

THE TECHNOLOGY,
MEDIA AND
TELECOMMUNICATIONS
REVIEW

TENTH EDITION

Editor
John P Janka

THE LAWREVIEWS

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MEDIA AND
TELECOMMUNICATIONS
REVIEW

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This article was first published in December 2019
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Published in the United Kingdom
by Law Business Research Ltd, London
Meridian House, 34-35 Farringdon Street, London, EC4A 4HL, UK
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ISBN 978-1-83862-078-3

Printed in Great Britain by
Encompass Print Solutions, Derbyshire
Tel: 0844 2480 112

ACKNOWLEDGEMENTS

The publisher acknowledges and thanks the following for their assistance throughout the preparation of this book:

ADVOCACIA JOSÉ DEL CHIARO

BAKER & MCKENZIE.WONG & LEOW

BIRD & BIRD

CLEARY GOTTlieb STEEN & HAMILTON LLP

CMS RUSSIA

ELVINGER HOSS PRUSSEN

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PREFACE

As it has since inception, this tenth edition of *The Technology, Media and Telecommunications Review* provides a survey of evolving legal constructs in 21 jurisdictions around the world. It remains a business-focused framework rather than a legal treatise, and strives to provide a general overview for those interested in evolving law and policy in the rapidly changing TMT sector.

More than ever, broadband connectivity goals are the focus of policymakers and are driving law and policy in this sector. New technologies and new ways of connecting people call for decision-makers to move away from old paradigms and embrace new ones. Indeed, facilitating digital inclusion, extending the economic and social benefits of connecting all citizens, and growing local economies by ensuring that affordable connectivity is available, are universal goals that require bold decisions and new approaches.

New expectations of being connected everywhere, and at all times, are driving the development of broadband service on aeroplanes, vessels, motor vehicles and trains, to support the needs of passengers, crew and the airlines themselves as they move to digitise their fleets and transmit the massive amounts of operational data generated by today's aircraft. Accommodating these new mobility services create pressures on the existing spectrum environment. And the different technologies that seek to meet these mobility needs are not always compatible with one another. As a result, regulators (1) sometimes provide more flexibility to allow spectrum to be used to provide a broader range of services, and (2) sometimes 'reform' existing spectrum bands so that new services and technologies can access spectrum previously set aside for other purposes.

The World Radio-communication Conference (WRC) of the International Telecommunication Union (ITU), being held this month in Sharm-El-Sheikh, will address many of these key issues, and make changes in some long-standing radio spectrum allocations, particularly the 'millimetre-wave' bands that offer the promise of providing untold amounts of capacity and even faster service speeds by a variety of technologies. As with most policy choices, the conference likely will include some political decisions. Indeed, political pressures already exist around the world in decisions being made by national regulators outside of the ITU process.

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, educational, health-related and entertainment services now available over the internet. Many governments are re-evaluating how to regulate broadband providers, whose networks have become essential to daily life. 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. But even this may start to change as the wireless providers who once relished auctions are coming to realise that the price they have to pay via auctions is just too high.

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 undesirable 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 base, 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 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 overview of these fascinating developments in the TMT sector.

John P Janka

Latham & Watkins LLP

Washington, DC

November 2019

JAPAN

Hiroki Kobayashi, David Lai and Takaki Sato¹

I OVERVIEW

The media and telecommunications environment in Japan has continued its rapid development throughout 2018 and 2019. 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, long-standing 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, the three main mobile services providers and, more recently, Rakuten Mobile have announced their intent to offer next-generation 5G cellular data services by 2020. In furtherance of this goal, NTT DOCOMO, KDDI, Softbank and Rakuten Mobile were each allocated 5G spectrum by Japan's Ministry of Internal Affairs and Communication (MIC) in April 2019. These four mobile services providers have each announced plans to invest significant sums toward the proliferation of 5G access. We expect Japan to make significant developments to its telecommunications networks in the months leading up to the Olympic Games, and to continue developing its infrastructure thereafter.

