

THE TECHNOLOGY,
MEDIA AND
TELECOMMUNICATIONS
REVIEW

TWELFTH EDITION

Editor
Matthew T Murchison

THE LAWREVIEWS

THE

TECHNOLOGY, MEDIA AND TELECOMMUNICATIONS REVIEW

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PREFACE

This volume marks the 12th edition of *The Technology, Media and Telecommunications Review*, which has been fully updated to provide an overview of evolving legal and policy activity in this arena across 25 jurisdictions around the world. This publication continues to occupy a unique space in the literature on TMT issues. Rather than serving a traditional legal treatise, this Review aims to provide a practical, business-focused survey of these issues, along with insights into how this legal and policy landscape in the TMT arena continues to evolve from year to year.

In 2021, the ongoing covid-19 pandemic has continued to loom large over legal and policy developments in this sector. As the threat of infection has continued to affect how we live, work and interact, the importance of connectivity has never been greater or more obvious. For many businesses, remote working has been the rule rather than the exception since March 2020, and may well persist in some form well after the pandemic is over. Many schools switched to distance learning formats during the pandemic. Tele-health is on the rise as doctors check in on patients via videoconference. Even tasks as mundane as grocery shopping have shifted online. And broadband connectivity, where available, has made it all possible.

The experience of covid-19 has, in turn, continued to reshape policymakers' understanding of the TMT arena. The shift to remote working and distance learning has stress-tested broadband networks across the world – providing a 'natural experiment' for determining whether existing policies have yielded robust systems capable of handling substantial increases in internet traffic. At the same time, the pandemic has prompted new initiatives to ensure, improve and expand broadband connectivity for consumers going forward. In various jurisdictions, policymakers are moving forward with subsidy programmes and other efforts to spur the deployment of advanced networks more deeply into unserved and underserved areas. Regulators also have taken steps to preserve internet access where it already exists, including by exploring mandates prohibiting disconnection of customers or requiring certain rates for low-income consumers – measures that, where adopted, sometimes have sparked fresh legal challenges and policy debates over the relative merits of government intervention and market-based solutions.

New technologies likewise have required new approaches and perspectives of policymakers. A notable example is the ongoing deployment of 5G wireless networks, as regulators continue to look for ways to facilitate such deployment. These initiatives take a variety of forms, and frequently include efforts to free up more spectrum resources, including by adopting new rules for sharing spectrum and by reallocating spectrum from one use to another. Multiple jurisdictions have continued to auction off wireless licences in bands newly designated for 5G deployment, capitalising on service providers' strong demand for

expanded access for spectrum. The planned deployment of new satellite broadband services, including multiple large satellite constellations in low-earth orbit, also continues to be a focus of regulatory interest across the world.

Meanwhile, long-running policy battles over the delivery of content over broadband networks continue to simmer in various jurisdictions, and new fronts have opened on related issues involving the content moderation policies of social media companies and other online platforms. Policymakers continue to grapple with questions about network neutrality, the principle being that consumers should benefit from an ‘open internet’ where bits are transmitted in a non-discriminatory manner, without regard for their source, ownership or destination. While the basic principle has been around for well over a decade, unresolved issues remain, including whether newer kinds of network management practices implicate such concerns, and whether efforts to promote a healthy internet ecosystem are best served by light-touch, market-based regimes or by more intrusive government interventions. In the United States, the light-touch approach reinstated in 2018 seems fairly certain to be revisited at the federal level, and certain states are continuing to claim an ability to impose their own restrictions on internet service providers. Regulators around the world have begun taking more aggressive enforcement action against internet service providers’ zero rating plans, which exempt certain data from counting against a customer’s usage allowance. Regulators in Asia are grappling with similar policy questions. In addition, these neutrality principles, usually debated in the context of broadband networks, are now spilling over to the content side, where social media companies are facing increased scrutiny over claims of discriminatory practices in moderating content appearing on their platforms. Indeed, some jurisdictions are considering measures that not only would rescind immunities these platforms have traditionally enjoyed for their content moderation practices, but also would require increased transparency and potentially even impose anti-discrimination mandates or other consumer protections. In short, while the balance of power between broadband network operators and online content providers historically has turned on the degree of regulation of the former, both sides’ practices are now very much in the spotlight.

