What to Watch in TMT: Mid-Year 2023 Update



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Increasing antitrust focus on Big Tech, proposals to regulate digital platforms and artificial intelligence, possible content moderation reforms for social media platforms, spectrum for drones and advanced aviation, adoption of digital discrimination rules, increased scrutiny on foreign ownership of telecommunications assets, Federal Communications Commission (FCC) leadership that remains in flux, a new Space Bureau, National Telecommunications and Information Administration (NTIA) kudos for CBRS-style spectrum sharing, revised broadband maps, billions in funding to improve broadband nationwide, develop and deploy 5G, Open Radio Access Networks, semiconductors, and telecom, media and technology (TMT) infrastructure. All of this, and more, is happening in Washington, D.C. right now. The following is a guide to the issues we are watching for TMT companies and their investors, beginning with a look at TMT leadership in Washington, and what it means for the sector.



Congress



Republican control of the House means more focus on FCC/NTIA/Department of Justice (DOJ)/Federal Trade Commission (FTC) oversight, more noise around online content censorship, and an intensified push for China tech restrictions. While Democrats still control the Senate, the close margin requires bipartisan cooperation on major issues, which likely means a deadlock on issues such as privacy and progressive agency nominations.

Changes in Committees with Jurisdiction over TMT, Expected Impact

- Republican control of the House of Representatives
 has Rep. Cathy McMorris Rodgers (R-WA) at the head
 of the powerful Energy & Commerce Committee. Rep.
 Rodgers plans to "hold Big Tech accountable," with
 special attention paid to online platforms such as TikTok,
 Facebook and Snapchat. Content moderation policies
 for various social media platforms also will be under
 scrutiny, as will data protection policies and practices,
 particularly for firms with ties to China. Rep. Bob Latta
 (R-OH) is chairing the Communications and Technology
 Subcommittee. Rep. Frank Pallone (D-NJ) continues to lead
 the Democratic contingent as Ranking Member and Rep.
 Doris Matsui (D-CA) is serving as Ranking Member of the
 Communications and Technology Subcommittee.
- In the Senate, Sen. Maria Cantwell (D-WA) continues
 to chair the Commerce Committee. Expect a focus on
 local media/journalism and oversight of broadband grant
 programs administered by the NTIA. Sen. Cantwell has
 also consistently opposed the bipartisan data privacy bill
 introduced by Reps. Rodgers and Pallone (D-NJ) in the
 House, and her continued leadership of the Committee
 suggests it will not pass into law this Congress without
 substantial changes.
- Sen. Ted Cruz (R-TX) took over minority leadership of the Commerce Committee, as Sen. Roger Wicker (R-MS) elected to serve as ranking member of the Armed Services Committee. Sen. Cruz is pushing an anti-China agenda on the Committee, largely focusing on social

media platforms such as TikTok. Sen. Cruz and other Republicans and Democrats opposed Senate confirmation of FCC Commissioner nominee Gigi Sohn, whose nomination ultimately failed, leaving the Commission at a 2-2 impasse more than two years after President Biden took office. However, as noted below, President Biden has since nominated well-respected telecom lawyer Anna Gomez to fill the fifth seat and break the deadlock. Gomez is widely regarded as a less controversial pick than Sohn, but it remains to be seen how she will fare in the Senate confirmation process.

China Select Committee

- A new House Select Committee has begun investigating and holding hearings on the potential economic, military and technological threats posed to U.S. national security by China. Scrutiny from this Committee may increase pressure on legislators, regulatory agencies and/or the Biden administration to impose additional restrictions, aggressively use existing regulatory tools and/or ban the use of Chinese technology in the United States. Domestic companies doing business with Chinese companies also may be subject to increased scrutiny.
- The Select Committee does not have any legislative jurisdiction (i.e., it cannot create or advance legislation), but it intends to conduct oversight and investigation of, for example, Chinese companies operating in the U.S. and U.S. companies working with Chinese companies. Further, the Select Committee has subpoena power and is expected to request and/or compel documentation and testimony related to Chinese operations in the U.S.

FCC



The Biden administration has not been able to get a fifth Commissioner—and third Democrat—seated at the FCC, leaving the Commission in a deadlock. But there is new hope, with the recent nomination of Anna Gomez to fill the fifth seat.

Senate Confirmation for Majority

- Chairwoman Rosenworcel has not been able to advance
 a progressive agenda at the FCC, including revisiting
 net neutrality regulations, but she has been successful
 in advancing a number of her other priorities, such as
 promoting affordable broadband for low-income families
 by transitioning the COVID-era Emergency Broadband
 Benefit to the standing Affordable Connectivity Program
 and getting funding to over 10 million families in the first
 year of the program.
- Chairwoman Rosenworcel has also been tackling the issue
 of digital discrimination, chartering the Communications
 Equity and Diversity Council to recommend policies
 to the Commission, establishing a task force to guide
 the proceeding, and proposing new rules to prevent
 discrimination in the provision of and access to broadband
 service. The Commission faces a November 15, 2023,
 statutory deadline under the Infrastructure Investment
 and Jobs Act (IIJA) to implement such rules.
- Chairwoman Rosenworcel has also worked to secure
 American communications networks through changes
 to the FCC's rules for authorization of radio frequency
 equipment, and reforms to the foreign investment
 review process. In a very high-profile win, Chairwoman
 Rosenworcel developed and released the long-awaited
 broadband maps that promise more granular and accurate
 reporting of where broadband is available, and who still
 needs access.
- Chairwoman Rosenworcel has also left her mark on the agency itself by creating the new Space Bureau and Office of International Affairs, in order to focus on the challenges of the growing and evolving satellite and space industry, and to better shape global telecommunications policy.

- Gigi Sohn, a well-known progressive activist and former FCC advisor, was renominated to be the third Democrat on the five-member Commission in January 2023, but her nomination failed. On May 22, 2023, President Biden nominated longtime telecom lawyer and industry expert Anna Gomez to the fifth seat. Gomez currently serves as Senior Advisor for International Information and Communications Policy at the U.S. Department of State, focusing on preparations for the International Telecommunication Union's World Radiocommunication Conference this November. She previously served as Deputy Administrator at NTIA. Gomez is endorsed by the Congressional Hispanic Caucus and influential legislators. Rep. Doris Matsui (D-CA) said of Gomez, "Over her nearly 30 years of experience in telecommunications and technology policy, she has been a powerful voice for advancing American innovation and promoting digital equity."
- Concerns around term expirations continue. Democratic Commissioner Geoffrey Starks' term expired on June 30, 2022, and Republican Commissioner Brendan Carr's term is set to expire on June 30, 2023. However, President Biden renominated both Commissioners Starks and Carr, along with the Gomez nomination. We expect to see the Gomez and Starks nominations bundled with Carr's, in order to create a nominee package that is palatable on both sides of the aisle. In the meantime, Starks may continue to serve until January 3, 2024, and Carr may continue to serve until January 3, 2025.

