-learning educational purposes; and cultural heritage organisations making digital copies of their permanent collections for preservation purposes.

The Commission's original proposal has been the subject of extensive lobbying by digital platforms and content creators, and the original text has been revised heavily by the European Parliament. The revised text was rejected by the Parliament's first plenary vote on 5 July 2018. On 12 September 2018, the Parliament adopted further amendments to the proposed text (particularly to Articles 11 and 13, which have proved to be controversial) and referred it for informal trialogue negotiations with the Council and Commission. As such, it is unlikely that these proposals will become binding in Member States ahead of the UK's exit from the EU.

The directive designed to implement the Marrakesh Treaty introduces a new mandatory exception to the copyright rights harmonised under EU law, allowing people who are blind or otherwise print-disabled to access books and other content in formats that are accessible to them, including across borders. The regulation governs exchanges of accessible format copies between the European Union and third countries that are parties to the Marrakesh Treaty. The regulation and directive implementing the Marrakesh Treaty were published in the Official Journal on 20 September 2017. The regulation applied from 12 October 2018, and Member States had to implement the directive by 11 October 2018. Accordingly, the Copyright and Related Rights (Marrakesh Treaty etc.) (Amendment) Regulations (2018/995) came into force on 11 October 2018 and amended the UK's copyright law to make the UK's laws compatible with the Marrakesh Directive.


139 Available at http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32017R1563&from=EN.

140 Available at http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32017L1564&from=EN.
The Commission has noted that, subject to any transitional agreement that the UK may reach with the EU, the European rules in the field of copyright will no longer apply to the UK following Brexit. While technically correct, the practical implications of this are relatively limited (see, for instance, the section above on the Portability Regulation), because copyright essentially remains a national right, reliant on international treaties.

**Commission investigation into US film studios**

The Commission has also investigated the practices of six major US film studios (Disney, NBCUniversal, Paramount Pictures, Sony, Twentieth Century Fox and Warner Bros) with respect to clauses in their licensing agreements with telecommunications company Sky UK. On 26 July 2016, the Commission accepted commitments from Viacom-owned Paramount to end a probe into potentially anticompetitive film licensing contracts, but confirmed that it is continuing to investigate five other studios and Sky UK. As a result, Paramount has agreed to stop enforcing contractual clauses that prevent European consumers outside the UK and Ireland watching Paramount films on Sky’s UK satellite and online channels, and prevent rival broadcasters from airing its pay-TV content in the UK. In practice, this means that Paramount will no longer insert geo-blocking restrictions in its licensing contracts with broadcasters. The current probe deals only with Sky UK in the UK and Ireland, but the Commission is also investigating the British pay-TV operator’s approach to consumers in France, Italy and Germany. Likewise, Paramount will not introduce or renew similar geo-blocking clauses in film licensing contracts with other broadcasters that operate in other European countries. Paramount will run the commitments package for five years, and it will cover both standard pay-TV and on-demand services, both online and by satellite. The effect of the Commission accepting the commitments is that the studio will not be required to pay a fine, nor to admit liability. Notably, the five other studios have not offered similar undertakings. On 6 February 2017, details were published of an appeal by Canal+ against the Commission’s decision to accept commitments from Paramount. On 12 January 2018, the Commission extended its investigation to a subsidiary of NBCUniversal following changes to NBCUniversal’s corporate structure.

The case is ongoing. It is, as yet, unclear what effect a final decision against the studios will have on consumers, but it could have a profound effect on the film industry in Europe. However, in spite of these commitments and the ongoing investigations, broadcasters will be under no obligation to offer packages outside their territories following the decision.

**iii OTT delivery of content and broadcast TV**

An OTT platform is typically a platform that allows users to stream audiovisual content using the internet or mobile telephone networks. The key benefit of OTT delivery is that it allows users to interact with content because data can flow both ways in an IP network.

OTT delivery is utilised by a range of content providers in the UK, including PSBs (i.e., BBC iPlayer, ITV Hub, All4 and My5), cable and satellite platforms (e.g., both Virgin Media and Sky offer VOD products), mobile operators, online aggregators and standalone VOD platforms (e.g., Netflix, Amazon Prime Video and NowTV). To further facilitate user

143 Available at http://ec.europa.eu/competition/antitrust/cases/dec_docs/40023/40023_8283_3.pdf.
access to internet-delivered services, the BBC, ITV, Channel 4, Channel 5, BT, TalkTalk and Arqiva have collaborated on an open-technology offering called YouView, which enables viewers to access free-to-air channels and catch-up and on-demand programming via their televisions (along with the ability to add access to pay-TV channels and on-demand services).

The industry is being transformed as the take-up of superfast broadband and connected televisions change the ways in which people watch television. According to Ofcom’s Media Nations: UK 2018 report, across all devices, people’s total television and audiovisual viewing in 2017 was five hours and one minute per day. Broadcast television made up 71 per cent of this, while the remaining 29 per cent was composed of viewing non-broadcast content such as content available via standalone VOD platforms and YouTube. On average, people view three hours and 23 minutes of broadcast television a day (including seven day catch-up) (this has fallen by nine minutes (4.2 per cent) since 2017). However, time spent watching TV sets overall remains constant as viewing of non-broadcast content increases. The change in viewing habits is in part driven by younger viewers, who watch more non-broadcast than broadcast content. In 2017, 16 to 34 year olds watched an average of two hours and 37 minutes of non-broadcast content a day across all devices, and two hours and 11 minutes of broadcast content. As a result, the average age of the demographic of broadcast TV viewers is increasing.144

Ofcom has also highlighted a decline in pay-TV revenues in 2017 which indicates the challenge that pay-TV operators such as Virgin Media and Sky are facing from subscription VOD services. Figures show that the number of pay-TV subscriptions in the UK in Q1 2018 totalled 15.1 million, whereas the total number of subscriptions to Netflix, Amazon Prime Video and NowTV was 15.4 million. Subscribers have indicated that the high level of investment in original content is a key reason for signing up with these VOD services.145

PSBs face challenges in light of this drastically changing landscape. While PSBs command half of all broadcast viewing, they are investing less money in first-run UK originals as increasingly they utilise third-party funding (such as co-production arrangements with third parties). However, Ofcom reports that the majority of viewers are either very or quite satisfied with PSB broadcasting, and that PSBs still provide a vital news service to viewers, with 84 per cent stating that a trustworthy news source is a PSB’s most important purpose.146

The consumption of sport viewing also looks set to change, with online streaming services such as Amazon Prime Video and Eleven Sports beginning to acquire sports rights.

iv PSBs

The BBC Royal Charter was renewed in early 2017 and runs to the end of 2027. From 3 April 2017, a unitary board has replaced the two-tier structure of the BBC Trust and the BBC’s Executive Board as the BBC’s governing body. The Board is responsible for ensuring that the BBC fulfils its mission and promotes its public purposes, including by setting the strategic direction for the BBC within the framework of the Charter and the accompanying Framework Agreement between the BBC and the Secretary of State for Culture, Media

and Sport, and by setting the BBC’s creative remit.\footnote{See the Royal Charter available at http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/about/how_we_govern/2016/charter.pdf, article 20(3).} Ofcom also became the BBC’s first external regulator, developing an operating framework for the BBC that covers regulation of the BBC’s performance, compliance with content standards and impact on competition. In October 2017, Ofcom published a new operating licence for the BBC. The licence requires the BBC to broadcast more original UK programmes, and also requires more BBC content to be made across the UK’s nations and regions.\footnote{Available at https://www.ofcom.org.uk/__data/assets/pdf_file/0017/107072/bbc-operating-licence.pdf.}

In November 2017, the BBC announced its decision to bring together two of its commercial subsidiaries, BBC Studios and BBC Worldwide, to trade as a single entity known as BBC Studios. The newly created BBC Studios launched on 3 April 2018. It is the primary entity for the BBC’s commercial production and distribution activities globally.\footnote{For further information, see: https://www.bbcstudios.com/about/about-us/.


Further, on 8 March 2018, Ofcom published a report that discusses the challenges facing PSBs in the context of increased media consumption via internet-delivered services and competition from global OTT services.\footnote{Available at https://www.ofcom.org.uk/__data/assets/pdf_file/0026/111896/Public-service-broadcasting-in-the-digital-age.pdf.} Ofcom’s findings include:

\begin{itemize}
  \item[\textit{a}] the level of competition from global VOD platforms, along with the likes of Apple and Facebook, is creating a ‘rush to scale’ that is resulting in further market consolidation;
  \item[\textit{b}] public service broadcasting has so far held up well to increased global competition. The main PSB channels still account for half of all viewing and TV advertising has been fairly resilient, although Ofcom states that this is ‘softening’. The reasoning for this is unclear, although Ofcom cites macroeconomic uncertainty and weakened consumer confidence as key drivers. While ITV has reduced its reliance on TV advertising revenues, Channel 4 is heavily reliant on advertising and sponsorship;
  \item[\textit{c}] young people are watching less scheduled TV, and brand awareness of the BBC among them is lower than Netflix and YouTube;
  \item[\textit{d}] Ofcom intends to support PSBs by strengthening its EPG Code through a consultation; and
  \item[\textit{e}] PSBs should continue to have access to digital terrestrial television (DTT) for at least the next 10 years, as mobile demand for the relevant spectrum has diminished due to 5G requiring spectrum at higher frequencies.
\end{itemize}

The DEA added a requirement under the Act for Ofcom to periodically review and report on the provision by EPGs of information on and access to PSB channels and content via PSB VOD services. Ofcom published its first such report on 27 July 2018.\footnote{Available at https://www.ofcom.org.uk/__data/assets/pdf_file/0019/103924/report-psb-vod-performance-2018.pdf.} The DEA also required Ofcom to review and revise the EPG Code prior to 1 December 2020. Pursuant to this, alongside its first EPG prominence report, Ofcom published a consultation on proposed changes to the linear EPG Code and options for the future regulation of prominence for...
VOD services.\textsuperscript{153} The closing date for responses was 5 October 2018. In the UK, regulations guarantee the PSBs’ prominence on the traditional Ofcom-licensed linear EPGs, but no such protections are afforded to PSBs in respect of other search functionality (e.g., on connected devices and searches via voice) or in respect of PSB VOD services. While PSB VOD and catch-up services are currently generally well-positioned, this is due to commercial negotiation rather than regulation. Ofcom’s proposals in respect of changes to the existing linear EPG Code\textsuperscript{154} include:

\begin{itemize}
  \item[a] the five main PSB channels (BBC One, BBC Two, Channel 3 services, Channel 4 and Channel 5) being guaranteed their current positions in the top five EPG slots (subject to regional variations for Wales);
  \item[b] BBC Four being guaranteed a slot within the first three pages of any licensed EPG;
  \item[c] BBC News, BBC Parliament, CBBC and CBeebies being guaranteed slots on the first page of the relevant EPG genre or section; and
  \item[d] local TV services being located in the top three pages of any EPG.
\end{itemize}

Additionally, Ofcom has analysed options for the future regulation of prominence in the context of VOD services (including the position of PSB VOD players and the availability of PSB content on a VOD basis elsewhere within platforms and via devices). Any such changes would be the subject of future legislation. Ofcom has stated that it would support new legislation to address the prominence of internet-delivered PSB content to secure the health of the PSB system and, accordingly, has invited responses in this area.

\section*{VI THE YEAR IN REVIEW}

\textbf{i Brexit}

On 23 June 2016, the UK voted to leave the EU by a vote of 51.9 per cent in favour of leave to 48.1 per cent in favour of remain. The government invoked Article 50 of the Treaty on European Union on 29 March 2017, thereby starting the period of negotiation between the UK and the EU on the terms of the UK’s exit, with exit taking effect once those negotiations have concluded or after two years (if sooner), irrespective of what terms have been agreed.