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 the MIC have led to a significant increase in the number of active MVNOs, which has also resulted in a number of major Japanese companies 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.

The MIC and other government authorities have taken steps to eliminate, or rigorously regulate, various business practices considered by many to be anticompetitive, such as SIM card locking and automatically renewing two-year service contracts. The MIC and other governmental agencies remain committed to improving high-quality telecommunications

¹ Hiroki Kobayashi is a corporate partner and David Lai and Takaki Sato are corporate associates at Latham & Watkins Gaikokuho Joint Enterprise.

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 Headquarters of the Cabinet Office (IPSHQ) 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. In 2018, the IPSHQ announced its intent to adopt more concrete regulations during 2019 designed to block access to piracy websites. The IPSHQ's proposal was vigorously debated among politicians, scholars and industry insiders, and eventually the IPSHQ decided during its final meeting in October 2018 not to schedule further discussions on the topic. Reports speculate that the IPSHQ may discontinue entirely its discussions on regulations to block access to piracy websites.

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:

- a* the Wire Telecommunications Act, which governs facilities for wired signal transmission, such as wired telephony, wired broadband networks and cable television;
- b* 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;
- c* the Telecommunications Business Act, which regulates telecommunications and media businesses; and
- d* 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, previously 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 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 is often criticised as opaque and arbitrary. For example, the allocation of radio spectrum frequencies to private sector service providers 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 stated during a legislative session that a broadcaster would violate the Broadcasting Act if it repeatedly broadcasted lengthy content supporting a particular political view without reporting on other political views. The Minister further indicated that, in the event of such a violation, 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 the unintended cancellation of its licence, a main broadcasting licence holder whose shares are traded on a stock exchange is permitted by statute to refuse

to recognise any transfer of its shares that would cause it to violate the foreign ownership restrictions. By 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.

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 control over 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 simultaneous control of up to four licences. Cross-ownership of newspapers and broadcasters is not 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.

iv 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 wireless 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 focuses on the proposed transferee rather than the transferred broadcasting or wireless business, and primarily involves a determination as to whether that transferee would have been eligible to independently qualify as a new licensee if it had submitted a full application. According to the MIC, it generally endeavours to finish the licence transfer review process within one month, which is significantly shorter than in the case of licence renewals or new applications.

Further, the Telecommunications Business Act was amended in May 2015 to require the major telecommunications companies² to renew their respective telecommunications business registrations when they engage in mergers or share acquisitions. This amendment, which came into effect in 2016, allows the MIC to review the potential anticompetitive effects of any proposed merger or share acquisition on business operations and fair trade. Anticompetitive concerns are particularly important in the Japanese telecommunications industry, which was monopolised by three major private telecommunication companies – NTT DOCOMO,³ KDDI and SoftBank – until Rakuten Mobile entered the market in October 2019.

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 64.10 per cent of its outstanding shares. NTT Corporation is 36.11 per cent owned by the Japanese Ministry of Finance as of 31 March 2019.

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.⁴ When there are no national security concerns present, this is ordinarily a pro forma requirement.

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 services and therefore are not regulated under the Act. However, personal matching services, SNS providers and other businesses not traditionally considered 'telecommunications' services may nonetheless be regulated under the Act, necessitating a filing with the MIC before commencing business.

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 West⁵ 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 the 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 infrastructure (optics fibre/FTTH, 3.9G and other infrastructure with data transmission

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 36.11 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.

speed over 30Mb per second, including DSL, FWA, satellite, BWA, etc.) penetration rate had similarly reached 99.98 per cent.

Rakuten Mobile: a new MNO service provider

Rakuten K.K., a major e-commerce platform, has long had the largest market share of all MVNOs in Japan. Its recently established subsidiary, Rakuten Mobile, was approved to become Japan's fourth MNO in April 2018. Rakuten Mobile was allocated 1.7GHz 40MHz bandwidth in April 2019, and shortly thereafter announced the launch of its MNO services. To consolidate its service offerings, Rakuten K.K. also assigned its MVNO business to Rakuten Mobile in April 2019.