The following country-specific chapters describe these and other developments in the TMT arena, including updates on privacy and data security, regulation of traditional video and voice services, and media ownership. On the issue of foreign ownership in particular, communications policymakers have increasingly incorporated national security considerations into their decision-making.

Thanks to all of our contributors for their insightful contributions to this publication. I hope readers will find this 12th edition of *The Technology, Media and Telecommunications Review* as helpful as I have found this publication each year.

Matthew T Murchison

Latham & Watkins LLP

Washington, DC

November 2021

UNITED STATES

*Matthew T Murchison, Elizabeth R Park and Michael H Herman*¹

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 radiofrequency 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 (ITU).

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 radiofrequency spectrum by federal government users, and works with the FCC to coordinate spectrum use between federal and

¹ Matthew T Murchison is a partner, Elizabeth R Park is counsel and Michael H Herman is an associate at Latham & Watkins LLP.

non-federal users. In recent years, the NTIA also has played an increasing role in the federal government's efforts to support broadband deployment in rural, tribal, minority, and other historically unserved or underserved communities.

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 cable TV (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 due 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 and the District of Columbia.

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 or other applications or petitions for authority that would result in legally cognisable non-US ownership of FCC-regulated businesses. To this end, the Committee for the Assessment of Foreign Participation in the United States Telecommunications Sector (Committee), a group of agencies composed of the DoJ and the US Departments of Defence and Homeland Security, and advised by various other government agencies and departments, was established in 2020 (formalising the ad hoc group referred to as Team Telecom). The FCC subsequently adopted procedures under which

it coordinates with the Committee to review applications and petitions filed with the FCC involving proposed foreign ownership, including to clarify the types of applications that will be referred to the Committee for review, to standardise the requests for information that are issued in connection with the Committee's review and to establish time frames applicable to such review. Because the FCC typically will not grant such applications until the Committee has signed off, the Committee effectively has the power to delay, if not block, a transaction or the grant of authority 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., voice over internet protocol (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 providers or services) if the FCC determines that enforcement of such 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 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 requires 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 certain types of 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.

iv 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 now permits 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 indirect foreign ownership of common carriers. The FCC has found that higher levels of foreign ownership from World Trade Organization (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 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. Over the past five years, the FCC has granted numerous requests seeking approval of foreign ownership in excess of the 25 per cent statutory limit.

Even transactions and applications that are consistent with the foreign ownership limits described above may be scrutinised, and effectively blocked, as a result of a review by the Committee or CFIUS (as described above). Beginning in 2019, the FCC, in consultation with the executive branch agencies that now constitute the Committee, has denied an application for authority to provide international telecommunications services (which are not subject to foreign ownership restrictions under Section 310 of the Communications Act) and has commenced reviews of previous grants of such authority based on national security and law enforcement concerns. Specifically, the FCC denied a long-pending application by China Mobile USA for authority to provide international telecommunications services in

the US, finding that its ownership and control by the Chinese government raised substantial national security and law enforcement risks that could not be resolved through mitigation measures. Following on from that action, the FCC commenced reviews of a previously granted authority issued to China Telecom Americas, China Unicom Americas, Pacific Networks and ComNet – each of which is ultimately subject to the ownership and control of the Chinese government – at the recommendation of the executive branch agencies to revoke these authorisations based on similar national security concerns.

Further, over the course of 2019 and 2020, the federal government imposed various restrictions on Chinese communications technology companies – most notably Huawei and ZTE – that it has determined pose national security threats to the United States. For instance, since May 2019, the DOC has effectively prohibited American companies from transacting with Huawei, ZTE and other Chinese firms that could provide the Chinese government with the means to intercept or disrupt the communications of American citizens and the US government. Moreover, in June 2020, the FCC formally designated Huawei and ZTE as national security threats, forbidding federal universal service support from being used to purchase equipment or services from either company. Most recently, the FCC has implemented a programme to reimburse smaller service providers' costs of removal and replacement of equipment in their networks that was produced by Huawei or ZTE.

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 ITU. Historically, foreign-licensed satellite operators with US market access were exempt from paying regulatory fees to the FCC in connection with their US operations. This exemption was eliminated in 2020, however, and the FCC now assesses application filing fees and annual regulatory fees in connection with non-US-licensed satellites that have been granted US market access.