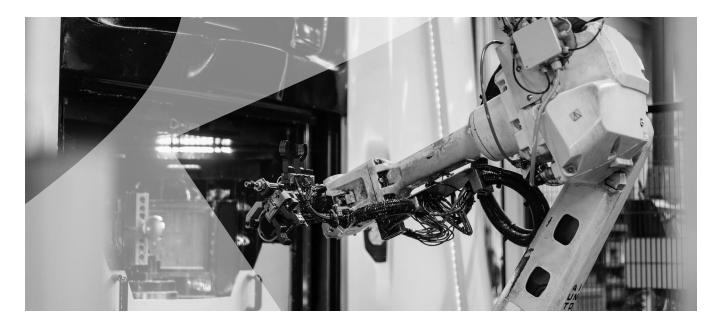
Antitrust Focus on Big Tech



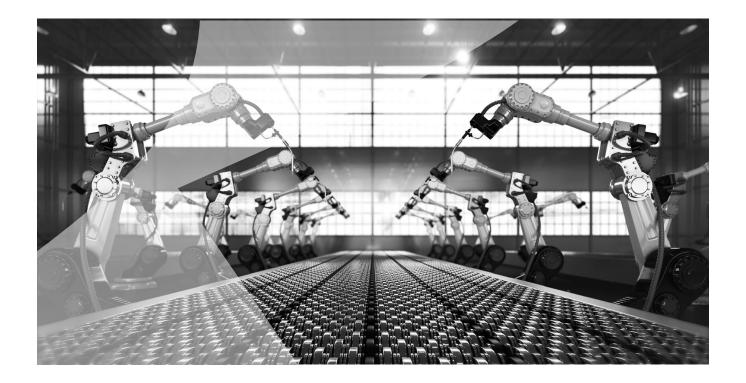
2023 promises a lot of excitement on the antitrust front in the TMT space. Indeed, we have already seen a new lawsuit against Google by the DOJ Antitrust Division and a loss by the FTC in its bid to block Meta's acquisition of Within.

- Still to come are (i) summary judgment rulings in the FTC's lawsuit seeking divestiture of Instagram and WhatsApp from Meta, (ii) the trial for DOJ's first lawsuit against Google and rulings on motions to dismiss for its second, and (iii) resolution of the FTC's suit to block Microsoft's proposed \$69 billion acquisition of Activision. We will also see the FTC's decisions on various proposed mergers in the TMT space, including Broadcom's proposed \$61 billion acquisition of VMWare and Amazon's proposed acquisition of iRobot.
- If the FTC prevails in its lawsuit against Meta seeking divestiture of Instagram and WhatsApp a decade after their acquisition, the decision would be one of the most momentous decisions in antitrust law in at least the last

25 years (if not ever). The trial date is not set, but the FTC has asked for a December 2023 trial date. Regardless of when a decision is handed down, it will almost certainly be appealed by the losing party. Prior to the trial, we expect that in 2023 there will be briefing on and likely resolution of the parties' respective motions for summary judgment. How Judge Boasberg rules on those motions could be determinative. Even if it is not, the decision(s) will potentially provide significant insight into whether he may be willing to enter an injunction requiring a divestiture and, if so, what standard he will apply. It remains to be seen how much Judge Boasberg will be influenced by the D.C. Circuit's decision on an identical case brought by state attorneys general. There, Judge Randolph, writing for a unanimous panel for the D.C. Circuit, affirmed dismissal of



- the suit on statute of limitations grounds, but along the way described the lawsuit as "old" and "odd," expressing that courts "should proceed cautiously when asked to deem novel products or practices anti-competitive." It ruled that "now an injunction breaking up Meta, ordering it to divest itself of Instagram and WhatsApp under court supervision, would have severe consequences, consequences that would not have existed if the States had timely brought their suit and prevailed." The statute of limitations at issue does not apply to the FTC's challenge, but nevertheless the language of the D.C. Circuit's opinion does not read particularly friendly to such a late divestiture order.
- DOJ also filed a new lawsuit against Google seeking divestiture of the company's AdTech businesses (their ad server and their ad exchange businesses). This suit likely will not be resolved in 2023 after Google was unsuccessful in its motion to dismiss. In the meantime, DOJ's first lawsuit against Google, primarily challenging Google's ability to negotiate for the position of "default search engine" with various companies, most importantly Apple and Mozilla, is set for trial in September 2023. DOJ is also challenging the terms and conditions Google places on Android devices that allegedly give Google a privileged position as a search engine on Android phones. As with the Meta rulings referenced above, we expect that any decision will be subject to appeal.
- Finally, in the merger space, we are paying close attention to the resolution of the FTC's case against Microsoft/ Activision and what the agencies decide to do in various other mergers. The FTC's case against Microsoft/Activision is at the forefront of aggressive merger enforcement. With the FTC's loss against Meta/Within, another loss by the agency would be a real setback for Chair Lina Khan's vision of expanding the "antitrust" grounds for reviewing mergers. That said, success may embolden the antitrust agencies and increase the unpredictability of regulatory review for merging companies. The FTC may ultimately avoid court scrutiny, however, after regulators in the United Kingdom decided to block the transaction. The merging parties have announced plans to appeal and would have to mutually agree to extend the end date of the agreement in order to keep the deal alive.



Content Moderation Reform, Section 230, Regulation of Digital Platforms



Big Tech companies should be more accountable for their content, or at least that is the claim of regulators and legislators who share unusual bipartisan support for increased regulation of tech companies. As part of the broader political and policy initiatives to limit the influence of social media platforms, various proposals have been floated to create additional requirements on covered platforms.

Content Moderation

- Section 230 of the Communications Decency Act provides online platforms with immunity from suit over the content they host and moderate. The law has two parts: (i) Section 230(c)(1) shields platforms from liability for content posted on their sites by third parties; and (ii) Section 230(c) (2) protects providers' rights to make good-faith content moderation decisions.
- In light of increasing awareness of how online platforms, especially social media, have been used to facilitate the spread of misinformation on high-profile subjects such as the 2020 U.S. presidential election and the COVID-19 pandemic, the scope of Section 230 immunity has come under greater scrutiny. Several proposals have arisen in Congress and in academia to reform those protections, ostensibly to match the outsized impact that online content can have. These proposals would generally impose a duty of care on providers to take reasonable steps to prevent their platforms from being used for unlawful or harmful purposes. A number of other proposed reforms would require online platforms to disclose content moderation policies and algorithms responsible for automated moderation, and in some instances would prohibit any moderation of certain content, such as political speech. Although a few of these proposals have become part of different bills in Congress, none of them has an especially high chance of becoming law in their current forms. Nevertheless, this continues to be an area of interest in Congress, in the courts and at the FCC.

The White House convened a listening session on September 8, 2022, focused on the need for tech platforms to face greater accountability for the content they host. Based on these discussions, the Biden administration has identified six areas of concern:

- "Promot[ing] competition in the technology sector;
- Provid[ing] robust federal protections for Americans' privacy;
- Protect[ing] kids by putting in place even stronger privacy and online protections for them, including prioritizing safety by design standards and practices for online platforms, products, and services;
- Remov[ing] special legal protections for large tech platforms;
- Increas[ing] transparency about platforms' algorithms and content moderation decisions;
- Stopp[ing] discriminatory algorithmic decisionmaking."

Formal action on these potential reforms has yet to be taken.