Rakuten Mobile had planned to commercially launch its MNO services in October 2019, but encountered delays that prevented it from meeting this timing. A 'free supporter programme' was launched by Rakuten Mobile on 1 October, which will continue until March 2020. Under the programme, 5,000 users in urban areas (including Tokyo's 23 wards, Osaka, Kobe and Nagoya) are able to use voice, data and short message services without cost in exchange for participating in quality testing and customer surveys. According to media sources, Rakuten Mobile recently reported to the MIC that services have not yet been rolled out to 20 per cent of the planned 'free supporter programme' participants.

Public Wi-Fi access

According to a 2017 survey of foreign visitors conducted by the Japan Tourism Agency, the lack of free public Wi-Fi in Japan was ranked the third most inconvenient aspect of their visit to Japan.

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 Project⁷ 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 across Japan,⁸ including those at airports, train stations, convenience stores and tourist spots, with a one-time new user registration. The smartphone application is available in 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.

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 2019.

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 app⁹ 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. Recently, a handful of private companies, such as Accenture and SoftBank, have launched first-party applications enabling foreign visitors to access thousands of Wi-Fi access points across Japan. With users' consent, some of these private companies gather anonymised data from the use of their applications, including data user attributes and location history, which they then analyse and sell to third parties as reports.

Tokyo Metro, a railway company owned by the Japanese national and local Tokyo governments that operates many of the subway lines in Tokyo, provides public Wi-Fi access points at 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.

In January 2019, the government began imposing a ¥1,000 departure tax, informally known as the 'international tourist tax', on all foreign visitors to improve Japan's tourism infrastructure, including through the proliferation and enhancement of public Wi-Fi.

Separately from the above improvements to free Wi-Fi services, 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 subscribed.¹⁰ 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 electrical outages. In light of growing security and privacy concerns, the MIC recently warned 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, it is prohibited to use mobile devices in Japan that do not meet Japanese radio wave emission standards, and with respect to which the manufacturer has not obtained authentication from the government. 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

⁹ *Omotenashi* means hospitality.

¹⁰ Normally, users can only use the Wi-Fi network of the service provider to which they are currently subscribed.

for personal mobile device use. In August 2016, an amendment to the Radio Act took effect, permitting 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 either been certified by the Federal Communications Commission in the United States or received 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 any adverse effect was minimal. In addition to government-imposed restrictions, private companies in Japan have in certain cases voluntarily adopted policies prohibiting the sale of certain foreign mobile devices. In May 2019, for example, NTT DOCOMO, KDDI and Softbank voluntarily ceased distribution of mobile devices manufactured by Huawei after sanctions were imposed upon it by the United States. These carriers eventually resumed sales of Huawei devices after the US government announced it was extending the pre-‘ban’ grace period.

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., GPS and other information services equipped in vehicles) 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.

New regulations have recently been adopted to address IoT devices’ vulnerability to cybercrime (see the ‘Cybercrime’ section below).

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 updated implementation plan, NTT will commence work on the switch to IP telephony in January 2024 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 certain 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. Under the proposed amendment, each telecommunication company must obtain the MIC’s approval of its plans regarding the use of telephone numbers, and must thereafter comply with the approved plans. Additionally, when telecommunication companies cease to provide services during the shift to IP telephony, those companies must file notice of such cessation with the MIC so that the MIC may make a public announcement of the terminating services to customers.