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 through 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 cross-ownership of broadcast stations and newspapers. However, in November 2017, the FCC largely eliminated these restrictions, and that decision was ultimately upheld by a US Supreme Court decision in June 2021, settling some uncertainty surrounding the FCC's deregulatory action during the pendency of federal appeals.

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 radiofrequency-based licences, permits or authorisations from one party to another, or transferring control of a holder of such radiofrequency authority from one party to another. Exceptions exist for certain non-substantive 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.

Transactions in this industry over the past year continue to reflect the evolving nature of the telecommunications and media sectors. In February 2021, AT&T Inc announced that it would spin off DirecTV, which it acquired in 2015, into a separate company, with AT&T Inc continuing to hold majority ownership. In addition, in May 2021, AT&T Inc announced plans to divest its WarnerMedia unit and merge it with Discovery, Inc, allowing AT&T to focus on its telecommunications offerings and enabling the combined media company (styled Warner Bros Discovery) to better compete in the ongoing streaming wars. In addition, over the course of 2021, Verizon Communications Inc sought FCC approval to acquire TracFone Wireless, Inc, the nation's largest mobile virtual network operator and leading prepaid carrier, from América Móvil, SAB de CV, a Mexico-based telecommunications company. As of the time of writing, however, the FCC's review of the transaction, which is focused on ensuring that the combination would not harm TracFone's predominantly low-income consumers, has yet to be completed.

Although approved by the FCC in 2016, Charter Communications, Inc's acquisition of Time Warner Cable, Inc and Bright House Networks, LLC recently became the subject of renewed activity when the company urged the FCC to terminate conditions imposed in

connection with the transaction that prohibit the company from imposing data caps and usage-based pricing, and require it to provide non-discriminatory, fee-free interconnection to certain entities. In January 2021, however, Charter withdrew its request that the FCC sunset the restriction on data caps and usage-based pricing. Ultimately, the United States Court of Appeals for the District of Columbia Circuit vacated the interconnection condition noted above as part of a separate legal challenge to the FCC's approval of the transaction, effectively mooted Charter's petition insofar as it sought relief from the interconnection requirement.

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 potentially unlawful conduct to ensure, among other things:

- a* that consumers are protected;
- b* that the integrity of the universal service support mechanism is preserved;
- c* robust competition;
- d* responsible use of the public airwaves; and
- e* 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, failure to contribute to universal service funds, misuse of universal service support or other violations of universal service funding rules, unauthorised operation of radio facilities, selling illegal equipment, violating the FCC's ownership rules and providing materially incorrect information to the FCC.

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol transmission

Transmission

Before 2015, the United States used a relatively light touch with respect to the regulation of internet service providers (ISPs) and broadband internet access providers (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).

The covid-19 pandemic – and Americans' attendant reliance on broadband connectivity for distance learning, remote work and telehealth – has reinvigorated ongoing efforts to ensure the availability of reliable and affordable internet access across the United States. Through the FCC's Keep Americans Connected Pledge, more than 800 service providers agreed not to disconnect consumers and small business customers for non-payment and to waive such customers' late fees incurred, in each case due to the crisis. A number of

states (including Delaware, Indiana and Maryland) went further, issuing executive orders or enacting emergency legislation mandating that service providers take such steps. In March 2020, Congress enacted the Coronavirus Aid, Relief and Economic Security (CARES) Act, which among other things provided funds to states to support connectivity for schools, teachers and students to facilitate distance learning, and allocated US\$200 million for the FCC to distribute to healthcare providers offering connected care services to their patients in response to the pandemic. Since then, Congress has appropriated additional funding to support distance learning and telehealth through continuing CARES Act initiatives as well as the adoption of new programmes. Moreover, in the first several months of 2021, the FCC implemented additional new statutory mandates by establishing the emergency broadband benefit programme, an approximately US\$3.2 billion initiative to subsidise low-income consumers' access to broadband connectivity, as well as the emergency connectivity fund, a US\$7 billion-plus programme to help schools and libraries facilitate remote learning during the pandemic. Policymakers' focus on establishing and maintaining robust connectivity precipitated by the covid-19 pandemic likely will inform future policy debates concerning universal service and the appropriate regulatory treatment of broadband internet access service. Indeed, at the time of writing, Congress is negotiating the terms of an infrastructure package that could direct as much as US\$65 billion in additional funding to the FCC, the NTIA and other federal and state agencies to further support broadband deployment.