Social media platforms scored a big victory this year
when the Supreme Court declined to alter Section 230,
after years of speculation, that it would do just that. On
February 21, 2023, the Court heard oral argument in a set of
sister cases, Gonzalez v. Google and Twitter v. Taamneh,
in which families of victims of terrorist attacks tried to
hold social media platforms liable for terrorist content
on their platforms. Gonzalez, specifically, raised the

question of whether content recommendations generated by algorithms amount to content created by the social media platform, rather than a third party, and therefore are not protected under Section 230. The Justices seemed hesitant to scale back Section 230 immunity in oral argument, expressing concern that a barrage of lawsuits might follow, potentially threatening jobs and stifling innovation in the tech industry. They seemed to believe that any revision of Section 230 was better left to Congress, which is free to consider the public policy implications of its actions in a way that courts are not. Ultimately, the Court did decline to touch Section 230, holding in an unsigned opinion that its decision in favor of social media companies on a preliminary issue in Twitter v. Taamneh meant that the Gonzalez plaintiffs had no real case, and thus, there was no need to reach the Section 230 questions they raised. Section 230 remains untouched for now, unless and until the executive or legislative branches move forward on reform.

 Notably, several states—including Texas, Florida and California—have recently introduced legislation aimed at social media content moderation. Similar to state-based privacy regulations, states may lead the way on content moderation in the absence of federal action.

Legislation to Regulate Digital Platforms

• In May 2023, Sen. Michael Bennet (D-CO) re-introduced legislation, in partnership with Sen. Peter Welch (D-VT), to create a federal "Digital Platform Commission" that would oversee and regulate large tech companies and social media sites (2022 S. 4201). He has expressed deep concern about the implications of Americans' widespread use of social media, especially by children and teens, for data privacy, mental health and market competition. The new Commission, as structured in the bill, would consist of five commissioners, appointed by the President and confirmed by the Senate, and would have all of the regulatory and oversight authority of similar agencies like the Food and Drug Administration (FDA) and the FCC. Notably though, it would be deputized to name certain entities "systemically important digital platforms," and subject them to additional regulation and scrutiny. The bill has not moved at this point, but a number of notable figures in the field have **spoken in support** of the proposal, including former FCC Chairman Tom Wheeler. Proponents of the bill argue that the agencies currently charged with regulating digital platforms, namely the DOJ and the FTC, do not have the requisite expertise, nor are their enacting statutes broad enough, to facilitate adequate response to the dynamic nature of the industry and the breadth of its reach. Others have suggested that, rather than create a whole new agency, it would be preferable to create a new branch within an existing agency, like the FCC or FTC, to meet this regulatory need. Whether or not this particular proposal moves forward, expect to see continued debate around the regulation of digital platforms and Big Tech in general.



Artificial Intelligence



It is somewhat unprecedented in Washington, D.C. for industry to ask for regulation, but that is precisely what is happening with respect to Artificial Intelligence (AI), including chatbots such as ChatGPT. In a recent Senate Oversight Hearing, discussed more below, some industry representatives agreed with legislators that more government intervention is needed, perhaps establishing a new cabinet-level agency to oversee the industry, issuing AI licenses for large-scale models, implementing a testing regime for AI models before release and adopting safety regulations. Various branches of the federal government also are focused on AI, and states have proposed AI-focused bills, including California, Colorado, Connecticut, New York and Texas.

International Partnerships

• The United States has launched two new international partnerships on AI: (i) on January 27, 2023, the United States and the European Union (EU) signed an administrative agreement to enhance the use of AI to improve agriculture, health care, emergency response, climate forecasting and the electric grid. The initiative is intended to give officials greater access to detailed and data-rich AI models, prompting more efficient emergency responses and electric grid management; and (ii) on January 31, 2023, the United States and India announced they would be launching the U.S.-India initiative on Critical and Emerging Technology (iCET). The partnership would expand collaboration on AI and develop common standards and benchmarks for trustworthy AI.

Mandating Equitable Federal AI

 On February 16, 2023, President Joe Biden signed an Executive Order (EO) on racial equity which includes provisions on equitable data and algorithmic discrimination in AI. The order mandates that agencies design, develop, acquire and use AI in the federal government in a manner that advances equity, and that agencies consider consulting their civil rights offices on decisions regarding the design, development, acquisition and use of AI.

Comments Sought on AI Accountability Measures

• On April 11, 2023, the Department of Commerce released a request for comment on AI accountability measures, including whether potentially risky new AI models should go through a certification process before they are released. The request "focuses on self-regulatory, regulatory, and other measures and policies designed to provide reliable evidence to external stakeholders" or provide assurance "that AI systems are legal, effective, ethical, safe, and otherwise trustworthy." Written comments are due by June 12, 2023. The action follows legislative directives to "support the advancement of trustworthy AI" from the National AI Initiative Act of 2020 and the CHIPS and Science Act of 2022.

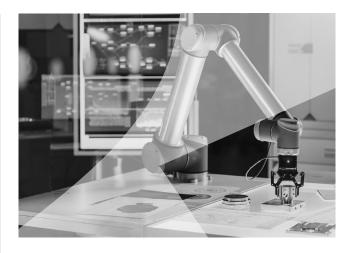
Administration Considers AI Risks and Opportunities

 The FTC, DOJ and the U.S. Equal Employment Opportunity Commission (EEOC) on April 25, 2023, released a joint statement outlining a commitment to further enforcement efforts against discrimination and bias in AI systems. Earlier in the month, FTC Chair Lina Khan stated that the agency is aiming to ensure the AI field is not dominated by existing Big Tech companies. Chair Khan noted that, as AI and machine learning necessitate huge amounts of data and storage, there is a potential for "big companies to become bigger." In addition, the FTC also cautioned companies to ensure their AI products' capabilities are not "over[sold] or overstate[d]." Khan's statement complements the existing FTC investigation into competition and data security in the cloud computing industry and previous FTC publications regarding company claims in relation to AI capabilities.

• On April 4, 2023, President Biden met with the President's Council of Advisors on Science and Technology (PCAST) about the "risks and opportunities" that rapid advancements in AI pose for individual users and U.S. national security. President Biden emphasized the opportunities for AI assistance in addressing disease and climate change, but also noted the importance of addressing potential risks to society, national security and the economy. President Biden highlighted the role of the private sector in introducing reliable and safe AI, noting that "tech companies have a responsibility, in my view, to make sure their products are safe before making them public."

New AI Standards and Guidance from Several Federal Agencies

- On January 26, 2023, the National Institute for Standards and Technology (NIST) released version 1.0 of an AI Risk Management Framework (RMF). This framework is voluntary, but provides a roadmap for how companies can get ahead of potential AI regulatory and governance issues while maximizing AI's benefits. It lays out key guiding principles and characteristics of "trustworthy AI," and suggests seeking broad and diverse input to help identify and combat potential bias.
- In October 2022, the White House Office of Science and Technology Policy issued a Blueprint for an AI Bill of Rights (the "Blueprint") that asserts principles and guidance around equitable access and use of AI systems. The Blueprint identified non-binding core principles to guide and govern the design, use and deployment of AI systems, focusing on the potential consequences of human rights abuse. It does not contain prohibitions against AI deployments or provide any enforcement mechanisms. The Blueprint also provides the private sector with an opportunity for self-regulation, particularly in relation to protecting consumer rights.