iii Restrictions on the provision of service

The telecommunications industry in Japan has traditionally been dominated by NTT East and NTT West and by three major private telecommunication companies: NTT DOCOMO, KDDI and SoftBank. A fourth major service provider, Rakuten Mobile, was granted an MNO business licence in April 2018. While Rakuten Mobile initially planned to begin providing services in October 2019, its commercial MNO services were delayed. 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 service providers with high market shares. For example, the guidelines state that the JFTC could take corrective action, such as issuing a cease and desist order, if a telecommunications service provider with a high market share, such as a mobile phone carrier, 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 implementation. If the MIC finds a pricing scheme inappropriate, either because it is anticompetitive or otherwise significantly unreasonable, the MIC may require the carrier to change its pricing scheme. Otherwise, prices charged to end users and the other terms of service are not regulated. This may change, however, as Prime Minister Shinzo Abe and other government officials have recently started applying 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, the prices charged 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, after which NTT East and NTT West respectively began to offer 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 facilitate fibre optic use by reducing fees for fibre optic services at the end user level. As of December 2017, approximately 690 operators had commenced use of these fibre optic wholesale services.

Prior to the commencement of NTT's fibre optic wholesale programme, there were competition-related concerns stemming from the confidential nature of NTT East's and NTT West's contracts with the secondary retailers to whom they provided fibre optic wholesale services. At the time, other major telecom service providers, such as KDDI and Softbank, expressed concerns that NTT East and NTT West were providing their fibre optic wholesale services to NTT group companies at lower prices than to unaffiliated companies, which in turn enabled NTT group companies to provide fibre optic services to end users at lower

prices. In response to these concerns, the MIC issued guidelines relating to the provision of fibre optic wholesale that prohibit the disparate treatment of select service providers and also provide the MIC with potential enforcement mechanisms. A survey conducted by the MIC showed that NTT DOCOMO and NTT Communications (a data communication company within 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 end users. Given the prominence of this market share, and due to their relationship to NTT East and NTT West, 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 investigation report, which was issued in August 2018, the MIC concluded that the discounted fees charged by NTT DOCOMO and NTT Communications did not constitute anticompetitive practices. However, the MIC did determine during its investigation that NTT DOCOMO's online description 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 fibre optic wholesale services, the availability of mobile line wholesale services (MVNOs) in Japan has also begun to expand. 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 significantly 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 the MIC is authorised to issue business improvement orders to MNOs who discriminate against MVNOs with respect to providing access to its network.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 2019 the number of active MVNOs has increased to 1,003. Correspondingly, there were 20.94 million MVNO subscribers by March 2019, up from 7.17 million in December 2013. However, despite this recent increase in MVNO activity, MVNO service subscribers still only constituted 11.6 per cent of all mobile service subscribers as of March 2019.

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.

Anticompetitive business practices

One of the reasons MVNO penetration remains low stems from MNOs' common practice of permitting subscribers to purchase new mobile devices on monthly instalment plans – often simultaneously offering discounts on monthly subscription fees equal to or greater than the amount of such monthly instalment payments. MNOs advertise that this instalment and discount programme renders 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 these 'effectively free' mobile device programmes, in March 2016 the MIC issued guidelines compelling MNOs to decrease the size of their mobile device discounts so that subscribers are required to make reasonable payments toward their new devices. The intended result of these guidelines is to bolster competition and, eventually, reduce mobile service subscription fees. 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.

The MIC has also made efforts to address the issues of SIM locking and mandatory 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 initial adoption of guidelines in 2010, it has encouraged 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. Following an August 2018 amendment to the guidelines, mobile service providers will be required to honour SIM unlock requests 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 unlock requests must still be honoured starting 100 days after the purchase).

Until recently, there had been little progress toward the abolishment of automatically renewing two-year service contracts. For years MNOs frequently required customers enjoying the benefits of their 'effectively free' mobile device programmes to enter into two-year contracts under which customers were 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 long been identified as reducing customers' freedom of choice in mobile service carriers. Though the MIC issued guidelines on numerous occasions over the years to address these contracting practices, which it viewed as raising anticompetitive concerns, the guidelines were largely ineffective at addressing the fundamental issue of automatically renewing two-year contracts.