The European Union (Withdrawal) Act 2018 (Withdrawal Act) received royal assent on 26 June 2018. It provides that, on exit day (11.00pm on 29 March 2019):

\begin{itemize}
  \item[a] the European Communities Act (ECA) 1972 shall be repealed;
  \item[b] all existing EU legislation (including EU-derived legislation, such as national implementing legislation) shall be enshrined into British law;
  \item[c] the jurisdiction of the CJEU over the UK shall end; and
  \item[d] the government shall be permitted to remove or amend EU laws that apply to the UK (whether directly effective or enshrined in UK law by a separate Act of Parliament) with primary legislation and, in some cases, secondary legislation via the Henry VIII clauses.
\end{itemize}


\textsuperscript{154} Available at https://www.ofcom.org.uk/__data/assets/pdf_file/0031/19399/epgcode.pdf.
The Withdrawal Act includes a number of significant changes from the initial bill, many of which were recommended by the House of Lords Select Committee. For example, the Withdrawal Act now:

- provides the government with the discretion to amend the definition of ‘exit day’;
- requires Parliamentary approval of the terms of the UK’s withdrawal from the EU for the withdrawal agreement to be ratified by the government and implemented in domestic legislation;
- provides that certain legal actions relating to a breach of the general principles of EU law that occurred before exit day will remain actionable, and can be brought, after exit day; and
- provides that returning EU powers that are technically within the legislative competence of the devolved authorities shall be exercised by the relevant devolved authorities, rather than reverting to the UK Parliament by default.

Certain provisions came into force when the Withdrawal Act received royal assent. These include provisions relating to:

- the implementation of the Withdrawal Act itself;
- border arrangements with Northern Ireland;
- powers and restrictions relating to devolved authorities;
- Parliamentary approval of the outcome of negotiations with the EU;
- negotiations for a customs arrangement with the EU and family unity for asylum seekers in the EU;
- publication of a draft bill relating to maintenance of certain environmental principles; and
- the power to make secondary legislation under the Withdrawal Act, and the Parliament’s and the devolved authorities’ scrutiny of any such secondary legislation.

The remaining provisions, which relate to repeal of the ECA and the enshrining of existing EU legislation into national law (and the concurrent loss of jurisdiction of European courts over its interpretation as applied in the UK and the sovereignty of Parliament to amend such laws), shall come into force as specified in regulations made by the government.

The Withdrawal Act has been received with mixed feelings in the UK and in the EU. Within the UK, the Scottish government has refused to endorse the Withdrawal Act on the basis that it attempts to further centralise power within the UK Parliament to the detriment of the devolved regions. The Welsh government provided its endorsement only after months of negotiations. Critics within the EU query how the UK government can state that it provides equivalent protections to EU laws, for example in the context of personal data, while also retaining authority to amend at will any EU law that has been enshrined into national law. The European Parliament’s report on transfers of personal data points to the sovereignty of the UK Parliament and the loss of jurisdiction of European courts as major stumbling blocks in the search for an alternative to the UK becoming a third country for the purposes of such data transfers after Brexit.\footnote{Available at http://www.europarl.europa.eu/RegData/etudes/STUD/2018/604976/IPOL_STU(2018)604976_EN.pdf.} As such, its status remains uncertain.

The Withdrawal Act does not make direct provision for a transition period following exit day, and the impact of any such transitional period on the provisions of the Act remain
unclear. The term of any such transition period is currently under negotiation between the UK and the EU; per the draft withdrawal agreement\textsuperscript{156} published on 19 March 2018, it is envisioned to last from 11.00pm on 29 March 2018 until 31 December 2020.

\textbf{ii Commission proposals for a DSM Strategy}

The Commission’s ambitious DSM Strategy proposals (announced 14 September 2016) signpost that Europe’s approach to digital market access is likely to:

- change significantly;
- dramatically enhance Europe’s connectivity;
- rationalise its telecoms regulatory regime;
- end certain geographical restrictions on content; and
- reform the European copyright regime in favour of European interests.

However, the proposals are ambitious both in terms of scale and cost: using the 5G Action Plan as an illustrative example, the Commission estimates that €500 billion in private investment will be required to deliver the Plan, of which it is projected there will be a €155 billion shortfall based on current investment trends. In February 2018, the Commission took a step forward regarding the Plan by establishing the 5G Observatory to monitor market developments in 5G technology and observe national strategies by EU Member States, particularly with regard to coverage and quality.\textsuperscript{157} The Commission, which appointed Mariya Gabriel to be responsible for the DSM as of July 2017, has indicated that part of the intent of the reforms, such as the 5G Observatory, is to stimulate competition and investment in the sector, but has also proposed the creation of a European Broadband Fund (to comprise both private and public funds) to help make up this shortfall. This proposal has yet to be tabled, but if the Commission’s ambitions are to be met, it seems that a substantial amount of new or reallocated public funding for next-generation telecoms infrastructure is forthcoming. While the WiFi4EU initiative will be funded by the EU (for installation and equipment costs only) for an initial budgeted amount of €120 million, €70 million of this is reallocated funding from the Connecting Europe Facility. Only €50 million will be previously unallocated funds.

On 22 June 2018, the Commission published a fact sheet that includes a timeline of DSM Strategy actions that had been taken up to that date.\textsuperscript{158} Recent progress has included the January 2018 Regulation establishing the European High Performance Computing Joint Undertaking; the successful abolition of roaming charges for travellers within the EU, which has been effective since June 2017; and the coming into force of the (directly effective) Portability Regulation on 1 April 2018.\textsuperscript{159} However, the continued application of the Portability Regulation in the UK post-Brexit will require a reciprocal agreement with the EU. It remains to be seen how the UK government will deal with data roaming surcharges post-Brexit – it has published a note indicating that, in the absence of a deal with the EU, the government would legislate to retain the requirement on mobile operators to apply a financial

\textsuperscript{156} Available at https://ec.europa.eu/commission/sites/beta-political/files/draft_agreement_coloured.pdf.

\textsuperscript{157} Available at https://ec.europa.eu/digital-single-market/en/european-5g-observatory.


limit on mobile data usage while abroad.\textsuperscript{160} The government has also published a note on the impact on telecoms businesses in the event there is no Brexit deal. The government states that if the European Electronic Communications Code is adopted prior to exit day, but with a deadline for transposition into national law post-exit, the government would ‘be minded to implement, where appropriate, its substantive provisions in UK law’.\textsuperscript{161}

Although many legislative proposals tabled as part of the DSM Strategy have now been agreed, it will be important to closely follow the progression of the outstanding proposals through the European Parliament and Council of the Member States’ co-decision procedure, as it is likely that certain of these proposals will be softened before they are adopted. For example, the proposed Copyright Directive has been the subject of extensive lobbying, and the text approved by the European Parliament has been heavily revised when compared to the original proposal. It remains to be seen what form the final agreed version of the Directive will take.

\section*{VII CONCLUSIONS AND OUTLOOK}

Recent years have seen privacy debates continued both inside and outside the courtroom, highlighting the ever-evolving regulatory landscape and the ongoing legal controversies about the scope and extent of a citizen’s right to privacy. The implementation of the GDPR has been a milestone in the area of data protection law, and companies continue to take steps to adjust their policies as the ICO’s and EU regulators’ approach to, and appetite for, enforcement become clearer. A close eye should also be kept on the developments of the Draft ePrivacy Regulation as it continues through the legislative process.

Following its fast-tracked introduction in 2014, the DRIPA legislation was declared incompatible with EU law on the basis that its data retention provisions violated the right of respect for private life and the protection of personal data, and its replacement, the IPA, will have to be amended in light of the UK High Court’s findings in \textit{R (Liberty)}.

An EU–US Privacy Shield is now in place to provide a legal basis for transfers of personal data to the US from the EU (replacing the Safe Harbor framework), but it is still the subject of further claims by privacy campaigners that it remains insufficient. Furthermore, standard contractual clauses are also being challenged in the courts. These solutions for transferring data will have to be updated to reflect the requirements of the GDPR in due course.

Brexit will undoubtedly have an influence on the policy and regulatory landscape in the UK and the EU27. The extent and nature of this will become clearer as more specific details emerge from the UK’s Brexit negotiations with the EU27.


I OVERVIEW

This chapter provides an overview of telecommunications, broadband internet access and media regulation in the United States. Given the complexity of such regulation – which is constantly evolving in response to technological advances, market shifts and political dynamics – this chapter is not intended to be comprehensive. Rather, it is intended to demonstrate the nature and scope of such regulation, and to identify some of the more significant legal and policy developments of the past year.

II REGULATION

i The regulators

Regulation of telecommunications, broadband internet access and media in the United States is governed primarily by the following authorities, within parameters established under federal and state statutes and constitutions.

The Federal Communications Commission

The Federal Communications Commission (FCC) is an independent US regulatory agency established by the US Congress pursuant to the Communications Act of 1934, as amended (Communications Act). The FCC is charged with regulating all non-federal government use of the RF spectrum, all interstate telecommunications and all international telecommunications involving an end-point in the United States. Together with the US State Department Office of Communications and Information Policy, the FCC participates in international spectrum negotiations and related matters at the International Telecommunication Union.

The National Telecommunications and Information Administration

The National Telecommunications and Information Administration (NTIA) is an executive agency of the federal government within the US Department of Commerce. The NTIA has primary responsibility for regulating all use of the RF spectrum by federal government users, and works with the FCC to coordinate spectrum use between federal and non-federal users.

1 John P Janka and Matthew T Murchison are partners and Michael H Herman is a law clerk awaiting bar admission at Latham & Watkins LLP.
The Department of Commerce

The United States Department of Commerce (DOC) has oversight of remote sensing satellites and certain export issues related to space technology. The DOC is developing an increased role with respect to facilitating the commercialisation of space, including spectrum-related matters.

State and local regulators

Telecommunications within a single US state are governed by individual state regulatory agencies, typically having jurisdiction over telephone companies and other public utilities providing services within the state, as well as over many consumer protection matters. State or local authorities typically issue franchises to operators of CATV systems whose service lines cross locally controlled, public rights of way. Such authorities also have jurisdiction over the siting of telecommunications facilities. The jurisdiction of state public utility commissions (PUCs) and of other state and local authorities over these types of matters is limited by state constitutions and statutes as well as by federal supremacy. For example, in the case of a conflict between the FCC and state or local regulations, the state or local regulation is typically pre-empted unless the US Congress or the FCC expressly permits state or local authorities to enforce their own regulations. The FCC has effectively exercised exclusive jurisdiction over most matters involving internet access services owing to the interstate and international nature of the internet.

The Federal Trade Commission

The Federal Trade Commission (FTC) protects consumer interests in such areas as online marketing and telemarketing. Both the FTC and the FCC have oversight over certain telemarketing matters. Both the FTC and the US Department of Justice (DOJ) antitrust division police market concentration by examining mergers and other major transactions in the sector, along with the attorneys general of the 50 US states.

Other executive branch agencies

Other executive branch agencies play an important but less direct role in the regulation of traditional telecommunications, broadband internet access and media. First, these agencies often provide input as the FCC explores substantive issues and implements regulations through its rulemaking and licensing processes, occasionally engaging in public disagreements with the FCC over such matters. In addition, executive branch agencies with national security and law enforcement responsibilities typically are consulted (or may otherwise provide input) in connection with proposed transactions that would result in legally cognisable non-US ownership of FCC-regulated businesses. Notably, Team Telecom, an informal group made up of staff from the DOJ, the Federal Bureau of Investigation, the Department of Homeland Security and the Department of Defense, routinely participates in FCC proceedings, reviewing such transactions and often gathering additional information from the parties. Because the FCC typically will not consent to such transactions until Team Telecom has signed off, Team Telecom effectively has the power to delay, if not block, a transaction until its concerns are addressed. Transactions involving FCC-regulated businesses (like other US businesses) are also subject to potential review by the Committee on Foreign Investment in the United States (CFIUS), a multi-agency group with the statutory authority to review proposed investments in US businesses from non-US sources. Because CFIUS can
recommend that the President block or impose significant conditions on such transactions even after they have closed if they have not been cleared by CFIUS, parties often file with CFIUS on a voluntary basis prior to closing.

ii Sources of federal telecommunications and media law and policy

In the US, federal telecommunications law is derived principally from statutes enacted by Congress (and signed by the President) as well as administrative regulations, orders and policies adopted by the FCC.

The Communications Act

The FCC’s governing statute, codified in Title 47 of the United States Code, establishes the framework for federal regulation of traditional telecommunications, broadband internet access and media in the United States. The Communications Act consists of seven major sections, or titles. The most significant of these are Title I (establishing the FCC and defining the scope of its authority), Title II (governing the activities of telecommunications carriers), Title III (governing the use of radio spectrum, including by wireless carriers and mass media broadcasters) and Title VI (governing the provision of cable television services). The Communications Act was substantially amended by the Telecommunications Act of 1996, which opened the US domestic market to greater competition in many respects.