- On January 24, 2023, the National Artificial Intelligence Research Resource (NAIRR) Task Force released its final report. The report provides a detailed roadmap for producing a national research infrastructure that would broaden access to essential resources for AI research and development. The plan aims to provide AI researchers with access to computational resources, high-quality data, training tools and user support, and it calls for analysis-ready data sets to be defined utilizing existing, community-driven principles and standards. It also aims to designate a single federal agency to serve as the administrative home for NAIRR operations and set the standard for responsible AI research through the design and implementation of its governance processes. NAIRR has told Congress that it could reach initial operating capability within 21 months with an estimate of around \$2.6 billion in appropriations.
- On March 3, 2023, the Departments of the Treasury and Commerce provided reports to Congress describing plans under consideration to regulate outbound investment on sensitive technologies, including AI, as required by the 2023 Consolidated Appropriations Act. Administration officials previously stated that a "handful" of "extremely sensitive" sectors should be covered by an outbound investment regime, including a subset of AI applications. The reports identify ongoing efforts and the necessary resources to ensure clear definitions and scoping of such a regime. The goal of any proposed outbound investment regime is to prevent exploitation of U.S. capital in ways that threaten national security without unduly burdening U.S. investors.
- During the Second Summit for Democracy on March 29, 2023, the White House released a fact sheet on "Advancing Technology for Democracy." The fact sheet urged democracies to align the development of AI with respect for democratic principles, human rights and fundamental freedoms. The summit also launched the Trustworthy and

- Responsible AI Resource Center for Risk Management, which is designed to enable responsible use of AI.
- On March 30, 2023, the Food and Drug Administration
 (FDA) issued draft guidance on Marketing Submission
 Recommendations for a Predetermined Change Control
 Plan for AI/ML-enabled Device Software Functions.
 The draft guidance interprets a new law authorizing
 Predetermined Change Control Plans (PCCPs) for medical
 devices. PCCPs authorized by FDA will allow medical
 device manufacturers to make changes to an approved
 or cleared device, consistent with the PCCP, which would
 otherwise require submission of a new application to
 FDA. This draft guidance provides recommendations to
 include in PCCPs for medical devices that feature machine
 learning-enabled device software functions (ML-DSFs).

Senate Oversight of Al

- On Tuesday, May 16, 2023, the Senate Judiciary
 Subcommittee on Privacy, Technology and the Law
 held a hearing entitled, "Oversight of A.I.: Rules for
 Artificial Intelligence." The Committee emphasized the
 historic nature of AI while expressing concern for its
 potential negative impact on intellectual property (IP)
 rights, disinformation, consumer privacy and economic
 and job security. Notably, witnesses advocated for a
 regulatory regime consisting of licensing and transparency
 requirements. Members called for the creation of a federal
 agency, setting international standards and protecting
 consumer rights and privacy while avoiding the pitfalls of
 past attempts to regulate social media and Section 230.
- Subcommittee Chair Richard Blumenthal (D-CT) said the underlying advancements of this era are real and promising, but so are the harms, ranging from weaponized disinformation, housing discrimination, harassment of women, voice impersonation and deep fakes: "Sensible safeguards are not an opposition to innovation. We can start with transparency; AI companies should be required to test their systems, disclose known risks, and allow independent researcher access. We can establish scorecards to encourage competition based on safety and trustworthiness. In places where the risks of AI are so extreme, we should impose restrictions or ban their use, especially when it comes to commercial invasions of privacy. We also need to enforce accountability."

- Samuel Altman, CEO of OpenAI, the company that developed ChatGPT, offered the most compelling testimony: "Regulatory intervention by governments will be critical to mitigating the risks of increasingly powerful models. For example, the government may consider a combination of licensing and testing requirements for the development and release of AI models above a crucial threshold of capabilities. There are several areas where I believe companies can partner with governments, including ensuring that the most powerful AI adheres to a subset of safety requirements, facilitating processes to update safety measures, and examining opportunities to develop global cooperation."
- The testimony from Gary Marcus, a professor from NYU, was similar: "The big tech companies' preferred plan boils down to 'trust us,' but why should we? We obviously need government involved. We need the tech companies involved, big and small. But we also need independent scientists. Allowing independent scientists access to these systems before they are widely released, as part of a clinical trial-like safety evaluation, is a vital first step. Ultimately, we may need something like **CERN**, which is global and neutral but focused on AI safety. AI is among the most world-changing technologies ever, already changing things more rapidly than almost any technology in history. We acted too slowly with social media; many unfortunate decisions got locked in, with lasting consequences."

Spectrum



Spectrum is always a hot topic in Washington, D.C. There are a number of important developments to watch right now, including legislation to extend the FCC's authority to auction spectrum, spectrum strategy work by federal agencies to chart the future course and repurposing of spectrum, work to determine whether the 3.1-3.45 GHz band will be shared or auctioned for exclusive use, kudos for CBRS-style spectrum sharing, work to maximize use of the 12 GHz band, and a proceeding to determine spectrum needs for uncrewed aircraft and the future of aviation.

Spectrum Auction Authority

- The FCC's spectrum auction authority expired on March 9, requiring prompt attention and extension by Congress. The spectrum auction authority is the right of the FCC to use competitive bidding practices to grant licenses to nonfederal entities for commercial wireless communication. This authority was granted to the FCC in 1993. The last long-term extension was in 2012, which expired on September 30, 2022.
- Two bills, each of which received bipartisan support, were introduced in the last Congress to address the auction authority: the Spectrum Innovation Act of 2022 (H.R. 7624 and 5. 4117) and the Extending America's Spectrum Auction Leadership Act of 2022 (H.R. 7783).
- The Spectrum Innovation Act would extend the FCC's auction authority to March 31, 2024. It also would specify the process for auctioning or sharing a segment of spectrum between 3.1 GHz and 3.45 GHz, and would allow those operating in the band to use the Spectrum Relocation Fund to finance operations such as R&D, engineering studies, economic analyses and other planning activities. The Spectrum Relocation Fund is a centralized funding mechanism through which federal spectrum users can obtain reimbursement for the costs of relocating or sharing their spectrum. In the previous Congress, the Spectrum Innovation Act passed the House, but stalled in the Senate Commerce Committee. It was,

- nevertheless, considered for inclusion in the Consolidated Appropriations Act, 2023.
- Sen. Cantwell, as chair of the Senate Commerce Committee, believes that a longer period of extension is needed to avoid any interruptions to the FCC's work regarding auctions. Negotiations over the length of the extension can therefore be expected to continue, with Sen. Cantwell insisting on a longer term (10 years) and Republicans seeking a shorter extension (18 months to three years), as they prefer greater oversight of FCC auction activity through repeated authorizations, and believe a shorter period will allow the Congressional Budget Office to more accurately score the bill.

Praise for CBRS-style Spectrum Sharing

- As demand continues to grow for wireless spectrum, an innovative approach to spectrum sharing that is used in the Citizens Broadband Radio Service (CBRS) is gaining praise. The dynamic spectrum sharing in the CBRS band between the Department of Defense (DOD) and commercial spectrum users protects DOD users and, when the government isn't using the airwaves, companies and the public can gain access through a tiered licensing arrangement.
- NTIA released a report that this ground-breaking framework, made possible by the FCC in 2015, is working. Deputy Assistant Secretary of Commerce for

Communications and Information April McClain-Delaney said, "innovative spectrum sharing frameworks are key to unlocking additional bandwidth for wireless connectivity across the country," and that "the success and growth of the CBRS band shows the promise of dynamic spectrum sharing to make more efficient use of this finite resource.