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) varies during the course of the year, and fluctuated between approximately 19 and 27 per cent of covered revenues for most of 2020. Universal service programmes and contribution obligations are administered by the Universal Service Administrative Company, a legally independent entity that is subject to the FCC's oversight.

The National Broadband Plan adopted in 2010 recommended that the FCC modify universal service high-cost subsidy programmes, which historically focused on voice telecommunications, to target broadband expansion into areas where the FCC asserts broadband internet access providers (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 established the 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. In addition, the FCC implemented CAF rules for rate of return incumbent carriers. To implement Phase II of the CAF programme, the FCC held a reverse-auction in 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 service to more than 700,000 locations in 45 states over the next decade. Over the course of 2019 and 2020, the FCC began disbursing funds to the reverse-auction's winning bidders and, in April 2021, initiated a process of adjusting service providers' deployment obligations to ensure the most efficient allocation of support. These broad changes to the high-cost programme were coupled with changes to the exceedingly complex intercarrier compensation scheme – under which local and long-distance service providers pay or receive compensation for traffic that is handed off to each other's networks – to eliminate inefficiencies and arbitrage opportunities inherent in that payment regime.

In January 2020, the FCC established the new Rural Digital Opportunity Fund (RDOF) that it had proposed the previous year. Modelled after the CAF programme, the RDOF will provide US\$20.4 billion over a 10-year period to support deployment of broadband service with minimum speeds of 25/3Mbps in rural areas, with the goal of improving connectivity for millions of Americans. In the first of two RDOF auctions, which concluded in November 2020, the FCC provisionally awarded approximately US\$9.2 billion in support to 180 winning bidders. In July 2021, the FCC began authorising the disbursement of these funds. The second RDOF auction, through which the remaining approximately US\$11.2 billion will be distributed, will be held at a later date.

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. Following the rejection of these proposals by the United States Court of Appeals for the District of Columbia Circuit in February 2019, however, the FCC largely abandoned its efforts to restrict resellers' participation in the Lifeline programme.

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 the 2018 order was appealed to the United States Court of Appeals for the District of Columbia Circuit. In October 2019, the DC Circuit upheld the majority of the FCC's 2018 order, including its classification of broadband internet access service as an information service exempt from the requirements imposed on common carriers under Title II. After the DC Circuit denied various petitions for rehearing in early 2020, the parties ultimately declined to seek review by the US Supreme Court, thereby solidifying broadband internet access service's information service classification for the time being. As a result of the election of President Biden in November 2020, the FCC is expected to again reverse course and classify broadband internet access service as a telecommunications service. However, because, as at the time of writing, the President has yet to fill the vacant fifth seat at the FCC – widely seen as a prerequisite to the agency's acting on this issue, given the political considerations involved – any such reclassification is likely to occur considerably later than many had anticipated.

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 of 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.

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.

The FCC also has taken a hands-on approach to the regulation of franchise fees that municipalities can charge CATV operators (which often offer broadband and voice services in addition to video service). By statute, such fees cannot exceed 5 per cent of the revenues that a CATV operator derives from providing video service in the municipality. In August 2019, however, the FCC clarified that the value of 'in-kind exactions' (e.g., services that CATV operators may be asked to provide without charge to government buildings and schools) count towards the 5 per cent cap. A number of municipalities challenged this decision at the United States Court of Appeals for the Sixth Circuit, which in May 2021 largely upheld the FCC's determination that in kind assessments are subject to the 5 per cent cap.

Meanwhile, the state of New York has sought to subject broadband services to price regulation by enacting a law in April 2021 requiring virtually all BIAPs in the state to offer broadband service to qualifying low-income households for US\$15 per month. BIAPs challenged that law in federal court and, in June 2021, obtained an injunction preventing enforcement of the law based on federal pre-emption grounds. The lower court's ruling is now on appeal in the US Court of Appeals for the Second Circuit, with briefings scheduled to conclude in March 2022.

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 gain access to the lawful internet

content of their choice; run applications and use services of their choice, subject to the needs of law enforcement; connect their choice of legal devices that do not harm the network; and benefit from competition among network providers, application and service providers and content providers.