Ancillary authority

Section 4(i) of the Communications Act provides that the FCC 'may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions'. In a number of instances, the FCC has attempted to use this ancillary authority to regulate subject matter outside the traditional scope of its jurisdiction (e.g., VoIP services).

Forbearance authority

Section 10(a) of the Communications Act enables the FCC to forbear from applying any provision of the Act to a Title II telecommunications carrier or service (but not other types of services or providers) if the FCC determines that enforcement of this provision is not necessary to ensure just, reasonable and non-discriminatory rates, terms and conditions of service; enforcement of such provision is not necessary for the protection of consumers; and forbearance from applying such provision is consistent with the public interest. The FCC has used this authority to free telecommunications carriers from restrictive common carrier regulations, particularly where the relevant market sector is competitive. The FCC also used this authority in early 2015 in connection with its reclassification of broadband internet access service as a telecommunications service (discussed in greater detail below).

FCC regulations and orders

In fulfilling its statutory mandate, the FCC plays a quasi-legislative role by promulgating administrative regulations, after providing notice to the public and an opportunity for public comment, as required by the Administrative Procedure Act. The FCC also plays a quasi-judicial role in interpreting existing law in evaluating any number of disputes and...
applications (e.g., licence applications or petitions for interpretation of the law). The resulting orders and regulations constitute an extensive body of administrative law governing telecommunications, broadband internet access and media in the United States.

Judge-made law

The judicial branch of the government also plays an important role in US lawmaking, at both the state and the federal level, reviewing administrative agency decisions for consistency with the governing statutes, and reviewing statutory law for compliance with the federal and state constitutions. Any party with a legally cognisable interest in the matter may seek review of an FCC action in a federal court of appeals. The courts review FCC decisions for consistency with its governing statutes and the US Constitution. In general, the FCC is entitled to deference in interpreting the Communications Act where it is ambiguous and capable of more than one reasonable interpretation. In addition, the courts review FCC decisions to ensure that they are not arbitrary or capricious: for example, the FCC may not depart from its own precedent without a reasoned basis for doing so, and more generally must have a reasoned basis for its decisions.

iii Regulated activities

Among other things, the Communications Act requires a party to obtain authority from the FCC prior to constructing or operating an apparatus for the transmission of energy or communications or signals by radio or engaging in the provision of interstate or international telecommunications services. The specific procedures for obtaining such authority vary based on a number of factors, including the nature of the underlying authorisation, the nature of the proposed service, and the suborganisation of the FCC with primary responsibility for that service.

In most cases in which an applicant must file an application to obtain authority from the FCC, that application must be placed on public notice, giving interested parties an opportunity to comment during a specified period (e.g., 30 days). Certain types of applications (e.g., many non-common carrier wireless applications, requests for short-term authority or experimental licences) are subject to more streamlined processing, which may circumvent the need for public notice and comment in the first instance. Notably, the FCC now permits most applications to be filed electronically, and also allows the public to track the status of such applications through electronic filing systems (databases) accessible over the internet.

The FCC has granted certain types of operating authority by rule, obviating the need for individual users to seek and obtain separate authority from the FCC. For instance, the FCC has authorised by rule all common carriers to provide domestic interstate telecommunications services (this does not obviate the general need for wireless service providers to obtain separate spectrum licences, as discussed below) and, in certain cases, has eliminated the requirement to obtain authority before constructing radio facilities. The FCC has also permitted certain wireless operations to proceed on an unlicensed basis, provided that the equipment used in such operations has been evaluated and authorised in accordance with the FCC’s procedures.
Ownership and market access restrictions

Foreign ownership restrictions

Sections 310(a) and (b) of the Communications Act restrict foreign ownership of common carrier, aeronautical and broadcast spectrum licences, and of US entities holding those licences. These statutory sections provide that foreign individuals and entities may not directly hold more than 20 per cent of the equity or voting interests in an entity that holds one of these types of FCC licences. Higher levels of indirect foreign ownership of a licensee are permissible where such ownership is held through US entities. More specifically, where the FCC licensee is owned and controlled directly by another US company, the 20 per cent limit effectively increases to 25 per cent, and the FCC may allow foreign ownership in excess of 25 per cent at or above the US parent company level where it determines that allowing such ownership would serve the public interest. In addition, as the result of a forbearance order issued in 2012 (which effectively overrides certain arcane language in the text of the Communications Act), the FCC will now permit higher levels of indirect foreign ownership in common carriers held through a non-controlling US company where the FCC concludes that such ownership would serve the public interest. Often, the FCC has permitted up to 100 per cent foreign ownership of common carriers. The FCC has found that higher levels of foreign ownership from WTO Member States presumptively serve the public interest.

Historically, the FCC generally has not waived the 25 per cent limit with respect to broadcast licensees. However, in late 2013, the FCC indicated that in order to facilitate foreign investment, it would consider such waivers on a case-by-case basis, taking into account any concerns raised by other executive branch agencies with respect to national security, trade policy and law enforcement. In May 2015, the FCC granted such a waiver to Pandora Radio LLC to allow Pandora to buy a radio station, and sustained that waiver against a legal challenge that was resolved in September 2015. In late 2016, the FCC extended to broadcast licensees the same standardised, streamlined rules and procedures that common carrier wireless licensees have been using to seek approval for foreign ownership, with appropriate broadcast-specific modifications. The FCC also established a methodology through which a publicly traded common carrier or broadcast licensee or controlling US parent could reliably ascertain its foreign ownership levels. The FCC has granted several requests seeking approval of foreign ownership in excess of the 25 per cent statutory limit.

Even transactions that are consistent with the foreign ownership limits described above may be scrutinised, and effectively blocked, as a result of a review by Team Telecom or CFIUS (described above).

Market access

Generally, the FCC does not authorise facilities located entirely outside the United States to serve the US market. An exception arises with respect to non-US-licensed satellites, which may serve the US if the satellite is licensed by a non-US jurisdiction that permits US satellites to serve that jurisdiction without undue restrictions (such access is presumed where the non-US jurisdiction is a WTO Member State); the satellite complies with the same FCC technical and service requirements that apply to US satellites; and the satellite’s operation would not give rise to any national security, spectrum policy or other policy concerns. In reviewing requests for US market access, the FCC increasingly considers the extent to which the relevant non-US-licensed satellite enjoys priority to the spectrum in question as a result of filings made by its licensing administration with the International Telecommunications Union (ITU).
Multiple or cross-ownership

With the exception of its broadcast licences, the FCC generally does not limit the number of spectrum licences that may be held by or attributed to (i.e., deemed to be held by) a single individual or entity. However, in evaluating the likely competitive effects of significant wireless transactions, the FCC has utilised a spectrum screen to identify local markets that merit closer scrutiny by looking at the total amount of spectrum that would be controlled by one individual or entity, and the FCC has initiated a proceeding to re-examine its use and definition of such spectrum screens. The FCC has also imposed certain limitations on the ability of authorised parties of one type to hold licences or authorisations of another type. For example, the FCC’s rules prohibit cable service providers from holding an attributable interest in the incumbent local exchange carrier serving the same market, and vice versa. The FCC has explicit limits on the number of broadcast stations (radio and TV) an individual or entity can own in a given local market, as well as the percentage of households nationwide that can be covered by television stations attributable to a single individual or entity. Historically, the FCC limited cross-ownership of radio and television stations, as well as the cross-ownership of broadcast stations and newspapers. In November 2017, the FCC eliminated these restrictions. A legal challenge to that decision is currently pending in the United States Court of Appeals for the Third Circuit.

v Transfers of control and assignments

Under Section 310(d) of the Communications Act, FCC approval must be obtained prior to assigning most types of RF-based licences, permits or authorisations from one party to another, or transferring control of a holder of such RF authority from one party to another. Exceptions exist for certain pro forma transactions and certain types of licences. Similarly, under Section 214 of the Communications Act, FCC approval is required prior to assigning interstate or international telecommunications authorisations or transferring control of a US carrier that provides interstate or international telecommunications services. In reviewing such applications, the FCC typically attempts to gauge whether the application will serve the public interest, convenience and necessity by weighing the expected benefits of the proposed transaction against its expected harms, including the effects on competition and consumers. Most states have similar requirements applicable with respect to intrastate activities, and some require prior approval or notice regarding the issuance of debt by, or changes in the debt structure of, entities that are subject to their jurisdiction. State statutes sometimes require that other factors be considered as well, such as the expected effect on jobs in the state.

The time frames for obtaining FCC approvals in connection with mergers, acquisitions or other major transactions can vary widely. The FCC’s non-binding goal is to process combined applications for major transactions within six months. The FCC has exceeded this time frame on many occasions, typically when a transaction poses competitive concerns or is contested by third parties, in which case approval can take nine to 12 months, or possibly longer. More routine transactions are often processed in a shorter period, but there can be no assurance that the FCC will act by any deadline.

Since late 2017 the FCC has completed its review of several major telecommunications and media transactions. Most notably:

a In October 2017, the FCC approved a series of applications seeking consent to transfer control of various licences and authorisations held by operating subsidiaries of Level 3 Communications, Inc (a provider of fibre-based services to business customers) to CenturyLink, Inc (an incumbent local exchange carrier that provides communications
services to consumers and businesses in all 50 states). As a result of the deal, Level 3 Communications and its operating subsidiaries, which together own or control over 209,000 route miles of fibre, will become wholly owned subsidiaries of CenturyLink.

In November 2017, the FCC’s Media Bureau approved a series of applications seeking consent for the merger of CBS Radio, Inc, a wholly owned subsidiary of CBS Corp, with Entercom Communications Corp. Under the proposed transaction, CBS Radio would survive as a wholly owned subsidiary of Entercom and control more than 200 radio stations across the United States, making it the country's second-largest local radio platform. To comply with FCC ownership rules, Entercom would ultimately divest more than two dozen licences in various markets.

The FCC has also initiated, but not yet completed, its review of applications seeking approval to transfer control of various licences and authorisations held by Sprint Corp (the nation’s fourth-largest wireless carrier) and its wholly owned and controlled subsidiaries to T-Mobile US, Inc (the nation’s third-largest wireless carrier). The combined entity would serve approximately 30 per cent of US wireless subscribers.

Several other transactions that are not currently subject to FCC review are also significant:

a The acquisition of Time Warner Inc (a large media and entertainment conglomerate in the United States) by AT&T Inc (a provider of video, broadband, and voice services), while not subject to FCC review owing to Time Warner's pre-merger divestment of its FCC authorisations, remained subject to approval by the DOJ, and in November 2017, the DOJ sued to block the transaction on antitrust grounds. However, after a multi-week trial held in June 2018, a district court ruled against the DOJ and allowed the acquisition to proceed. Days later, the companies consummated the transaction but agreed to operate their combined media arm as a distinct entity pending the DOJ’s appeal, which was filed in July 2018 in the US Court of Appeals for the DC Circuit.

b In August 2018, Sinclair Broadcast Group, Inc (one of the largest television broadcast companies in the US) withdrew its application to merge with Tribune Media Company (an American television conglomerate). The combined entity would have held over 200 broadcast television station licences in over 100 markets, reaching approximately 72 per cent of all television households in the US. Although questions were initially raised in 2018 regarding Sinclair Broadcast Group’s lack of candour during the proceeding, a hearing to consider such issues has not yet been scheduled. However, following termination of the transaction, Tribune Media filed a breach of contract suit in Delaware Chancery Court.

c In July 2018, the New York State Public Service Commission voted to revoke its approval of Charter Communications, Inc’s acquisition of Time Warner Cable, Inc. Although the transaction received FCC approval in May 2016, New York’s regulators allege that Charter Communications failed to comply with conditions on which the state’s approval was based. Following the vote, the parties reportedly entered into negotiations that would allow Charter Communications to continue operating in New York as long as certain requirements are met.
vi Enforcement

Violations of the Communications Act, the FCC’s implementing rules, orders and policies, and specific licence terms and conditions can result in enforcement proceedings before the FCC, and potentially before the DOJ. The FCC has explained that it intends to investigate and respond quickly to potential unlawful conduct to ensure, among other things:

- that consumers are protected;
- robust competition;
- responsible use of the public airwaves; and
- strict compliance with public safety-related rules.