- Other key findings include: "CBRS is playing an important role in connecting rural America as well as providing a real-world example of how sharing spectrum can work for both the federal government and the private sector."
- NTIA is seeking feedback on the report and ways to improve the CBRS spectrum sharing framework.
 Comments are due on May 31, 2023.

Better Federal Spectrum Coordination

- NTIA and the FCC share responsibility to coordinate the
 efficient use of spectrum resources among federal and
 non-federal users. Following high-profile inter-agency
 disputes over spectrum policy in recent years, including
 the fight among the FCC and FAA over 5G deployments
 and radio altimeters, reallocating spectrum intended for
 intelligent transportation to WiFi, the FCC's 24 GHz and
 C-band proceedings, our federal government is focused on
 the need to improve spectrum coordination processes.
- On August 2, 2022, the FCC and NTIA signed an updated Memorandum of Understanding (MOU) to increase spectrum coordination between the agencies, requiring formal meetings to conduct joint spectrum planning at least quarterly. Although no significant disputes have arisen during Chairwoman Rosenworcel's tenure, expect Congress to continue pushing for greater spectrum coordination.
- NTIA recently solicited comments to help develop the National Spectrum Strategy. The National Spectrum Strategy aims to identify 1,500 megahertz (MHz) of spectrum that can be studied to determine if it can be repurposed for more intensive use. With an eye to the future, NTIA asked what spectrum needs should be addressed and which bands to repurpose. Further, NTIA asked for comment on what a long-term spectrum planning should entail and who NTIA should coordinate with on this process. Finally, with a focus on encouraging and being at the technological forefront, NTIA sought input on what new or emerging technologies could best help to ensure the U.S. continues to maintain its leadership in spectrum-based services.

3.1-3.45 GHz

- The IIJA allocated \$50 million from the Spectrum Relocation Fund to the DOD for research and development, engineering studies, economic analyses, and other planning activities to improve spectral efficiency as the 3.1-3.45 GHz spectrum is reallocated and shared among federal and non-federal users. The Act also provides for auctioning new spectrum licenses in this band. DOD has until October 2024 to determine what spectrum can be made available for commercial uses in the band. The FCC cannot begin an auction of 3.1-3.45 GHz licenses until after November 30, 2024.
- DOD Chief Information Officer John Sherman said it
 would be untenable for DOD to vacate the 3.1-3.45 GHz
 band because it is crucial to national security, as many
 land, air, and sea-based radars use this spectrum. He said,
 however, that DOD can make spectrum sharing work in
 collaboration with industry and other federal agencies.
- Congress has made clear through the IIJA that it wants the 3.1-3.45 GHz band auctioned for non-federal use, either on an exclusive or shared basis, as a means of generating revenue for the Treasury. If NTIA and DOD do not identify a sufficient amount of 3.1-3.45 MHz spectrum to generate commercial interest in an auction by the October 2024 deadline, Congress may step in to dictate an amount. The FCC can't begin promulgating auction or service rules until DOD has identified the available spectrum.
- Given the strong bipartisan support for commercial use of the 3.1-3.45 GHz band in Congress, we expect a continued push for non-federal use of the band.

5030-5091 MHz, Spectrum for Advanced Aviation

- After five years of petitions, comments and deliberations, the FCC finally initiated a rulemaking proceeding to consider and adopt service and technical rules for unmanned aircraft systems (UAS) to utilize the 5030-5091 MHz band.
- Infrastructure is a key to unlock the potential of advanced aviation, and this includes telecommunication infrastructure to support communications functions for advanced aviation operations. The FCC commenced its first rulemaking this year to consider service and technical rules for spectrum to support command and control links for UAS.
- In many respects, the FCC presents forward-looking proposals for UAS spectrum. The specific focus of the rulemaking is to create service and technical rules for the 5030-5091 MHz spectrum, but the FCC doesn't stop there.

The FCC acknowledges that the 5030-5091 MHz band, recommended for allocation to UAS by the International Telecommunications Union, is not the only band that will be utilized to support UAS communications. Various options to use commercial wireless and satellite spectrum also are being explored. The FCC also presents a number of innovative proposals or questions:

- Should the FCC utilize dynamic frequency management system (DFMS) administrators, private third parties, to manage the band? DFMS administrators would determine and assign frequencies to UAS operators through automated technology for temporary use in a particular geographic area and for a particular time period tailored to an operator's flight plan.
- Assuming adequate interest in the 5030-5091 MHz spectrum, should the FCC rely on competitive bidding to assign much of the spectrum? The FCC also may choose licensees from submitted applications based on criteria established by the FAA or a multi-stakeholder group.
- The FCC notes that use of existing wireless networks in bands other than the 5030-5091 MHz band also must be considered for UAS, and may be a low cost alternative compared to building dedicated UAS networks to provide added benefit in the near term. The FCC recognizes that there is stakeholder interest in using a wide range of bands and notes that mobile wireless operators are developing network-based UAS applications to operate over commercial wireless networks using flexible-use spectrum. Satellite operators are doing the same. The FCC proposes that certain spectrum in the band can be secondarily used for the provision of commercial wireless network services.
- Comments and reply comments in this proceeding were due in the spring of 2023, but this rulemaking will be ongoing for all of 2023.

6 GHz/AFC

• In 2020, the FCC adopted new rules for the 5925-7125 MHz (6 GHz) band to open up 1200 MHz of additional spectrum for unlicensed operations. Under the new rules, higher-power devices are required to check with Automated Frequency Coordination (AFC) systems prior to operating to avoid harmful interference to incumbent operations, while lower-power devices are restricted to indoor use only and are not required to communicate with an AFC system before operating. The approval of one or more AFC system operators is a prerequisite to the commencement of higher-power, commercial and private enterprise operations in the 6 GHz band.



• In November 2022, the FCC announced the conditional approval of 13 entities seeking authorization to act as AFC system operators. These operators must now undergo and successfully complete multiple rounds of testing, first in a laboratory setting, then in a public forum allowing interested parties (including incumbents) to test the AFC systems' performance to ensure that they adequately implement the FCC's rules to protect incumbent licensees against interference. AFC testing processes are expected to play out during 2023.

7 GHz

Disputes over whether some or all of the 7125-8400 MHz
(7 GHz) band should be repurposed for unlicensed or
licensed use are beginning to emerge and the fate of the
7 GHz band is likely to become a highly contentious topic
throughout 2023.

12.2-12.7 GHz

• On May 19, 2023, the FCC released a Report and Order and Further Notice of Proposed Rulemaking (FNPRM) denying a request by Multi-Channel Video and Data Distribution Service (MVDDS) licensees to add a mobile allocation to permit a two-way mobile terrestrial 5G service in the 12.2-12.7 GHz band and seeking additional comment on how best to maximize efficient use of the band. The FCC found that terrestrial mobile use of the band would interfere with both Direct Broadcast Satellite and nongeostationary orbit Fixed-Satellite Service licensees for downlink operations that provide services to consumers. The FNPRM seeks comment on other possible noninterfering terrestrial uses for the band including higher power fixed point to point and point to multipoint, and indoor unlicensed use. The majority of MVDDS licenses have been acquired by Dish and MSD Capital, an investment firm owned by Dell founder Michael Dell.