In 2008, the FCC ruled that Comcast Corp, 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:

- a* required all broadband internet access service providers to disclose the network management practices, performance characteristics and terms and conditions of their services;
- b* prohibited fixed broadband internet access providers from blocking lawful content, applications, services or non-harmful devices;
- c* prohibited mobile wireless broadband internet access providers from blocking lawful websites or applications that compete with their voice or video telephony services; and
- d* prohibited fixed broadband internet access providers 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's ruling in a decision 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 was brought by a group of public advocacy organisations, internet content providers and state attorneys general in the US Court of Appeals for the District of Columbia Circuit.

In an opinion issued in October 2019, the DC Circuit upheld the majority of the FCC's 2018 order, including its classification of broadband internet access service as an information service. The Court did, however, remand three discrete issues to the FCC for further review: the potential impacts of the order's deregulatory reforms on public safety, pole attachments and BIAPs' participation in the Lifeline programme. After soliciting comments on these issues, the FCC in October 2020 reaffirmed its classification of broadband internet access service as an information service, finding that such classification will not negatively affect public safety, BIAPs' pole attachment rights or Lifeline participation. In January 2021, the California PUC sought review of this decision by the DC Circuit, but the state agency's challenge is being held in abeyance pending the FCC's consideration of petitions for reconsideration filed before the agency.

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 was pending. BIAPs brought a similar lawsuit in Vermont in October 2018, which also was stayed pending the resolution of the appeal. Although the DC Circuit vacated the 2018 order's express pre-emption provision, it left room for such challenges to proceed based on conflict pre-emption principles. After the DC Circuit denied petitions for rehearing and the parties declined to seek review by the US Supreme Court, the California litigation moved forward. There, the federal government dropped its challenge to SB-822 following President Biden's election, and the Court denied the BIAPs' motion for a preliminary injunction. The BIAPs appealed this denial to the United States Court of Appeals for the Ninth Circuit, which heard oral arguments in September 2021. As at the time of writing, the Vermont case remains stayed.

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 these groups 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:

- a 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.
- b Under the telecommunications service priority programme, service providers must afford priority service to federal, state and local governments and other critical institutions.
- c 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.
- d The FCC has established rules governing the Emergency Alert System, 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.
- e The FCC has established rules requiring deployment of enhanced 911 services with the aim of providing accurate and precise caller location data to facilitate a rapid and effective emergency response.

The FCC is also responsible for the emergency preparedness of US network operators, the radiofrequency 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. 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.

v Privacy and data security

Cybersecurity

US cybersecurity policy, following the completion of the federal government's Cyberspace Policy Review, has sought to:

- a* 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;
- b* enhance US counterintelligence capabilities and increase the security of the supply chain for key information technologies; and
- c* 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 due to 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, while updated and comprehensive privacy legislation has stalled at the federal level, certain states have pressed forward with privacy requirements of their own. For example, following on from the enactment of the California Consumer Privacy Act in 2018 – which imposes far-reaching privacy obligations on a wide range of businesses doing business in California, including broadband service providers and internet platforms – the California attorney general’s office issued regulations implementing the statute in June 2020.

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 current 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. Despite having opened a new proceeding to consider reforms to its implementation of the TCPA in light of the Court’s ruling in May 2018, the FCC has yet to provide clarity on these issues. Over the course of late 2019 and early 2020, two challenges to the TCPA reached the US Supreme Court. Although it rejected a First Amendment challenge to the statute in July 2020, the Court resolved a longstanding dispute concerning the proper interpretation of the term autodialler in April 2021 by construing the term narrowly to include only devices that have the ability to store or produce telephone numbers using a random or sequential number generator.