However, the Japanese government finally took the next step in May 2019 by legislatively imposing restrictions on the use of automatically renewing two-year contracts through an amendment to the Telecommunication Business Act – a significantly more affirmative step than its prior non-binding guidelines. As a general principle, the newly amended Telecommunication Business Act prohibits the use of any contract provisions that would restrict consumers' ability to terminate their mobile service contracts if the restrictions rise to a level that would be deemed to have anticompetitive effects. Given the generality, the

MIC has been delegated the task of adopting specific regulations to carry out this mandate. The MIC has drafted proposed regulations to clarify the types of anticompetitive behaviour that are prohibited under the amended Telecommunication Business Act, which have been reviewed by the Information & Communication Council and are in the process of being revised. The latest draft of the MIC's proposed regulations lists, among others, the following as examples of prohibited provisions in consumers' mobile service contracts:

- a* any termination penalty (regardless of amount) in conjunction with a contract term longer than two years;
- b* regardless of contract length, any early termination penalty in excess of ¥1,000; and
- c* automatic renewal clauses coupled with an early termination fee, regardless of the initial contract term, unless the following conditions are met:
 - the contract must be terminable without a fee during a minimum three-month window – extending from one month prior to expiry of the original contract term through the first two months of the renewal period;
 - consumers must be given the choice, upon execution of the original contract, not to have any termination penalty apply to renewal periods;
 - consumers must be given the choice, at the time of automatic renewal, not to have any termination penalty apply to that renewal period; and
 - the service provider cannot change pricing or terms to incentivise customers to consent to a longer termination penalty period.

The MIC has also recently begun analysing the state of competition between MVNOs. In particular, the MIC has expressed concerns that MNOs might favour affiliated MVNOs and, in turn, discriminate against unaffiliated MVNOs by providing them slower data traffic speeds. The MIC did not mention any MNOs by name, but many commentators believe that the MIC was referring specifically to KDDI (with respect to UQ Communications, an MVNO that is 32 per cent-owned by KDDI) and SoftBank (with respect to Y!Mobile, a low-cost mobile service affiliated with SoftBank). In October 2018, the MIC established new regulations prohibiting MNOs from discriminating between MVNOs with respect to data traffic speeds.

Similar to the primary mobile service providers described above, the MIC has also recently expressed concerns that the market shares of UQ Communications and Wireless City Planning (WCP) could permit them to stifle competition by rejecting competitor MVNOs' requests to connect to their telecommunication facilities. In response, the MIC designated UQ Communications and WCP as 'Type II designated telecommunication' companies effective as of December 2019. This designation requires UQ Communications and WCP to each file with the MIC its respective terms and conditions regarding competitor MVNOs' access to its telecommunication facilities.

In light of increasing customer complaints, effective as of October 2018, the amended enforcement regulations of the Telecommunication Business Act added MVNO voice communication services to the list of services for which customers have an eight-day 'cooling-off period' after signing a new service contract, during which the agreement can be terminated without penalty.

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:

- a* the transmission of emails using false sender information as a means of advertisement for the sender's own or another person's sales activities;
- b* the transmission of emails to persons who have not opted in to receive such specified emails; and
- c* 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, in July 2018 the Metropolitan Government of Tokyo increased penalties under an anti-nuisance ordinance prohibiting continued unsolicited phone calls, facsimiles, emails, and SNS messages, with offenders now being penalised with up to one year's imprisonment or a fine of up to ¥1 million.

iv 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 (the Privacy Act) protects personal information or data that can be used to identify specific living persons. Under the Privacy Act, the 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 a user's 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, the MIC, in April 2017, 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 the data to third parties located in foreign countries. Even foreign businesses (not directly processing personal data in Japan) should pay attention to the extraterritoriality of Japan's data privacy rules, which is triggered when the foreign business collects personal data from a data subject located in Japan when supplying goods or rendering services 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 Justice, Consumers and Gender Equality of the European Commission mutually recognised each other's personal data protection regimes as equivalent. Beginning in January 2019, the restrictions on the cross-border transfer of personal data between Japan and the EU have been exempted.