12.7-13.5 GHz

• The FCC issued a Notice of Inquiry (NOI) in October 2022 to explore repurposing up to 550 megahertz in the 12.7 to 13.25 GHz band for next-generation wireless services. The NOI addresses how new entrants could share spectrum with incumbents, or incumbents could be relocated to other bands. The item also explores service rules that might encourage investment in mobile broadband use of the band. A broad segment of the TMT industry has participated in this proceeding, including broadcasters, satellite operators, the cable industry, mobile wireless operators, device manufacturers and consumer advocates. Expect continued advocacy in the proceeding, with incumbent interests seeking to prevent the issuance of an NPRM and/or to shape an NPRM in a manner that maximally protects their operations. Prospective new entrants are pushing for the FCC to quickly propose new rules allowing for expansive new use of the band.

T-Mobile Divestiture of Its 800 MHz Spectrum/ **Dish Option**

• Part of the terms of federal government approval of the T-Mobile/Sprint merger is the requirement that T-Mobile divest its nationwide 800 MHz spectrum (approximately 13.5 MHz nationwide) this year. T-Mobile entered into an agreement giving Dish the right to purchase this spectrum for \$3.6 billion. Dish recently increased the asset value under which it carries this option on its balance sheet from \$678 million to \$1.693 billion because of "current market data indicative of pricing of similar assets and an increase in our probability of exercising the option." Dish also recently expressed its desire to extend its opportunity to buy the 800 MHz spectrum from July 1 to September 1. According to the Final Judgment approving the merger, T-Mobile may not sell the licenses to "to any other national facilities-based mobile wireless network operator, without the prior written approval of the United States, in its sole discretion, after consultation with the affected Plaintiff States." T-Mobile also may not sell the spectrum for less than \$3.6 billion. T-Mobile can seek to retain the spectrum by convincing the DOJ that the sale "is no longer needed to remedy the competitive harms of the merger."



Satellite Regulation and Policy



The proliferation of new satellite constellations, especially those in Low Earth Orbit (LEO) and Medium Earth Orbit (MEO), will mean more regulatory focus on both efficiency and externalities. The new FCC Space Bureau will likely emphasize both streamlining outmoded regulatory models and ensuring that more satellites do not mean less safety/competition. Also, expect increased regulatory flexibility for satellite augmentation of terrestrial wireless networks.

New FCC Space Bureau

• The Commission has reorganized the International Bureau into the Space Bureau, led by Julie Kearney, and the Office of International Development, led by Ethan Lucarelli. The Space Bureau will be tasked with developing and administering satellite policy, monitoring compliance, and coordinating satellite spectrum allocations, functions previously performed by the Satellite Division of the International Bureau. By elevating the FCC's satellite and space regulation and expertise to the full Bureau level, this reorganization recognizes the significant increase in interest and investment in satellite and other space operations. The Office of International Affairs will be responsible for the other International Bureau functions such as the FCC's engagement and coordination with international bodies and regulatory authorities as well as the development of policies related to submarine cables and advising on foreign ownership related issues.

Orbital Debris and Space Sustainability

- Orbital debris has become a hot topic at the FCC and in Congress. There is a growing concern that the proposed mega-constellations of LEO satellites will create orbital debris that may drastically impact the safety of outer space.
- The FCC recently adopted a deorbiting rule for LEO satellites that requires disposal of satellites within five years of mission completion. The FCC also has an ongoing orbital

- debris proceeding to consider policies to mitigate the risk of orbital debris, and has increased scrutiny of individual orbital debris mitigation plans in license request reviews.
- As part of the recent partial grant of SpaceX's application for its 30,000-satellite second-generation constellation, the FCC imposed a new orbital debris measurement parameter that would prevent an operator from launching more satellites in the event that existing satellite failures surpassed this parameter. In response, SpaceX has asked the FCC to impose this requirement on all other LEO operators.
- In the ongoing Space Innovations proceeding, the FCC is continuing to review and modernize rules and regulations to support space sustainability. In addition, a bipartisan group of senators recently re-introduced the ORBITS Act, aimed at removing space junk. In the last Congress, the bill passed the Senate but was not acted on in the House. We expect a continued push from both the FCC and Congress on space sustainability.

Single Network Future: Supplemental Coverage from Space, Satellite-Terrestrial Convergence

 The FCC adopted an NPRM in March 2023 to facilitate integration of satellite and terrestrial networks. A new regulatory framework is proposed for "Supplemental Coverage from Space" (SCS). Satellite operators collaborating with terrestrial service providers, a recent

trend in industry, could obtain authorization to operate space stations on flexible-use spectrum that is allocated for terrestrial services. If approved, SCS would enable expanded network coverage to subscribers on the ground especially in remote, unserved and underserved areas. Another aim of the proceeding is to increase the availability of emergency communications. Comments in the proceeding were filed on May 12, 2023, and reply comments are due June 12, 2023.

Satellite Licensing Reforms

• The FCC released an NPRM in December 2022 that sought comment on ways to streamline the satellite and earth station licensing process to permit more efficient action. Among other issues, the FCC proposed to make changes to the rule limiting unbuilt NGSO systems which currently prohibits applying for an additional NGSO-like system when a party has an application on file or a license for an unbuilt NGSO-like system in the same frequency bands. In looking to streamline the process, the FCC asked what types of satellite or earth station applications it should consider "straightforward" and generally sought comment on whether it should codify processing times.



Broadband Infrastructure, 5G and Government Funding



One of the big developments of 2022 was the introduction by the White House of the Internet for All initiative, stemming from the Infrastructure Investment and Jobs Act (IIJA). The initiative provides mandates and funding for government programs to bring broadband service and infrastructure to unserved and underserved areas, and develop more middle mile infrastructure and programs for broadband adoption.

Separately, NTIA is implementing the Public Wireless Supply Chain Innovation Fund (Innovation Fund), authorized by the National Defense Authorization Act (NDAA) and receiving \$1.5 billion in funding from the Chips and Science Act. Congress recognizes in the Innovation Fund the critical importance of expediting the development and deployment of Open Radio Access Networks (Open RAN) for 5G and beyond. These initiatives will transform broadband offerings and wireless networking for the future.

Internet for All

- Internet for All is the Biden administration's initiative to provide affordable high-speed internet nationwide. This \$65 billion appropriation is the largest broadband grant program in U.S. history. The initiative consists of various federal programs, including the Broadband Equity, Access and Deployment (BEAD) Program, the Enabling Middle Mile Broadband Infrastructure Program, the Affordable Connectivity Program, and the State Digital Equity Act Programs. The vast majority of the funding, \$42.5 billion, will go to the BEAD program. Each component of the Internet for All initiative is aimed at some combination of planning (e.g., data mapping and feasibility studies), developing infrastructure and encouraging broadband adoption (e.g., public access and skills training).
- Internet for All is unlikely to be changed in the 118th Congress. However, individual programs that fall under its umbrella and need additional funding could be at risk

if they get caught in a partisan appropriations battle. For instance, if the Affordable Connectivity Program were to run out of funding, it could face opposition from conservatives opposed to government subsidies. As states roll out their digital equity plans and accept applications for Digital Equity Act grants, we may see further criticism from Republicans who favor private-sector solutions.