In tandem with the FCC’s efforts to clarify the scope of the TCPA, other regulatory and legislative steps have been taken to facilitate voice service providers’ identification and blocking of illegal and unwanted robocalls. For example, in June 2019, the FCC issued a declaratory ruling permitting voice service providers to offer call-blocking functionality to their subscribers on an opt-out basis. Moreover, in December 2019, Congress passed the TRACED Act, which provides additional flexibility to service providers to block illegal and unwanted robocalls and imposed a June 2021 deadline for the implementation of STIR/SHAKEN, an end-to-end call authentication protocol aimed at curtailing unwanted ‘spoofed’ robocall traffic travelling on and among their networks. Pursuant to the TRACED Act, the FCC has established safe harbours (from liability for unintentional blocking of wanted calls) for a wide array of robocall mitigation initiatives, and has prohibited voice service providers from accepting traffic from other providers not appearing in the agency’s new robocall mitigation database. In addition, although many carriers – including the nation’s largest – met the TRACED Act’s June 2021 implementation deadline, the FCC is actively working to ensure that service providers that have obtained exemptions from the deadline nevertheless deploy STIR/SHAKEN as soon as possible.

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 radiofrequency 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 radiofrequency-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 WiFi networks to share portions of the 5GHz and 6GHz bands that previously were designated for other purposes, in part, through the use of dynamic spectrum access or automated frequency coordination systems to protect incumbent operations. More recently, the FCC has initiated an inquiry to examine current and future spectrum needs to enable connectivity relating to the internet of things through both licensed and unlicensed spectrum.

ii Broadband and 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 through its 'spectrum frontiers' proceeding made spectrum above 24GHz available for 5G wireless mobile and other broadband services. Since the inception of

this proceeding, the FCC made available over 6GHz of millimetre wave spectrum for flexible wireless use, in the 24.25–24.45 and 24.75–25.25GHz bands (24GHz band), the 27.5–28.35GHz band (28GHz band), the 37–38.6GHz band (37GHz band), the 38.6–40GHz band (39GHz band), the 47.2–48.2GHz band (47GHz band) and the 50.4–51.4GHz band. The FCC also made available the 64–71GHz band for use by unlicensed devices. The FCC has begun auctioning off terrestrial usage rights for this spectrum; in January 2019, for instance, the FCC completed its auction of terrestrial rights to the 28GHz band, which raised over US\$700 million and resulted in the grant of new licences to dozens of winning bidders in October 2019. And in March 2020, the FCC completed an auction for spectrum in the upper 37, 39 and 47GHz bands, raising more than US\$7.5 billion (including nearly US\$4.5 billion for the government).

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 40–42GHz and 48.2–50.2GHz bands for expansion of fixed satellite service, and adjusted previously adopted earth station requirements in the 24GHz, 28GHz, 39GHz, and 47GHz bands, and authorised satellite use in the 50GHz band, to permit greater flexibility in the deployment of earth stations. The FCC also provided for expanded unlicensed use of the 57–71GHz band on board aircraft.

Efforts also are underway to make more mid-band spectrum available for flexible wireless use, including 5G deployments. For instance, in July 2020, the FCC commenced an auction of licences in the 3.5GHz band. And following the DC Circuit's June 2020 rejection of a challenge brought by small satellite operators to the FCC's plan to repurpose the 3.7–4.2GHz band (which to date has been used primarily for satellite-based video distribution) for 5G, the FCC held an auction of spectrum in the 3.7–3.98GHz portion of that band that concluded in February 2021. In addition, the FCC announced an auction of licences for spectrum in the 3.45GHz band scheduled for October 2021. The FCC has an ongoing inquiry into potential ways to facilitate more intensive use of the frequencies between 3.7GHz and 24GHz. The FCC also is exploring other underutilised spectrum to support 5G and other recent technologies, and a proceeding that the FCC commenced in 2020 to examine proposals to expand commercial use of the 71–76GHz, 81–86GHz, 92–94GHz and 94.1–95GHz bands remains ongoing.

With respect to broadband service on aircraft, as well as on ships and in vehicles, the FCC adopted new rules to better enable satellite-delivered connectivity to passengers and crew. The FCC allowed 'earth stations in motion' to operate in more satellite frequencies than before in an effort to connect even more consumers in this fast-growing segment of the marketplace and provided more certainty be adopted under a simplified regulatory framework for licensing these spectrum uses.

There also have been a number of other new developments with respect to satellite spectrum policy. The DOC has expressed 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 federal government has issued a number of space policy directives that require, among other things, that the federal government and industry collaborate to improve space safety and mitigate orbital debris and that the DOC and the Director of the Office of Science and Technology Policy at the White House provide to the President a report on improving the global competitiveness of the US space sector. At the same

time, the FCC continues to evaluate operators' proposals for non-geostationary orbit satellite deployments and, in March 2020, initiated a new processing round for such applications, and is considering proposals to establish rules for coexistence among these systems.