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 the content infringes the intellectual property rights or privacy of others, or if a third party alleges infringement and the content sender 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 laws protecting the secrecy of communications. According to the IPSHQ, the policy is simply a temporary measure intended to bridge the gap until the government passes more permanent legislation concerning piracy websites. The IPSHQ established a council of experts for the purpose of drafting such legislation, and initially targeted the issuance of an interim report in September 2018. However, there has been strong disagreement among the council's members concerning the legitimacy of blocking access to online content, which led to a failure to meet the intended report timing. The final meeting of the council in October 2018 ended without a subsequent meeting being scheduled. According to reports, the council may discontinue further discussions. We anticipate that concrete legislation on this matter will remain the subject of 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 IoT devices are vulnerable to malware that could render them 'zombies' subject to manipulation by a cyber-attacker. The MIC has stressed that, to implement countermeasures against cyberattacks, it is essential to have specific information relating to the 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 the sharing of information among telecommunications business operators for cybersecurity purposes. 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. In January 2019, the MIC designated ICT-ISAC Japan, a cybersecurity research organisation, to act as the third-party for these purposes. 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 network-specific information to telecommunications business operators via a designated third-party organisation so that they can warn network owners of any password configuration deficiencies. The NICT began operating in February 2019 under the project name 'NOTICE' (i.e., the National Operation Towards IoT Clean Environment). Following these cybersecurity developments, the Telecommunication Business Act was correspondingly amended in April 2019 to add new data security requirements to the technological specification requirement for IoT terminal equipment.

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 251 million as of March 2019 (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/per 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 Mobile, 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 Mobile

obtained 1.7GHz 40MHz bandwidth and announced the launch of its MNO services. Each of NTT DOCOMO, KDDI and SoftBank also obtained 40MHz bandwidth.

In May 2019, the Radio Act was amended to expedite the implementation of 5G services. Meanwhile, the MIC completed the first round of 5G spectrum allocation, which was awarded to NTT DOCOMO, KDDI, Softbank and Rakuten Mobile in 2019 on the condition that 5G services shall be rolled out on a nationwide basis. For the purpose of expediting 5G spreading, the MIC also started granting subsidies to corporations for of the installation of optical fibre.

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 it to be commercially referred to as 4G. In March 2015, NTT DOCOMO was the first among the major Japanese mobile service providers 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. As described above, 5G spectrum was finally allocated to NTT DOCOMO, KDDI, Softbank, and Rakuten Mobile in 2019.

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. In June 2019, the MIC issued a roadmap to establish a 'connected car society', including a plan to begin use of automatic driving systems in a limited geographic area during 2020.

Additionally, the Tokyo Organising Committee of the Olympic and Paralympic Games announced in November 2017 a 'Basic Spectrum Plan' for the 2020 Games, pursuant to which the Committee is granting permits to use radio devices during the Olympic 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 planned to submit the relevant amendment to the Telecommunications Business Act to the legislature in 2019. The amendment to the Radio Act resulted in an increase to spectrum fees for 5G services and IoT, which applies to both mobile phone carriers and broadcasters.

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 August 2018, the study group issued a report focusing on reform of the spectrum allocation system. This report discusses the feasibility of an auction system. It does not advocate a pure auction system under which only the offered amount is decisive, though it does recommend to using the offered amount as one of elements for spectrum allocation.

Following the issuance of this report, the Radio Act was amended in May 2019 to adopt what some commentators refer to as a 'partial auction' system, whereby the MIC will consider the amount of special fees offered by the applicant based on their own valuation of the spectrum. The applicant's offer alone is not a decisive element, but it does serve as an element in the MIC's consideration.

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:

- a* an obligation to be politically impartial;
- b* a prohibition on reporting 'manipulated facts';
- c* an obligation to present diverse opinions on controversial issues; and
- d* 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 Gyao!) 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 2018 and 2019, 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 have been launched over 17 channels beginning in 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 that have secured 5G spectrum allocation are already preparing to launch 5G services in 2020.

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.

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ISBN 978-1-83862-078-3