Digital Discrimination Proceeding

In addition to providing historic funding to support
broadband deployment, the IIJA requires the FCC to take
action to prevent and eliminate digital discrimination.
Rules must be adopted no later than November 15, 2023,
"to facilitate equal access to broadband internet access
service." The Commission is required to consider "the
issues of technical and economic feasibility presented
by that objective." The Commission's rules must be
aimed at: "(1) preventing digital discrimination of access

- based on income level, race, ethnicity, color, religion or national origin; and (2) identifying necessary steps for the Commission to take to eliminate discrimination described in paragraph (1)."
- The FCC started a proceeding on the matter, chartered the Communications Equity and Diversity Council and formed a cross agency Task Force to Prevent Digital Discrimination.
- The FCC may take its mandate to eliminate digital discrimination as sweeping, akin to a civil rights law, rather than a narrower approach such as facilitating equal access. It is unclear if Anna Gomez, nominee to fill the empty fifth seat on the Commission, will be confirmed in time to participate in the vote by the November 15 statutory deadline. If Gomez has been confirmed, Commission Democrats will have more leeway to go a broader, potentially divisive, path. If the Commission remains 2-2, however, it will likely have to take a narrower approach in order to garner bipartisan support.

BEAD Program

- The big news this year is that NTIA has said it will allocate BEAD state grants no later than June 30, 2023. Here is a breakdown of the initial money:
 - All 50 states plus Washington, D.C. and Puerto
 Rico are eligible to receive a guaranteed minimum
 allocation of \$100 million to put towards broadband
 planning, deployment, mapping, equity, and
 adoption activities. Other U.S. territories, including
 Guam, the Northern Mariana Islands, the U.S. Virgin
 Islands and American Samoa, will receive minimum
 allocations of \$25 million each.

- Roughly \$4 billion will be allocated according to each state's percentage of unserved high-cost locations, with "high-cost" referring to locations where the cost of deploying broadband service is higher than the average cost of comparable construction in all unserved areas.
- Roughly \$32 billion will be allocated by each state's percentage of unserved locations.
- Where will BEAD broadband funding be focused? States have to focus on distributing money to unserved and underserved areas, and there are new definitions for these terms.
 - States will first prioritize broadband for unserved locations—areas where at least 80% of locations to be served lack access to 25 Mbps downstream and 3 Mbps upstream. These areas may have broadband already, but the service is so poor that they qualify as essentially unserved.
 - After ensuring broadband to unserved locations, states will prioritize underserved areas. In underserved areas at least 80% of locations to be served lack access to 100 Mbps downstream and 20 Mbps upstream (the new definition of broadband).
 - Thereafter, states can provide funding to connect eligible community anchor institutions, such as hospitals, schools, libraries, public housing organizations, community support organizations, etc.



Broadband Maps

- The FCC released pre-production drafts of new nationwide broadband maps on November 18, 2022, as required by the Broadband DATA Act. These new maps are critical to allocating the BEAD funding as they identify areas that are unserved and underserved with broadband. In connection with its mapping initiative, the FCC rolled out a new Broadband Data Collection (BDC) requirement to collect service availability data. Challenges to the availability data on the draft maps also are being accepted. The FCC will continue refining the maps, including with data obtained through BDC submissions.
- The FCC's new maps will be used to identify unserved and underserved areas. Those areas, in turn, will determine the amount of funding each state is eligible to receive. Once the amounts are released, states will submit their initial proposals and, if approved by NTIA, will receive the first 20% of their funds. A challenge process will follow, in which local governments and other entities can dispute states' characterizations of locations as unserved or underserved. Once the challenge process has concluded, states will submit their final proposals to NTIA and, upon approval, will receive the remainder of their funds. Summer 2023 appears to be the earliest possible date for the announcement of NTIA's approval of state grant programs.

Middle Mile Program

• The \$1 billion in funding for the Middle Mile program is very important to the success of local broadband deployments. A deficit in middle mile infrastructure has been a bottleneck to deploying broadband in rural areas for 15-20 years. Middle mile networks are the connections from national and regional internet backbones to local networks. In many areas, there isn't a middle mile network located close enough to connect last-mile infrastructure. Applications for the Middle Mile program were due by September 30, 2022. On October 4, 2022, NTIA announced preliminary data that show over 235 applications were submitted totaling more than \$5.5 billion in funding requests for the program. NTIA will evaluate the applications and make awards on a rolling basis.

As states take advantage of opportunities for developing middle mile infrastructure, they could consider the following:

 Coordinating with the department of transportation in their state to strategically leverage rights-of-way that will accelerate the path to better connect unserved and underserved areas.

- Identifying key anchor institutions, such as community colleges or public safety facilities, within the community that will directly connect people in need of broadband and benefit from the speed and savings from the network.
- Building a campaign to promote the importance of a residential broadband connection, while supporting those ISPs with innovative programs that allow new subscribers to easily take advantage of individual subscriber subsidies.

Additional IIJA Broadband Funding

The IIJA also provides additional funding for two existing broadband programs:

- \$2 billion for the Tribal Broadband Connectivity Program to expand broadband deployment and adoption on Tribal lands.
- Almost \$2 billion for the ReConnect Program administered by the Rural Utility Service at the Department of Agriculture.

Tribal Connectivity Grant Program

- The Tribal Connectivity Grant Program was announced in June 2021 with the purpose of giving money directly to tribes to develop broadband infrastructure and ensure that all tribe members have access to reliable, high-speed internet. NTIA administers the grants among Native American, Alaska Native and Native Hawaiian entities. The program prioritizes awarding grants that will fund connecting individuals, businesses and organizations on tribal land that are currently unserved or underserved. With an initial appropriation of \$1 billion and an additional \$2 billion in funding from the IIJA, the program now has a total of nearly \$3 billion in funding.
- NTIA awarded \$1.7 billion in Tribal Connectivity grants in 2022, over half of the \$3 billion allocated to the program. After the first Notice of Funding Opportunity (NOFO) issued by NTIA, over 300 applications were received and more than \$5 billion in funding was requested. Given the speed with which funding is being awarded and the gap between the demand for funds and the amount appropriated, further appropriations will likely be needed within the next several years. Further, the impending second NOFO and round of applications has yet to be announced, so we expect to see that soon.
- Also in October, 2022, NTIA created and hosted the first meeting of the Tribal Broadband Leaders Network (the

Network), a group representing more than 70 tribes. NTIA will consult with the Network for feedback regarding rollout and implementation of Tribal Connectivity grants. The Network is also intended to allow Tribal leaders to consult with one another as they roll out their respective broadband programs. NTIA will continue to consult with the Network as the funds are awarded, and the White House suggested that the Network's feedback would be taken into consideration as the second application period is opened.

Digital Equity Act Programs

- Finally, the IIJA funds \$2.75 billion for the Digital Equity Act, which creates two interconnected programs:
 - \$1.25 billion for the Digital Equity Competitiveness
 Grant Program to support federal digital equity and inclusion efforts.
 - \$1.5 billion for the State Digital Equity Capacity
 Grant Program for state-led efforts on digital equity
 and inclusion, which would be awarded based on
 state populations and demographics. The states
 are required to develop a state digital equity plan,
 approved by NTIA, in order to be eligible.
- The purpose of both Digital Equity Act programs is to ensure that all Americans have access to affordable fixed and wireless broadband service, as well as the equipment needed to fully participate in the modern economy and society. Digital equity includes: (i) Digital literacy training; (ii) Technical support; and (iii) Awareness of measures to ensure online privacy and cybersecurity.