Violations of FCC requirements can result in a variety of sanctions, ranging from fines and forfeitures to consent decrees designed to ensure corrective action; in egregious cases, criminal enforcement is possible. In recent years, the FCC has issued several multimillion-dollar fines, as well as a number of fines of several hundred thousand dollars each. The cited infractions include deceptive consumer practices, unauthorised operation of radio facilities, selling of illegal equipment, violation of the FCC’s ownership rules and the provision of materially incorrect information to the FCC.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol transmission

Before 2015, the United States used a relatively light touch with respect to the regulation of ISPs and BIAPs, relying largely on market forces instead of prescriptive regulation. By many accounts, this hands-off approach contributed to the rapid growth of the US internet-based sector. Subsequent activity at the FCC – including, in particular, the agency’s imposition of net neutrality regulations and reclassification of retail broadband internet access services – suggested that it would play a more active role in the regulation of internet-based services. However, more recently the pendulum has swung in the other direction, with the FCC returning to a lighter touch with respect to internet access services (e.g., with respect to net neutrality regulation).

ii Universal service

The Communications Act directs the FCC to take steps to facilitate the universal availability of essential telecommunications services through, *inter alia*, the use of a federal universal service fund (USF). The USF supports various programmes that seek to promote the availability of quality telecommunications services at just, reasonable and affordable rates on a nationwide basis to high-cost areas, low-income individuals, schools, libraries and rural healthcare facilities. The USF is funded through revenue-based contributions from providers of interstate and international telecommunications and interconnected VoIP services, as well as certain other providers of telecommunications. The contribution factor (essentially, that rate at which interstate and international revenues are assessed for USF contribution purposes) fluctuates during the course of the year, but has been around 18 to 20 per cent of covered revenues for most of 2018. Universal service programmes and contribution obligations are administered by the Universal Service Administrative Company, an independent legal entity that is subject to the FCC’s oversight.

The National Broadband Plan recommends that the FCC modify existing universal service subsidy programmes to target broadband expansion into areas where the FCC
asserts BIAPs would not find it economically viable to provide broadband service in the absence of this type of financial support. Consistent with this recommendation, the FCC has established a new Connect America Fund (CAF) to support the deployment of broadband infrastructure to areas that are currently unserved, and to phase out legacy universal service support mechanisms in the process. Under the FCC’s implementing rules, certain wireline incumbents called price cap carriers enjoy significant funding preferences through, *inter alia*, a right of first refusal in connection with available funding. As a result, a much smaller pool of support is available to competitive providers. The FCC, which is currently implementing Phase II of the CAF programme, held a reverse-auction in July and August 2018 to distribute funding in areas where price-cap incumbents declined preferential funding. In the auction, more than 103 bidders were awarded more than US$1.49 billion of support to offer services to more than 700,000 locations in 45 states over the next decade. In addition, the FCC is implementing CAF rules for rate of return incumbent carriers. These changes are being coupled with changes to the existing – and exceedingly complex – intercarrier compensation scheme by which local and long-distance service providers pay or receive compensation for traffic that is handed off to each other’s networks. The FCC still must develop another mechanism and find billions more in funding to extend broadband services to the most remote and hardest-to-serve locations in the United States.

The FCC also has a Lifeline programme, which uses a portion of the USF to subsidise the costs of certain supported telecommunications services so that they can be purchased by individuals who otherwise would be unable to afford them. Broadband is included in the list of supported services, providing low-income consumers a means of obtaining internet access at reduced rates. Minimum standards exist for supported voice and broadband services in order for a service to qualify for the Lifeline subsidy. In November 2017, the FCC proposed modifications to Lifeline that would, among other changes, limit the ability of resellers (service providers that lease, rather than own, network capacity) to participate in the programme. Opponents challenged the new rules in the United States Court of Appeals for the District of Columbia Circuit, and the Court stayed their implementation in anticipation of oral arguments in the case, which took place in October 2018.

### iii Restrictions on the provision of service

#### Common carriage

The Communications Act subjects all providers of telecommunications services to common carrier regulation (e.g., the duty to provide service to all members of the public, including other carriers, without unreasonable discrimination). Telecommunications services are defined to include the provision of telecommunications to the public for a fee. Telecommunications, in turn, are defined to include the transmission, between or among points specified by the user, of information of the user’s choosing without change in the form or content of the information as sent and received. Notably, this definition does not encompass the creation or publication of mere content. Traditional telecommunications carriers tend to be heavily regulated by both the FCC and the state PUCs.

In contrast, information services are defined to include the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilising or making available information via telecommunications. These services typically involve what is called a net protocol conversion – essentially, a change in the form, structure or substance of the underlying communication. Providers of information services are not subject to common
carrier regulation and traditionally have been lightly regulated at the federal level. State and local jurisdiction over internet services is severely circumscribed, as the services are considered interstate for most purposes.

As communications technologies have continued to evolve, the lines between telecommunications services and information services have blurred, and the FCC has been slow to classify new service offerings. The FCC thus far has declined to classify VoIP services, creating uncertainty as to which regulations apply at both the federal and state levels. This uncertainty has been exacerbated by the FCC’s attempted use of its ancillary authority to extend a number of common carrier-type requirements to such otherwise-unregulated services.

Because the classification of a service is of critical importance in determining the regulations applicable to that service, the reclassification of a service can have significant consequences. The FCC’s treatment of internet access services provides a vivid illustration of this fact. Broadband internet access services require, inter alia, the transmission of data between an end user and an ISP, and any number of other individuals or entities. For years, the FCC viewed this transmission capability as a telecommunications service, and required BIAPs to offer it to competitors on a stand-alone, common-carrier basis. However, in a series of orders issued during the 2000s, the FCC reclassified broadband internet access services as information services functionally integrated with a telecommunications component, such that BIAPs are no longer required to make the transmission capability available to competitors (unless that capability is offered to the public voluntarily on a non-integrated, stand-alone basis).

The classification of broadband internet access service has remained an area of significant regulatory interest. In February 2015, the FCC reclassified retail broadband internet access service as a telecommunications service as part of the FCC’s net neutrality proceeding. This action was taken for the stated purpose of creating a clearer jurisdictional basis for the imposition of net neutrality rules on BIAPs, although it also automatically subjected BIAPs to various common carrier provisions appearing in Title II of the Communications Act, including privacy-related obligations. However, in January 2018, the FCC restored its prior classification of broadband internet access service as an information service, in conjunction with the FCC’s repeal of certain of those net neutrality rules, and in doing so also relieved BIAPs of Title II’s privacy obligations and other common carrier requirements. Appeals of the FCC’s 2015 decision accordingly became moot, although appeals of the 2018 order are ongoing, with oral arguments in the DC Circuit scheduled for February 2019.

Price regulation

The Communications Act gives the FCC the authority to regulate the rates charged by common carriers in connection with the telecommunications services they provide, and ensure that those rates are just and reasonable. Prior to the passage of the Telecommunications Act in 1996, rate regulation was accomplished through the filing of tariffs with the FCC and state PUCs. More recently, the FCC has eliminated much of its tariffing regime and instead relied upon market competition (backed by a complaint mechanism) to ensure that rates are just and reasonable. As retail broadband internet access service is classified as common carriage (for now), it too is subject to these same general just and reasonable requirements that apply to traditional telecommunications services (although this may not last).

In other respects, the FCC has taken steps toward the re-regulation of certain services that are critical inputs to broadband services. In 2016, the FCC found that certain incumbents
were abusing their market power and charging unreasonably high rates for the broadband special access services necessary for business data service firms to function and serve their customers. The FCC subsequently proposed and adopted a new regulatory framework for such special access services in which individual geographic markets are classified as either competitive or non-competitive, with the former subject to relatively lower levels of new regulation, and the latter subject to more onerous requirements and oversight. The new rules went into effect in August 2017 and were upheld in nearly all respects by the Eighth Circuit Court of Appeals in a ruling issued in August 2018.

Net neutrality

In recent years, one of the most significant policy debates at the FCC has focused on an open internet policy or net neutrality. Although the meaning of net neutrality is itself a subject of debate, net neutrality advocates generally aim to constrain the rights of broadband network providers to block, filter or prioritise lawful internet applications, websites and content.

The FCC’s direct involvement with a net neutrality policy began in 2005 with the issuance of its Broadband Policy Statement. Although the FCC’s authority under the Communications Act to regulate the internet was not clearly articulated, the Broadband Policy Statement expressed four principles that the FCC indicated were intended to preserve the open nature of the internet for consumers, without discouraging broadband deployment by network operators. All subject to a service provider’s right to engage in reasonable network management, the FCC stated that consumers are entitled to:

a. gain access to the lawful internet content of their choice;
b. run applications and use services of their choice, subject to the needs of law enforcement;
c. connect their choice of legal devices that do not harm the network; and
d. benefit from competition among network providers, application and service providers, and content providers.

In 2008, the FCC ruled that Comcast, the largest US CATV company, had violated the Broadband Policy Statement by inhibiting users of its high-speed internet service from using BitTorrent and other file-sharing software, a practice Comcast claimed was a type of reasonable network management designed to block pirated content and alleviate network congestion. Comcast appealed this decision, arguing, inter alia, that the FCC lacked the statutory authority to adopt or enforce net neutrality requirements. In early 2010, a US court of appeals agreed with Comcast and vacated the FCC’s order. In doing so, the court rejected the FCC’s attempt to rely on its ancillary authority as a basis for its enforcement of the Broadband Policy Statement against Comcast, insofar as the FCC had failed to identify a source for such authority in the Communications Act.

The FCC then adopted new rules on broadband internet access services, applicable only to mass-market retail services. Those rules required all broadband internet access service providers to disclose the network management practices, performance characteristics, and terms and conditions of their services;

a. prohibited fixed broadband internet access providers from blocking lawful content, applications, services or non-harmful devices;
b. prohibited mobile wireless broadband internet access providers from blocking lawful websites, or applications that compete with their voice or video telephony services; and
c. prohibited fixed BIAPs from unreasonably discriminating in transmitting lawful network traffic.
In 2014, the US Court of Appeals for the District of Columbia Circuit vacated the FCC’s anti-discrimination and anti-blocking rules, finding that they amounted to impermissible common-carrier regulation of internet access services, since the FCC had classified those services as information services not subject to Title II of the Communications Act (the Court upheld the FCC’s disclosure requirements). However, the Court also suggested that the FCC could adopt modified versions of these rules under Section 706 of the Telecommunications Act of 1996, which potentially grants the FCC relatively broad authority to promote the ‘virtuous circle’ of internet-related innovation.

In May 2014, the FCC launched a new rulemaking to explore whether new net neutrality rules could be adopted pursuant to Section 706, or whether the FCC instead should regulate BIAPs as ‘Title II’ common carriers. In 2015, the FCC opted for the latter approach, reclassifying retail broadband internet access service as a telecommunications service subject to Title II. At the same time, the FCC exercised its forbearance authority to free BIAPs from much of the regulation that otherwise would apply under Title II (such as tariffing obligations and mandatory federal universal service contributions). Notably, several core common carrier regulations continue to apply notwithstanding such forbearance, including statutory requirements that charges and practices be just, reasonable and not unreasonably discriminatory, requirements to maintain the privacy of customer information, and the right of consumers to seek damages and pursue complaints in courts for claimed violations by common carriers.

Soon after the FCC’s ruling, a broad coalition of BIAPs and trade associations filed an appeal in the US Court of Appeals for the District of Columbia Circuit. That Court upheld the FCC in a ruling issued in June 2016, and the US Supreme Court ultimately denied further review in November 2018.

In January 2018, the FCC revisited these issues yet again, this time restoring the classification of broadband internet access service as an information service and repealing its 2015 bans on blocking, throttling and paid prioritisation as well as its general internet conduct standard. In place of these prophylactic rules, the FCC adopted a revised transparency rule requiring BIAPs to disclose any blocking, throttling or paid prioritisation on their networks. The FCC also entrusted the FTC with the task of bringing enforcement actions for unfair and deceptive practices if BIAPs violate their own stated commitments not to engage in such conduct, and for unfair methods of competition if BIAPs otherwise engage in anticompetitive conduct. An appeal of this order brought by a group of public advocacy organisations, ICPs and state attorneys general is currently pending in the US Court of Appeals for the District of Columbia Circuit.