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 over 100 radiofrequency 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.

Internet-based media platforms, including social media platforms, have long been shielded from liability by Section 230 of the Communications Act both for third-party (i.e., user-generated) content and for such platforms' good-faith exercise of editorial discretion to block or limit access to users' posts. In May 2020, however, then-President Trump issued an executive order articulating a narrow view of Section 230 immunity, setting in motion a potential re-examination of the statute at the federal level, including at the FCC. Although the agency declined to proceed as requested by the Trump administration, the scope of Section 230 remains the focus of much attention in Congress. In addition, several states separately have sought to hold social media platforms accountable for what they view as politically motivated content moderation practices. Florida's SB-7072, for instance, would restrict platforms' ability to moderate politicians' and political candidates' posts. A group of social media platforms have challenged SB-7072 on First Amendment grounds, however, and successfully obtained a preliminary injunction against the state's enforcement of the law in June 2021. And in Ohio, the state's attorney general has sought to have Google declared to be a public utility subject to common carrier-style regulation, an effort that the search giant is continuing to contest in court.

Terrestrial broadcasting

Television and radio stations broadcasting video content for free to listeners and viewers via terrestrial radiofrequency spectrum are subject to extensive regulation by the FCC, which has exclusive licensing authority over 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 radiofrequency spectrum is a scarce resource, and thus the FCC should promote localism, diversity of ownership and service in the public interest.

Carriage of broadcast television programming by multichannel video programming distributors 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 multichannel video programming distributor (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 the 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 on a going-forward basis, 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. Relatedly, a non-profit entity called Locast launched a service in 2018 that allows users to stream local broadcast television stations in exchange for voluntary donations, relying on an exception in the retransmission consent regime for governmental and non-profit entities seeking to retransmit signals with no desire for commercial advantage. In July 2019, a number of programmers and broadcasters filed suit against Locast, challenging its non-profit status and alleging violation of US copyright laws; Locast, for its part, filed counterclaims alleging that the plaintiffs are misusing their copyrights and are engaged in anticompetitive behaviour. Following a ruling by the court in favour of the programmers and broadcasters, Locast ceased operations in September 2021.

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 MVPDs, such as DBS and CATV providers, remain subject to FCC regulation with respect to their use of radiofrequency 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.

Although states and localities in their role as franchisors frequently impose requirements on CATV operators (including to extract in kind benefits, as described above), their authority to regulate CATV is limited in many respects by the pre-emptive effect of the Communications Act and the FCC's rules. The proper scope of states' and localities' authority over CATV operations is the subject of an ongoing lawsuit brought by Comcast and various programmers against the governor and attorney general of Maine, whose state legislature passed a law requiring all CATV operators in the state to provide all channels, and all programmes on all channels, on an 'à la carte' basis. The industry plaintiffs, which challenged the state law on First Amendment and pre-emption grounds, successfully obtained a preliminary injunction in the United States District Court for the District of Maine. After the United States Court of Appeals for the First Circuit agreed that the law likely was unconstitutional, the lower court permanently enjoined its enforcement in April 2021.

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, internet protocol-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, internet protocol TV (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, and 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 established a roadmap to free additional spectrum resources for such services, and the FCC brought these plans to fruition through the spectrum proceedings discussed above. The advent of these services, many of which would not use broadcast spectrum, reflects increasing convergence in the communications industry, and has led to increased efforts to reconcile regulatory frameworks that treat similar services differently.

VI THE YEAR IN REVIEW AND OUTLOOK

Without a full complement of commissioners for much of 2021, the FCC's focus over the past year has largely shifted away from politically controversial issues such as net neutrality regulation and towards the implementation of legislative directives, including most notably a raft of new broadband subsidy programmes aimed at ensuring that unserved and underserved areas and populations have reasonable access to broadband connectivity. 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 in other respects. Meanwhile, state-level governmental bodies continue to consider initiatives aimed at promoting broadband availability and regulating broadband network management practices – initiatives that have attracted lawsuits and that raise important questions over the allocation of regulatory authority as between federal and state governments in this arena. Once a fifth commissioner for the FCC is installed, a surge in new federal regulatory activity is expected on a variety of fronts.

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