Additionally, in the aftermath of the 2018 order, several states have attempted to establish their own net neutrality requirements for BIAPs, in the form of either direct regulation (e.g., California’s SB-822) or conditions on government procurement contracts (e.g., Vermont’s EO 2-18 and S-289). The federal government and BIAPs sued to block California’s net neutrality law on pre-emption grounds in September 2018, leading to a concession by the state not to enforce the law while the appeal of the FCC’s 2018 order remains pending. BIAPs brought a similar lawsuit in Vermont in October 2018.

iv Security

US regulatory approach to emergency preparedness

Because US commercial communications networks are privately owned, the FCC’s role in ensuring emergency preparedness primarily is one of gathering and disseminating
information and coordinating among different governmental agencies. Facilities-based telecommunications service providers participate in industry-run working groups focused on developing best practices to ensure network reliability, to report network outages and to be prepared to restore network services as rapidly as possible in the event of an outage. The recommendations of this group do not have the binding force of law, but have played an important role in shaping industry practice and have prompted some limited FCC rulemaking activity. For example:

- **FCC rules now require all wireline and wireless telecommunications service providers to maintain on site a back-up power source (typically, a generator) capable of keeping networks functioning for a minimum number of hours. In addition, FCC rules require providers of fixed residential voice services (including interconnected VoIP) to offer customer premises equipment along with a backup power source.**

- **Under the Telecommunications Service Priority (TSP) programme, service providers must afford priority service to federal, state and local governments and other critical institutions.**

- **The FCC has adopted outage reporting rules that require network operators to notify the FCC of significant outages that may impact end user communications, and recently extended these rules to VoIP providers.**

- **The FCC has established rules governing the Emergency Alert System (EAS), a national public warning system that requires broadcasters, CATV operators, satellite broadcasters and others to provide communications capability to the President to address the American public during a national emergency. The system may also be used by state and local authorities to deliver important emergency information, such as AMBER alerts and weather information targeted to specific areas.**

The FCC is also responsible for the emergency preparedness of US network operators, the RF spectrum needs of non-federal first responders (police, fire, ambulance and emergency medical teams), and coordination among network operators and various governmental organisations to address cybersecurity concerns. Much of this activity has focused on ensuring adequate spectrum for public safety users, and ensuring the interoperability of different public safety networks.

Congress has authorised the creation of a nationwide, interoperable, high-speed network dedicated to public safety applications. This network is being managed by FirstNet, an independent entity within the NTIA that is overseen by a board including representation from the public safety community, wireless experts, and current and former federal, state and local government officials. Notably, a significant portion of FirstNet operations is funded by the proceeds of spectrum auctions.

**The Communications Assistance for Law Enforcement Act**

The Communications Assistance for Law Enforcement Act (CALEA) requires telecommunications carriers to implement specific capabilities in their networks to permit law enforcement agencies to intercept call identifying information and call content pursuant to a lawful authorisation. For this purpose, the term telecommunications carriers is defined broadly to include interconnected VoIP providers as well as facilities-based BIAPs (consistent with the FCC’s reclassification decision in the net neutrality context). CALEA establishes both minimum capacity requirements and capability requirements. CALEA does not specify
the means by which providers must comply with these capability requirements, but creates a safe harbour for carriers that implement industry standards. CALEA does not grant law enforcement agencies any surveillance authority beyond what otherwise exists under US law.

**Cybersecurity**

US cybersecurity policy following the completion of the federal government’s Cyberspace Policy Review has sought to:

- create or enhance shared situational awareness of network vulnerabilities, threats and events, and the ability to act quickly to reduce current vulnerabilities and prevent intrusions;
- enhance US counterintelligence capabilities and increase the security of the supply chain for key information technologies; and
- strengthen the future cybersecurity environment by expanding cyber education, coordinating and redirecting research and development efforts, and working to define and develop strategies to deter hostile or malicious activity in cyberspace.

Consistent with these goals, the FCC has explained that one of its core objectives is ‘to strengthen the protection of critical communications infrastructure’. In advancing this objective, the FCC has focused on educating consumers and small businesses about the importance of cybersecurity, developing cybersecurity best practices in cooperation with industry leaders and facilitating the ability of small businesses to develop their own cybersecurity plans.

**Online protections for children**

The Children’s Online Privacy Protection Act of 1998 restricts the ability of website operators to collect personal information from children under 13 years of age. The type of verifiable parental consent that is required before collecting and using information provided by children under 13 is based upon a sliding scale set forth in an FTC regulation that takes into account the manner in which the information is being collected and the uses to which the information will be put. While children under 13 can legally give out personal information with their parents’ permission, many websites disallow underage children from using their services because of the regulatory burdens involved.

**Protection of personal data and privacy**

The Communications Act protects the privacy of ‘customer proprietary network information’, which includes the date, time, duration and location of a call, type of service used and other details derived from the use of a telecommunications service. US law also protects the contents of any telecommunications message from eavesdropping, recording, use or disclosure by a third party without a user’s consent. Users of online services enjoy similar protection from eavesdropping or disclosure of their communications. Exceptions apply where access to, or use or disclosure of, such information is necessary for law enforcement, which in most cases requires prior approval by a judge. In addition, the NTIA has formed an Internet Policy Task Force, which has recommended the adoption of voluntary codes of conduct by industry participants, and continues to examine ‘the nexus between privacy policy and innovation in the Internet economy’.

Notably, this legal framework is targeted at carriers and other private actors, as opposed to the government. However, in 2013 it was the policies and practices of the latter that
prompted the most significant privacy concerns, and added fuel to the ongoing debate over how much privacy should be sacrificed by individuals in the name of national security. The controversy erupted in June 2013 when the British newspaper The Guardian published a series of exposés containing information leaked to it by Edward Snowden, who had been employed as a contractor for the US National Security Agency (NSA). More specifically, Snowden disclosed classified information regarding NSA surveillance programmes, including NSA efforts to compile a database containing the metadata for hundreds of billions of telephone calls made through the largest US carriers and collect stored internet communications from large internet companies like Google. While some of these activities apparently were authorised by special courts established under the Federal Intelligence Surveillance Act, the activities of these courts are not subject to public scrutiny and have been criticised as little more than a rubber stamp for proposed executive branch activities.

The FCC has also tried to ensure that consumers can effectively block calls and text messages that they do not wish to receive, using authority provided by Congress in the Telephone Consumer Protection Act (TCPA). Among other things, in June 2015 the FCC attempted to strengthen restrictions on the practice of robocalling using automatic telephone dialling systems (i.e., autodiallers) by issuing a series of declaratory rulings. Among other things, the FCC ruled that a device is an impermissible autodialler if it had either the present ability or potential future ability to be used to store or produce telephone numbers to be called, using a random or sequential number generator, and to dial such numbers. Numerous parties sought review of this ruling in the US Court of Appeals for the District of Columbia Circuit, arguing, among other things, that the FCC’s action actually obfuscates matters and unreasonably expands the reach of the TCPA, because, for example, a smartphone could be classified as an impermissible autodialler simply because it could use an autodialling application. In March 2018, the Court struck down the FCC’s autodialler ruling and other aspects of the 2015 order, and in May 2018, the FCC opened a new proceeding to consider reforms to its implementation of the TCPA in light of the Court’s ruling.

IV SPECTRUM POLICY

i Flexible spectrum use

In recent decades, the FCC increasingly has adopted a flexible approach to defining the uses to which a particular RF band may be put, or the optimal scope of licences that an entity can use to meet its business needs. For example, the FCC has granted many licensees (but not broadcasters) flexibility to redefine their own service territory, dividing or combining geographically bounded licences, and to subdivide their assigned spectrum and sell or lease a portion to another user. The FCC has also adopted more fluid service definitions – for example, permitting fixed and mobile operations, or terrestrial and satellite operations – in the same band.

The FCC has been examining ways to increase flexibility and efficiency in the use of available spectrum resources. It has recognised that one key failing of its spectrum policy is that administrative rigidities historically have prevented more efficient use of the spectrum resource. As a result, the FCC’s spectrum policy has evolved towards more flexible and market-oriented regulatory models.

For example, to facilitate the development of secondary markets in spectrum usage rights involving terrestrial RF-based services, the FCC has adopted rules to facilitate two types of leasing arrangements: a spectrum manager lease, in which a lessee is permitted
to use spectrum subject to the oversight and control of the initial licensee; and a *de facto* transfer lease, in which the lessee assumes many of the obligations of a licensee, and exercises control over its own spectrum operations. The FCC has also examined ways to facilitate unlicensed use of certain spectrum bands, provided that such use does not interfere with licensed operations (if any) in those bands. Among other things, the FCC has adopted rules permitting certain devices to operate on a secondary, unlicensed basis in unused broadcast television spectrum, also known as white spaces; and has sought to facilitate the ability of unlicensed Wi-Fi networks to share portions of the 5GHz band that previously were designated for other purposes.

ii Broadband spectrum use

Federal law and policy has sought to encourage the growth of broadband networks, including through access to additional spectrum. More specifically, Congress has directed the FCC and the NTIA to make additional federal government spectrum available for commercial use. The FCC and the NTIA are also exploring ways that commercial users might share federal government spectrum.

The FCC has also identified existing commercial spectrum that could be reallocated and thus used more efficiently in support of broadband services. After Congress enacted legislation that allowed television broadcasters to turn in some of the spectrum they use for their television channels in return for a portion of auction proceeds, the FCC conducted its first incentive auction. The auction of the voluntarily returned broadcast channels for new mobile broadband use yielded US$19.8 billion in revenue, including more than US$7 billion for the government.

In addition, the FCC has continued work in its spectrum frontiers proceeding, which seeks to make additional spectrum above 24GHz available for 5G wireless mobile and other broadband services. In a second phase of this proceeding, the FCC made available 1,700MHz of millimetre wave spectrum for flexible wireless use in the 24.25–24.45 and 24.75–25.25 GHz band (24 GHz band) and the 47.2–48.2 GHz band. This is in addition to the 27.5–28.35 GHz, 37–38.6 GHz, 38.6–40 GHz, and 64–71 GHz bands that the Commission previously made available for flexible wireless use. The FCC also enabled the millimetre wave bands to be used for a variety of other uses, including satellite, fixed and federal government uses. The FCC targeted the 40–42 GHz and 48.2–50.2 GHz bands for expansion of the fixed satellite service, and adjusted previously adopted earth station requirements in the 28 GHz and 39 GHz bands to permit greater flexibility in the deployment of earth stations. This expanded on a prior FCC decision that allowed the deployment of over 9,000 individually licensed earth stations on an interference-protected basis in the 27.5–28.35 GHz band, and committed to consider allowing ubiquitously deployed satellite user terminals access to 27.5–28.35 GHz in light of ‘the evolving nature of technology and deployment’ in this band segment. The FCC also provides for expanded unlicensed use of the 57–71 GHz band on board aircraft.

With respect to broadband services on aircraft, as well as on as ships and vehicles, the FCC adopted new rules to better enable satellite-delivered connectivity to passengers and crew. The FCC has allowed ‘earth stations in motion’ to operate in more satellite frequencies than before in an effort to connect even larger numbers of consumers in this fast-growing segment of the marketplace, and has provided more certainty by adopting a simplified,
regulatory framework for licensing these spectrum uses. Pending before the FCC is also an inquiry into potential ways to facilitate more intensive use of the frequencies between 3.7GHz and 24GHz.

There also have been a number of other new developments with respect to satellite spectrum policy. The DOC has outlined plans to simplify aspects of the existing commercial licensing regime and also to develop radio spectrum policies to serve the needs of the commercial industry. In addition, the President has issued a number of space policy directives, which require, among other things, that the DOC and the Director of the Office of Science and Technology Policy at the White House provide him with a report on improving the global competitiveness of the US space sector through RF spectrum policies, regulation, and US activities at the ITU and other multilateral fora.

iii Spectrum auctions and fees

Where spectrum is to be assigned to an individual licensee, and more than one party applies to use such spectrum (i.e., mutually exclusive applications are received by the FCC), the FCC may choose from several mechanisms under the Communications Act by which to designate the winning licensee. Most new spectrum assigned since 1993 has been licensed through the use of competitive bidding (i.e., spectrum auctions). The statute excludes certain specific types of spectrum licences (international satellite, public safety, non-commercial broadcast, etc.) from the scope of the FCC’s auction authority. The FCC has completed almost 100 RF spectrum auctions to date.

Historically, proceeds from all spectrum auctions have gone to the US Treasury. Under the recently used incentive auction (described above), current licensees have the option to contribute spectrum rights in exchange for a portion of the proceeds from the auction of that spectrum.

V MEDIA

i Regulation of media distribution outlets generally

The regulation of media distribution outlets and content varies depending on the business model and technology being used. As previously noted, internet-based content delivery is very lightly regulated in the US. Traditional media outlets historically have been regulated more heavily by the FCC.

Regulation of content and content providers

The First Amendment to the US Constitution guarantees the freedom of speech, and limits the ability of the government to regulate the content of a broadcaster’s programming, or content providers directly. Several decades ago, the courts recognised the FCC’s authority to prohibit indecent programming by free, over-the-air broadcasters, based on the government’s interest in ensuring that scarce spectrum rights are used in a manner that serves the public interest, and the unique pervasiveness of broadcast media in the lives of Americans and their children. As discussed below, those rules do not apply to the CATV and satellite video and audio service providers whose coverage extends throughout the US. It is unclear whether the FCC’s rules remain constitutional in today’s media-rich market where many different media outlets serve the same household.

In recent years, the FCC has fined stations that aired fleeting expletives (incidental words or gestures that are broadcast despite the reasonable precautions taken by the licensee
to avoid indecent broadcasting). For example, in 2006 the FCC fined affiliates of the ABC and Fox networks millions of dollars for airing such material during their programming. Both networks subsequently challenged these fines in the courts. In June 2012, the US Supreme Court invalidated the fines on due process grounds, finding that the FCC had not fully articulated its rule against fleeting expletives until after the programmes in question had been aired. In taking this approach, the Court left open broader questions as to whether the FCC’s fleeting expletives policy violates the First Amendment or otherwise is unconstitutional.

**Terrestrial broadcasting**

Television and radio stations broadcasting video content for free to listeners and viewers via terrestrial RF spectrum are subject to extensive regulation by the FCC, which has exclusive licensing authority for such stations in the United States. Among other things, the FCC has adopted detailed technical rules governing this type of broadcaster, restricted their ability to air indecent programming, imposed political broadcasting and other public interest obligations on them, and adopted multiple ownership restrictions. These regulations are largely premised on the idea that RF spectrum is a scarce resource, and thus the FCC should promote localism, diversity of ownership and service in the public interest.

**Subscription media**

Entities providing electronic media services by subscription – CATV, direct-broadcast satellite (DBS) service, subscription radio or even subscription over-the-air TV stations – generally are subject to less restrictive content regulation than terrestrial free over-the-air broadcasters (obscene material is prohibited, but not material that is merely indecent). Because subscribers pay for their service, by definition, arguments that they must be protected from unwittingly accessing indecent content are less convincing. Subscription satellite radio providers and multichannel video programming distributors (MVPDs), such as DBS and CATV providers, remain subject to FCC regulation with respect to their use of RF spectrum and certain other matters. Moreover, terrestrial CATV operators are also subject to franchising by state or local authorities for the use of public rights of way.

**Carriage of broadcast television programming by MVPDs and other parties**

When Congress imposed a variety of obligations on cable operators with respect to their carriage of local broadcast television signals in 1992, it was concerned that the MVPD industry posed a threat to broadcast TV stations (given better transmission quality, greater choice of programming, etc.). Congress was also concerned that MVPDs would become the predominant means of distributing video programming to consumers, and then could use that market position to preclude local broadcasters from reaching those consumers effectively. To address this concern, Congress established a statutory framework allowing each over-the-air TV station, on a local-MVPD-by-MVPD basis, to elect either must-carry status (ensuring mandatory carriage on an MVPD serving the local market of that station) or retransmission consent (requiring an MVPD to obtain the station’s consent before carrying its signal). This new right supplemented the compulsory copyright licence established in the Copyright Act, under which content owners receive a statutory fee from MVPDs in connection with their retransmission of broadcast signals, but MVPDs do not need the consent of those content owners.

Initially, most local broadcasters were unable to negotiate cash compensation in exchange for granting retransmission consent to MVPDs; at best, they typically were able to
negotiate in-kind deals, such as commitments from MVPDs to purchase advertising time. More recently, local broadcasters have begun to demand cash compensation, and many have indicated they would withhold retransmission consent from an MVPD unless they are paid for the carriage of their signal. For example, in 2013, the CBS network declined to extend its grant on retransmission consent on existing terms, and carriage of that network on a major MVPD was disrupted in a number of major US markets for several weeks. However, in March 2014 the FCC took action that increased MVPDs’ bargaining position somewhat; specifically, the FCC revised its rules to preclude the joint negotiation of retransmission consent agreements by multiple broadcast television stations that are ranked among the top four stations in a local market and not commonly owned. The FCC explained that such action was necessary to ensure that broadcasters did not enjoy undue leverage in such negotiations. Nevertheless, disputes between MVPDs and broadcasters continue, and the FCC occasionally is called upon to adjudicate claims of bad faith retransmission consent negotiations.

In addition to the retransmission consent requirements described above, any party that retransmits broadcast programming must comply with US copyright law. Federal law creates compulsory licences allowing cable systems and other MVPDs to retransmit such programming without obtaining specific licences from every relevant copyright holder in the programming stream. Other types of services do not benefit from this compulsory licence and must respect relevant copyright, as the US Supreme Court confirmed in June 2014 when it released its decision in American Broadcasting Cos v. Aereo, Inc, which involved a service that leased each subscriber an individual remote antenna that allowed that subscriber to receive broadcast signals and retransmit that signal over the internet for near-live viewing. The Court concluded that Aereo’s retransmission of these signals constituted a public performance of programming material that infringed on the rights of the copyright holders. The Aereo decision does not address how US copyright law could apply to other retransmission services going forward, and in particular does not fully resolve whether modest changes to the structure of an Aereo-like service (e.g., recording programming for later viewing instead of engaging in near-live retransmission) would change the outcome.

ii Internet-delivered video content

The regulatory status of internet-delivered video content turns in part on whether it can be considered video programming under the Communications Act. This term encompasses ‘programming provided by, or generally considered comparable to programming provided by, a television broadcast station’. Much online video content does not fall into this category, and as such lies outside the FCC’s jurisdiction.

Also significant is the manner and form in which video programming is delivered to the viewer. Video programming may be subject to minimal regulation if it is incorporated into an information service by virtue of the use of the internet or other broadband technologies as a delivery mechanism. Moreover, the FCC has identified a category of interactive television services – defined as ‘a service that supports subscriber-initiated choices or actions that are related to one or more video programming streams’ – but it has not decided what requirements, if any, should apply to such services. The manner in which these classification issues are resolved can have significant implications in other regulatory areas. For example, IP-delivered video programming in the form of a traditional cable service arguably falls outside the scope of the FCC’s net neutrality rules. Notwithstanding general uncertainty with respect to the regulatory status of internet-delivered video content, IPTV services delivered
by telecommunications companies have been subject to franchising as cable systems under some state and local requirements. To expedite competitive entry into the IPTV market, to facilitate competition to entrenched CATV operators, several states have adopted state-wide franchising, and have pre-empted separate approval requirements in individual municipalities. The FCC encourages rapid approval of competitive franchising requests and has indicated that it may pre-empt states that do not promptly act on such requests.

### iii Mobile services

Consumer demand for access to audio and video programming through mobile platforms is one of the primary drivers of increased demand for mobile broadband access generally. As noted above, the National Broadband Plan aims to free additional spectrum resources for such services. The advent of these services, many of which would not use broadcast spectrum, reflects increasing convergence in the communications industry, and could lead to increased pressure to reconcile regulatory frameworks that treat similar services differently.

### VI CONCLUSIONS AND OUTLOOK

The FCC continues to focus its regulatory efforts on broadband-related matters, and developments in 2018 have carried on the recent trend toward deregulation of BIAPs. The FCC has continued its efforts to free additional spectrum for wireless broadband operations, both on a licensed and unlicensed basis, to facilitate continued growth in broadband markets. At the same time, the FCC has continued to explore ways to make broadband more accessible, including in areas of the country the FCC deems underserved and to individuals who otherwise would lack the resources to pay for such access.

The FCC’s previous efforts to impose substantive regulations on broadband internet access services remain controversial, and have been rescinded in large part by the FCC itself. Attention has increasingly turned to federal legislative proposals to establish net neutrality requirements in some form, although such requirements may well turn out to be less stringent than those adopted by the FCC in 2015. In any event, it is possible that important details of those rules will need to be resolved through case-by-case adjudication or further FCC policy statements.
Appendix 1

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She has broad experience in advising major clients in the IT and media sectors on various regulatory issues. She often advises on mass media legislation and licensing and certification. She assists Russian subsidiaries of major foreign and Russian companies on a broad spectrum of regulatory issues. She has gained practical experience in relation to joint venture structuring and M&A projects in the TMT sector. She has also taken part in due diligence investigations in relation to regulatory issues.

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Ms Anuradha advises clients on legal issues in the technology and telecoms sector and assists clients with various transactions in these sectors. Ms Anuradha previously worked with the Telecom Regulatory Authority of India for three years as a research associate with the networks spectrum and licensing division, and has a good understanding of the legal and regulatory framework in the telecommunication and broadcasting sector. She advises on regulatory aspects regarding the provision of various licensed and non-licensed telecoms...
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He advises clients on the best available corporate structures for carrying out TMT business in Russia. He has represented purchasers and sellers across Russia and CIS countries in a large number of M&A deals, and provides general corporate and commercial advice to public and private client companies that operate in the telecommunications and media sectors.

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Richard advises large global telecommunications companies across Australia, Asia-Pacific and the Middle East, including nbn, and has extensive experience with commercial negotiations and in contract law. Most recently, Richard has acted as a key adviser on the negotiation of nbn’s wholesale broadband agreement, which is the primary agreement under which nbn supplies products and services to its wholesale customers.

Prior to joining Webb Henderson, Richard worked for Ashurst where he advised clients in a diverse range of industries including the technology sector, financial services and resources.

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Linda Funck is a partner with Elvinger, Hoss, Prussen, which she joined in 2000 when she became a member of the Luxembourg Bar.

Her principal fields of activity are mergers and acquisitions, banking, financial and securities laws, corporate restructuring and IT, IP and data protection law. In the field of TMT, Linda Funck regularly advises local and international companies on all IT aspects, and is a regular adviser to clients seeking to establish, restructure or develop their TMT activities in Luxembourg.

She is member of the Commission dealing with intangible law matters of Luxembourg of the Luxembourg Bar Association.

She holds a master's degree in law from the Université Paul Verlaine in Metz. She is fluent in English, French, German and Luxembourgish.
PABLO GONZÁLEZ-ESPEJO

Uría Menéndez

Pablo González-Espejo is a lawyer based in the Madrid office of Uría Menéndez. He joined the firm in 1994 and was made partner in 2004. In 1999, he opened Uría Menéndez’s São Paulo office, which he headed until September 2003. He advised foreign investors in Brazil and was one of the first foreign lawyers to be registered with the Brazilian Bar Association. Since returning to the firm’s Madrid office in October 2003, he has focused his practice mainly on commercial and company law in the audiovisual, telecommunications, sports and IT sectors.

He advises companies on regulatory and commercial matters. He is regularly involved in major transactions advising businesses and investors in acquisitions, IPOs, joint ventures and outsourcing projects. His international experience includes cross-border deals, especially in Latin America.

Mr González-Espejo also heads the sports law practice group at Uría Menéndez, advising sports clubs, leagues and athletes. He has taken part in international arbitrations before the CAS and is part of the team of experts that drafted a White Paper to reform Spanish professional sports.

He is considered a leading practitioner in M&A, new technologies, telecommunications, media and sports by the most prestigious legal directories, such as Chambers, PLC Which Lawyer? and Best Lawyers in Spain.

ANDRÁS GUROVITS

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Dr András Gurovits is a partner at Niederer Kraft Frey Ltd, Zurich, Switzerland. His main areas of practice are arbitration and litigation, sports, TMT and corporate governance.

He is a listed arbitrator with the Court of Arbitration for Sport CAS/TAS in Lausanne, a member of the legal committee of the International Ice Hockey Federation as well as member of the board of Grasshopper Fussball AG (the corporation operating the professional football of Grasshopper Club Zurich).

Dr Gurovits regularly advises clients in civil and commercial disputes before state courts and arbitral tribunals as well as in administrative proceedings before the relevant state authorities. Further, he regularly acts as sole arbitrator, member of a panel or chair in arbitration proceedings before the CAS. His corporate governance experience includes, in particular, planning and implementation of organisational regulations, codes of conduct and similar instruments to ensure the proper conduct of commercial entities and sports-governing bodies and sports organisations. His sports practice covers all aspects of sport-related issues, such as commercialisation of sports rights, organisation of sports events and management of sports organisations.

IRENE HALFORTY

Webb Henderson

Irene is a commercial lawyer experienced in providing legal and regulatory advice in TMT, privacy and data, communications and IP, as well as general corporate and commercial matters.

Irene has worked extensively on advising on the legal and regulatory aspects of data, privacy and customer engagement through novel technologies. In addition, she is experienced in corporate restructuring, regulatory advocacy, and developing and negotiating industry agreements.
About the Authors

codes of practice. Irene also has experience in writing submissions to, and engaging with, key government and regulatory stakeholders on policy and law reform issues.

In 2018 she was appointed to the Law Society of NSW Privacy & Data Committee and elected as the co-vice chair of the Communications, Entertainment and Technology Law Committee (NSW Young Lawyers).

ALEXANDER HEIRWEGH

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Alexander Heirwegh is an associate specialising in intellectual property, information technology, data protection, internet, e-commerce and telecommunications.

Alexander obtained a master's degree in law at Ghent University, magna cum laude. He also obtained an LLM in intellectual property and ICT law at Leuven University, magna cum laude. During his studies, Alexander focused on European and IT law at Charles University in Prague, Czech Republic, while taking part in the Erasmus exchange programme.

Alexander has particular expertise in online brand and copyright protection, and domain names. He has participated in various online trademark and copyright infringement cases and domain name disputes.

He has written a master's thesis on privacy and trademark enforcement issues in cybersquatting cases.

ANGUS HENDERSON

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Angus Henderson has worked on communications regulatory, wholesale and commercial transactions over the past 25 years in Australia, Asia-Pacific, the Middle East and beyond. He has worked for leading telecommunications operators in the sector on some of the leading telecommunications, pay television and broadband deals during this time.

A large proportion of his practice is devoted to the development of competitive regulatory models in the telecommunications and broadcasting industries. He provides extensive advice on deregulation of communication markets to operators and regulators throughout Asia-Pacific and the Middle East on these matters.

In 2015 and 2012, Mr Henderson was named as ‘Telecommunications Lawyer of the Year (Sydney)’ by Best Lawyers. He is ranked in Band 1 by Chambers Asia Pacific 2017 in telecommunications in Australia. He is named as a ‘preeminent’ telecommunications lawyer by Doyles Guide 2017 and is also named as a ‘Leading Individual in TMT’ in The Legal 500 2017. He is also the co-editor of Communications Law and Policy in Australia.

MICHAEL H HERMAN

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Michael H Herman is a law clerk awaiting bar admission in the Washington, DC office of Latham & Watkins LLP, where he was a summer associate prior to joining the firm full time. Mr Herman received his JD from Wake Forest University School of Law, graduating summa cum laude. During law school, Mr Herman served as editor-in-chief of the Wake Forest Law Review and interned for Judge Jimmie V Reyna of the United States Court of Appeals for the Federal Circuit. Prior to law school, Mr Herman attended Wake Forest University, graduating cum laude with a BA in politics and international affairs.
FEDERICO HERNÁNDEZ ARROYO
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Federico Hernández, who previously worked in-house at Cofetel, Mexico’s former Federal Telecommunications Commission, has first-hand knowledge of complex regulatory issues regarding the telecommunications sector. He helps clients with regulatory, commercial and procurement transactions. National and international companies call on Federico to help them navigate the regulatory challenges and other hurdles involved in establishing and maintaining operations in Mexico. His unique perspective and experience in working with both public and private clients allow him to provide practical and efficient solutions to legal and business problems.

Federico has counselled clients on administrative, procurement, infrastructure, antitrust, corporate and commercial matters. Clients in industries including TMT, education, sports, consumer, transportation, infrastructure, entertainment and gaming, and non-governmental organisations turn to Federico for his creative approaches and his ability to put together the right legal team. Earlier in his career, Federico served as director of regulatory affairs of Cofetel, where he helped draft policies, regulations and other resolutions. Since then, in his private practice, Federico has advised the government in complex regulatory and policy projects. Federico regularly publishes articles and moderates or speaks on panels on such topics as net neutrality, the internet of things, machine to machine, the right to be forgotten, big data, mobile technology and other hot topics.

SAM HUANG
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Sam Huang is an associate at Lee and Li. His primary areas of practice include media and internet law, data and privacy protection, e-commerce, consumer protection and general corporate matters. He regularly advises clients, mostly multinational companies, on the areas of personal data protection, privacy, data security, cross-border data transfers, telemarketing and e-marketing, online gaming and electronic signatures, as well as other e-commerce or internet-related matters.

JOHN P JANKA
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John P Janka is a partner in the Washington, DC office of Latham & Watkins LLP, where he served as a global leader of the communications law practice group for a decade. For almost three decades, Mr Janka has counselled international telecommunications operators and ISPs, content providers, investors and banks on a variety of regulatory, transactional and controversy matters. His experience includes the purchase, sale and financing of communications companies, the procurement and deployment of communications facilities, global spectrum strategies and dispute resolution, the provision of communications capacity, content distribution, strategic planning, and effectuating changes in legal and regulatory frameworks. His clients include satellite operators, broadband providers, wireless and other terrestrial communications companies, video programming suppliers, ISPs, television and radio broadcast stations, and firms that invest in and finance these types of entities.

Mr Janka has served as a United States delegate to an ITU World Radio-communication Conference in Geneva, and as a law clerk to the Honourable Cynthia Holcomb Hall, United
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States Court of Appeals for the Ninth Circuit. Mr Janka holds a JD degree from the University of California at Los Angeles School of Law, where he graduated as a member of the Order of the Coif, and an AB degree from Duke University, where he graduated magna cum laude.

JAN JANSSSEN

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Jan Janssen is a senior dispute resolution lawyer with a keen interest in complex regulatory matters and technology. He specialises in commercial and international arbitration with a focus on intellectual property, information technology and the liberalisation of sectors.

Jan’s practice primarily involves complex civil litigation and commercial arbitration in a variety of industries, including fashion, media, postal services, technology and telecommunications.

Jan also provides contractual advice and assists clients in protecting, managing and enforcing their intellectual property rights both in an online and offline environment. He assists and represents clients in transactional matters, such as distribution, agency, licensing, technology transfer, software development, outsourcing and service level agreements.

JEAN-LUC JUHAN

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Jean-Luc Juhan is a partner in the corporate department of the Paris office of Latham & Watkins.

His practice focuses on outsourcing and technology transactions, including business processes, information technology, telecommunications, systems and software procurement and integration. He also has extensive experience advising clients on all the commercial and legal aspects of technology development, licensing arrangements, web hosting, manufacturing, distribution, e-commerce, entertainment and technology joint ventures.

Mr Juhan is in particular cited in *Chambers Europe* and *The Legal 500 Paris*: the ‘exceptional’ Jean-Luc Juhan, ‘whose negotiating skills and expertise are remarkable’, is ‘very sharp and down-to-earth’ and has ‘very good knowledge of the industry’; he advises high-profile French and international groups on large outsourcing, telecommunication and integration system projects.

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Hiroki Kobayashi is a corporate partner of Latham & Watkins Gaikokuho Joint Enterprise in Tokyo. He advises on Japanese legal issues relating to a variety of areas of transactional practice, including corporate law and various government regulatory matters. He handles cross-border M&A matters in collaboration with Latham & Watkins attorneys in other offices, and counsels clients on M&A transactions conducted under different business practices. His experience includes an acquisition by Turner Broadcasting System, Inc through its Japanese subsidiary Japan Entertainment Network KK of Japan Image Communications Co, Ltd, a licensed operator of multiple TV channels, and a sale by Liberty Global of its US subsidiaries holding shares in Jupiter Telecommunications, Japan’s largest cable television operator, to KDDI. Mr Kobayashi has spoken on the topic of privacy in cyberspace at a meeting of an academic society of computer scientists. Mr Kobayashi is admitted to practise in Japan and

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Ms Liisa Maria Kuuskmaa is a legal assistant of the commercial and regulatory practice group at Sorainen.

Ms Kuuskmaa assists lawyers in a broad spectrum of areas such as competition law, information technology and data protection, telecommunications, distribution and trade, and infrastructure and regulatory. She has experience in assisting lawyers in numerous complex cases, including advising clients in various regulatory compliance and trade regulation matters, drafting and implementing agreements, and resolving related disputes.

Prior to joining Sorainen as a legal assistant in 2018, she completed a traineeship at the firm, and also gained experience at the legal clinic of the University of Tartu and as an intern at the Estonian Prosecutor’s Office.

Ms Kuuskmaa holds a BA degree in law, cum laude, and is currently obtaining an MA degree in law at the University of Tartu. She was also a member of the winning team at the XXI Estonian Moot Court Competition in 2018.

CHI HO KWAN

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Chi Ho Kwan is an associate in the Hong Kong office of Latham & Watkins and a member of the litigation department.

Mr Kwan specialises in civil and commercial litigation and arbitration proceedings. He has assisted in various civil matters such as shareholders’ disputes, contractual disputes and debt recovery actions.

He also has experience in a variety of regulatory matters, including licensing matters, financial and corporate regulations and investigation, as well as white-collar defence and investigations.

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David Lai is a corporate associate of Latham & Watkins Gaikokuho Joint Enterprise in Tokyo. Mr Lai’s practice covers a broad range of corporate transactions, including cross-border mergers and acquisitions, joint ventures and strategic alliances, and general corporate counselling. His representative experience in the telecommunications industry includes counselling Qualcomm Incorporated in connection with its RFFE module joint venture with TDK Corporation, and representing a Japan-based internet and television service provider in its acquisition by a large Japanese fund. Prior to joining Latham & Watkins, Mr Lai served as an associate in the corporate department of a major international law firm in Seattle, Washington. Mr Lai is admitted to practise in the states of New York and Washington.
KIRILL LAPTEV
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Kirill is head of the technology, media and telecommunications (TMT) sector group in Belarus.

Kirill leads most of the IT related projects coordinating the TMT team in Belarus. Kirill’s key areas of expertise include commercial contracts and regulatory matters. He is highly experienced in advising major international clients of the TMT sector in their distinctive projects involving Belarus on complex matters such as the special regime for residents of High Tech Park, including IT related tax matters as well as new crypto regulations and blockchain projects and IP matters in IT and legal due diligence for IT companies with unique experience of dispute resolution in IT. Kirill also is one of the shortlisted specialists in the country for data protection and privacy matters both on a national level and from an EU perspective, with a deep understanding of GDPR specifics. He also represents clients in their relations with higher state authorities in significant projects in the telecoms sector in Belarus.

Kirill is frequently invited as a speaker to IT related events for lawyers and IT businesses as well as writing on the topic of IT law. Due to his reputation as TMT sector group leader and a key expert in the IT sphere, he has been recognised as one of the ‘Next generation lawyers for commercial, corporate and M&A’ by The Legal 500 along with nominations for arbitration and trade and customs by Who’s Who Legal.

BEATRIZ LANDI LATERZA FIGUEIREDO
Pinheiro Neto Advogados

Beatriz Landi Laterza Figueiredo has been a member of the São Paulo office of Pinheiro Neto Advogados since 2014. She advises Brazilian and foreign companies in a wide range of industries, including software, media, telecommunication, data protection and information technology. Beatriz has a JD from the Mackenzie Presbyterian University and a master’s degree in intellectual property from the FGV-SP.

ANA RAMOS LOGRADO
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Ana Ramos Logrado graduated from the University of Coimbra, Portugal (2014), and undertook subsequent master’s degree studies in legal forensic sciences at Nova University Law School, Lisbon, Portugal (2016). Ms Logrado also completed an internship at the Court of Execution of Penalties in Lisbon (2015–2016).

JAIME MEDEIROS
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Jaime Medeiros graduated from the University of Lisbon, Portugal (1982). He has been elected ITechLaw local representative for Portugal (2010–2011); vice president of the Lisbon District Bar of the Portuguese Bar Association (2008–2010); counsellor to the General Counsel of the Portuguese Lawyers Pension Fund (2008–2010); member of the General Council of the Portuguese Bar Association (2002–2004); member of the Portuguese delegation at the Council of the Bars and Law Societies of the EC (CCBE) (2004); member of the board of the Lisbon district of the Portuguese Bar Association (1991–1993); member
of the special committee of company law CCBE; and president of the supervisory board of Fundaçao LIGA (since 2005). He was also a lecturer on civil procedural law and contracts law (1982–1986). He is an arbitrator for the arbitration centre of APDI.

Mr Medeiros has authored several articles and regularly speaks on legal issues from his practice. He is the co-author of *Commercial Agents in Europe* (John Wiley & Sons Ltd, 1996). He also co-authored the Portugal chapter of the 2011 to 2013 editions of *Getting the Deal Through – Telecoms and Media* (Law Business Research Ltd).

Mr Medeiros has been recognised as a leading private practice lawyer in Portugal in information technology by *Who’s Who Legal* (since 2013) and by *ExpertGuides* (since 2015), in telecoms and media by *Who’s Who Legal* (since 2017) and in intellectual property and TMT by *The Legal 500* since 2016.

**MADARA MEĻŅIKA**

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Ms Madara Meļņika, an associate working in Sorainen’s dispute resolution and C&R practice areas, obtained bachelor’s and master’s degrees from the University of Latvia, Faculty of Law.

During her bachelor’s studies, on the Erasmus+ mobility programme Madara spent a semester at the University of Salzburg, and during her master’s studies she used a scholarship from Kurt Hagen to research and study German law for six months in Germany, at Freie Universität Berlin. In addition, Madara represented the University of Latvia in the Price Media Law Moot Court Competition where her team won the regional rounds of North Europe. She has also participated as a co-author in a legal research group on the protection of journalists’ sources organised by ELSA International and the Council of Europe, and has been a member of the Youth Board in Index on Censorship.

Currently, Madara Meļņika is involved in various media law and human rights projects.

**MIHKEL MIIDLA**

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Mr Mihkel Miidla is a partner and head of the regional technology, media and telecommunications sector group at Sorainen as well as head of the information technology and data protection practice in Estonia. He advises clients in all IT and telecoms-related matters. As a specialist in IT law, Mr Miidla provides outstanding support in cases where IT and IP are closely related.

Mr Miidla is one of Estonia’s leading experts on data protection with his extensive experience in advising clients on personal data protection matters and as a visiting lecturer on privacy and data protection issues at the University of Tartu. He advises on all aspects of data protection, including implementation of the General Data Protection Regulation, cybersecurity, online privacy and data breach response strategies.

Mr Miidla is passionate about novel technologies and disruptive innovation. He advises clients on regulatory matters relating to launching innovative services and products in Estonia.

Mr Miidla also has significant experience in the field of service and trade contracts, including agency, supply and distribution arrangements. He has assisted many local and international businesses in trade deals as well as in setting up trade operations in Estonia and abroad. He has valuable experience in product and service-related issues ranging from advertising and labelling requirements to complex industry-specific regulatory and competition (e.g., automotive industry, energy and utilities) issues.
Mr Miidla advises on complex electronic communications regulations and represents clients in telecommunication disputes as well as helping to resolve regulatory compliance issues.

Since 2014, Mr Miidla has been a member of the Intellectual Property and IT Law Committee of the Estonian Bar Association. He has been recognised as a ‘next generation lawyer’ in IP, IT and telecoms by *The Legal 500*.

**MATTHEW T MURCHISON**  
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Matthew T Murchison is a partner in the Washington, DC office of Latham & Watkins LLP, where his practice focuses on communications and appellate matters. Mr Murchison advises clients on a range of regulatory, litigation and transactional matters in the communications sector. He routinely appears before the Federal Communications Commission to represent clients on a variety of significant issues, including net neutrality, major transaction reviews, retransmission consent and spectrum policy. In addition, he has drafted key advocacy filings on these and other regulatory issues for clients in the broadband, video, wireless and satellite industries, and regularly counsels these clients on regulatory matters that affect their businesses. Mr Murchison has also successfully presented oral argument in the DC Circuit and US District Courts, and has authored briefs before the US Supreme Court, US courts of appeal and US district courts in cases concerning the First Amendment, communications law, administrative law, intellectual property and privacy. Mr Murchison obtained his JD from Stanford Law School and his BA from Yale University, where he graduated *magna cum laude*.

**DIÉGO NOESEN**  
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Diégo Noesen is a member of the intellectual property, information technology and media team. He is a senior dispute resolution lawyer focusing on European and domestic litigation with an emphasis on intellectual property. Diégo’s practice involves complex civil litigation in a variety of industries and sectors, including media and entertainment, fashion, automotive, technology and telecommunications.

Diégo also provides transactional advice and assists clients in protecting, managing and enforcing their intellectual property rights. He has particular expertise in brand and copyright protection, and domain names.

**FLIP PETILLION**  
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Flip Petillion is a leading domestic and international litigator and arbitrator.

Flip has been handling court litigations and arbitrations for 30 years in matters related to different industries. He has built an outstanding reputation through his special focus on intellectual property rights, information, communication, technology and media.

He represents multinationals and first-class individual portfolio holders.

Flip created Petillion, a boutique firm focusing on dispute resolution. The firm acts in Belgian courts and before the European Court of Justice and the European General Court.
SIMON POWELL

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Simon Powell is a partner in the Hong Kong office of Latham & Watkins. He is also the immediate past managing partner of the Hong Kong office and chair of the litigation department in Asia.

Mr Powell’s practice focuses on complex contentious regulatory, commercial litigation and arbitration matters, including contentious technology, media and telecommunications regulatory issues and disputes; financial and corporate regulation and investigation; antitrust and competition law; and contentious insolvency and business restructuring and reorganisation.

Mr Powell represents numerous multinational and local corporations in connection with a wide range of multi-jurisdictional and cross-border issues, including those operating in the telecommunications industry, and in relation to antitrust and competition issues and regulatory matters generally, with a particular focus on Hong Kong.

Mr Powell is one of only a few solicitor-advocates in Hong Kong, giving him full rights of audience before all the Hong Kong civil courts (including the newly instituted Competition Tribunal, which has been set up as a part of the judiciary). He is also a fellow of the Chartered Institute of Arbitrators, and a CEDR accredited mediator. He sits on the Hong Kong Law Society’s competition committee, which focuses on reviewing and commenting upon competition-related issues within Hong Kong.

SHANNON ROGERS

_Bird & Bird_

Shannon is an associate in Bird & Bird’s commercial practice in the UAE. She advises clients on general commercial and regulatory matters in the region, and has acted for various national and international companies in respect of all aspects of their businesses, including advising on compliance with relevant local regulations, and advising on commercial negotiations.

MYRIA SAARINEN

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Myria Saarinen is a partner in the Paris office of Latham & Watkins. She has extensive experience in IP and IT litigation, including internet and other technology-related disputes. She is very active in litigation relating to major industrial operations and is involved in a broad range of general commercial disputes.

She has developed specific expertise in the area of privacy and personal data, including advising clients on their trans-border data flows, handling claims raised by the French Data Protection Authority, and setting up training sessions on the personal data protection framework in general and on specific topics. She also has expertise in cross-border issues raised in connection with discovery or similar requests in France.

Ms Saarinen is named among leading practitioners in commercial litigation, data privacy and IT (The Legal 500 Paris 2016/2017, Chambers Europe 2013, Chambers Global 2013).
RACHEAL SANNI

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Racheal advises both companies and regulators on telecommunication, data protection and payment systems regulatory matters, as well as commercial contracts across a number of sectors.

Her experience includes advising governments in the region on the regulation of new technologies and services and multinational companies on data protection regulations in the UAE and Europe.

CAROLINA RIBEIRO SANTOS

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Carolina Ribeiro Santos graduated from University of Coimbra, Portugal (2015), having attended a semester at Autonomous University of Barcelona Faculty of Law, Spain (2013–2014), and undertook subsequent postgraduate studies in intellectual property law (2017) at Lisbon Faculty of Law and fashion law at the Catholic University of Oporto, Faculty of Law (2018), as well as a master’s degree in law and management from Nova Business School in partnership with Nova University Law School, Lisbon (2018). Ms Santos also completed an internship at the Portuguese Consulate in Paris, France (2015), and has been a member of the Portuguese Intellectual Property Law Association since 2017.

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Takaki Sato is a corporate associate of Latham & Watkins Gaikokuho Joint Enterprise in Tokyo. Mr Sato’s practice covers a broad range of corporate matters, including mergers and acquisitions, general corporate, antitrust and data privacy. Prior to joining Latham & Watkins, Mr Sato served as an associate at a major law firm in Tokyo. Mr Sato is admitted to practise in Japan and New York.

LISBETH SAVILL

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Lisbeth Savill is a partner in Latham & Watkins’ London office and a member of its entertainment, sports and media practice. She focuses on commercial work in the media and entertainment sectors, including financing, distribution and licensing arrangements for audiovisual content, and the purchase, sale and financing of entertainment companies. Her clients cover a wide range of interests in the entertainment and media sectors, including equity and debt financiers, major studios, independent producers, rights holders and distributors of film and television content. Lisbeth has been recognised as a leading lawyer in the film and television industries for many years. She is actively involved in issues important to the entertainment sector.

DARYL SEETOH

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Daryl’s practice covers information technology, data privacy, commercial and compliance work. Daryl advises frequently on telecommunications and e-commerce as well as general
licensing and regulatory matters including anti-bribery and corruption, consumer products, consumer protection, environmental, customs, and sanctions and trade compliance.

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Victor Stancescu is an associate at Niederer Kraft Frey Ltd, Zurich, Switzerland. His main areas of practice include corporate and commercial law, privacy law, mergers and acquisitions as well as sports law. He is also a member of Niederer Kraft Frey’s Technology team.

Mr Stancescu regularly advises corporations and other entities of different sizes active in various industries on a broad range of matters of corporate and commercial law, privacy as well as mergers and acquisitions. He is a member of the player safety committee of the International Ice Hockey Federation and a member the board of the Swiss Association for Sports Law (ASDS).

**ANDRIS TAURIŅŠ**

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Mr Andris Tauriņš is head of the Sorainen Latvia TMT sector group. His main specialisation is dispute resolution in court and by way of arbitration, intellectual property, information technology and pharmacy law, as well as e-commerce issues. He lectures on topics involving intellectual property rights and has been a lecturer on intellectual property rights at Riga Business School, as well as on copyright matters at Latvia Culture College.

In addition, Andris is a licensed professional patent attorney specialising in trademarks. This qualifies him to represent international clients before the Latvian Patent Authority in trademark-related matters, including international trademark registration applications.

Senior associate Andris Tauriņš appears in *Chambers Europe* rankings as a result of positive market feedback and increased visibility. According to clients, he is dedicated and highly responsive. Andris also is a recommended practitioner by Best Lawyers for IT law in Latvia.

**MARCO ZOTTA**

*Cleary Gottlieb Steen & Hamilton LLP*

Marco Zotta is an associate of Cleary Gottlieb Steen & Hamilton LLP, based in the Rome office. His practice focuses on administrative law, European and Italian antitrust laws and telecommunications law. He graduated, *summa cum laude*, from the Law School of Rome ‘La Sapienza’ in 2003, where he lectured on constitutional law in 2005, 2006 and 2007. In May 2009, he obtained an LLM degree from the University of California at Berkeley School of Law (Boalt Hall). Mr Zotta completed a PhD programme in law and economics at LUISS Guido Carli University (Rome) in 2015, focusing on the relationship between regulation and competition law in the electronic communications sector.

Mr Zotta has been a member of the Rome Bar since 2006. He is a native Italian speaker and is fluent in English.
Appendix 2

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