Public Wireless Supply Chain Innovation Fund

- The NDAA and the CHIPS and Science Act established and funded the \$1.5 billion Innovation Fund to support the development of Open Radio Access Networks, or O RAN. The aim is to foster greater competition in the 5G equipment market, which is currently dominated by a handful of manufacturers. The Innovation Fund will disburse grants over a 10-year period to help small and medium-sized enterprises develop and bring to market the next generation of O RAN equipment. NTIA is charged with administering the program and, on January 27, 2023, began taking public comment on the implementation of the Innovation Fund.
- The first phase of Innovation Fund grants will be available for application on June 2, 2023. NTIA will make awards on a rolling basis with initial awards issued no later than August 8, 2023. The two specific focus areas for funding

are: (1) Expanding industry-accepted testing and evaluation activities to assess and facilitate the interoperability, performance and/or security of Open (standards-based) RAN; and (2) Developing new and/or improved testing methodologies to test, evaluate and validate the interoperability, performance and/or security of networks, including their component parts.

CHIPS ACT, Notice of Funding Opportunity

- On February 28, 2023, the U.S. Department of Commerce (Commerce) released details on the application process for projects to construct, expand or modernize commercial facilities for the production of leading-edge, current-generation and mature-node semiconductors. This includes both front-end wafer fabrication and back-end packaging. Awards will take the form of direct funding, federal loans and/or federal guarantees of thirdparty loans.
- Commerce will be releasing separate NOFOs for semiconductor materials and equipment facilities, and for research and development facilities. Direct funding for all three NOFOs is available in an amount up to \$38.22 billion and up to \$75 billion in direct loan or guaranteed principal amounts.
- Eligible Projects under Current NOFOs:
 - Leading-edge facilities that utilize the most advanced front-end fabrication processes that achieve the highest transistor and power performance. For logic, this currently includes facilities that produce semiconductors at high volumes using extreme ultraviolet (EUV) lithography tools. For memory, this currently includes facilities capable of producing 3D NAND flash chips with 200 layers and above, and/or dynamic randomaccess memory (DRAM) chips with a half-pitch of 13 nanometers (nm) and below.
 - Current-generation facilities that produce semiconductors that are not leading edge, up to 28 nm process technologies, and include logic, analog, radio frequency and mixed-signal devices.
 - New and expanded current-generation front-end fabrication facilities will deliver manufacturing capacity for current-generation semiconductor technologies, as well as new and specialty technologies such as devices based on compound semiconductor materials.

- Mature-node facilities that fabricate generations of (a) logic and analog chips that are not based on FinFET, post-FinFET transistor architectures or any other sub-28 nm transistor architectures; (b) discrete semiconductor devices such as diodes and transistors; (c) optoelectronics and optical semiconductors; and (d) sensors.
- Back-end production facilities for the assembly, testing or packaging of semiconductors that have completed the front-end fabrication process.
 This category includes advanced packaging of semiconductors.
- The Application Process and Timing
 - Statement of Interest (SOI). An SOI will be required for all applicants for all three NOFO (including semiconductor materials and equipment facilities and research and development facilities) and is currently open for submissions for all potential applicants. SOIs must be submitted at least 21 days prior to submitting a pre-application or full application, but will not be used for the purpose of award evaluations.

- Pre-Application (optional). For leading-edge facilities (as defined above), the optional preapplication process opened on March 31, 2023. For current-generation, mature-node and back-end production facilities, optional pre-applications are currently being accepted on a rolling basis. If a preapplication is submitted, a full application cannot be submitted until after an applicant receives written feedback from Commerce on its pre-application submission.
- Full Application. Full applications for leading edge facilities are being accepted on a rolling bases since March 31, 2023. Full applications for currentgeneration, mature-node and back-end production facilities will be accepted on a rolling basis starting June 26, 2023.



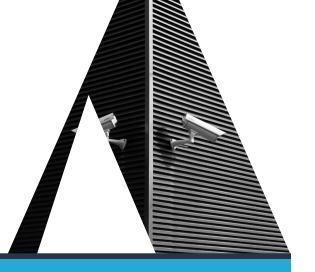
Expanding Universal Service Fund Contributions



The Universal Service Fund (USF), which is primarily funded by consumers through contributions to their telecommunications carriers on their monthly voice service bills, is facing a crisis as costs of funding Universal Service increase but USF revenues decline. The FCC may look at Big Tech to make up the deficit.

- Last August, the FCC released a report to Congress on the state of the USF recommending that Congress adopt legislation to clarify the Commission's authority to assess contributions on broadband internet access service providers, digital advertising, and other online edge services that depend on broadband networks (e.g., streaming services or social media), and allowing the FCC to make changes to the contributions methodology and base. Several proposals were introduced in both the House and Senate that, if enacted, would require additional study by the FCC to assess the need to expand its USF contribution base (see, e.g., S.2427; H.R.8575; S.3236; and H.R. 6314).
- We expect the Commission will take action in the near-to-mid-term to review and discuss the future of its existing USF subsidy programs. Proposals to expand the contribution base to include Big Tech would require legislative action by Congress and have triggered major lobbying efforts by companies seeking to avoid USF contribution.
- There are several lawsuits challenging the constitutionality of the USF contribution mechanism currently pending in the 6th and 11th Circuits. Petitioners argue that the "contribution" is usually passed onto consumers and is therefore effectively a tax. Petitioners contend that having the tax rate set by a private entity, the Universal Service Administrative Company, which administers the USF and determines the necessary contribution factor to support USF-funded programs, is an unconstitutional delegation of legislative power that may only reside with Congress. Petitioners further allege that the FCC's regulatory authority may not be delegated to a private entity. If a court determines that the USF contribution mechanism is unconstitutional or illegal, it could compel action by Congress to create alternative USF funding mechanisms, such as funding universal service programs through direct appropriations. In a victory for the program, the 5th Circuit dismissed one such challenge in March.

Securing our Networks, Protecting Consumer Privacy and Securing the Supply Chain



The FCC, NTIA and Congress have had an increasing focus on securing our communications networks, protecting consumer privacy and securing our communications supply chain.

- Chairwoman Rosenworcel has focused on national security matters since taking the helm at the Commission. In early 2021, she organized a National Security Policy Council composed of expert staff from throughout the FCC to coordinate with the Cybersecurity and Infrastructure Security Agency, NTIA and the National Security Council at the White House. The latest charter of the Commission's Communications Security, Reliability and Interoperability Council (CSRIC VIII), which makes recommendations to the Commission on issues of public safety and homeland security including 911, emergency alerts, and disaster and attack response, expires on June 29, 2023.
- Because "threats to network security are always evolving," the FCC voted on April 20 to require international telecommunications service providers, who hold Section 214 authorizations, to submit more information about their ownership structure to the FCC. In addition to the one-time collection of foreign ownership information when an entity applies for a Section 214 authorization, the FCC proposes to require holders to renew their authorization every 10 years and/or periodically update their ownership information, as well as other improvements to the security review.
- In November 2022, the FCC unanimously adopted new rules that prohibit the future authorization of radio frequency (RF) equipment produced by companies on the "Covered List" maintained by the FCC. FCC equipment authorization is a prerequisite to the marketing, importation, and operation of RF devices in the U.S.
 The rule change is intended to prevent devices from companies identified as national security threats from entering the U.S. market. Along with these rule changes,

- the FCC also sought comment on whether and how it could go about revoking existing authorizations for RF devices produced by companies on the Covered List. We expect this proposal to generate significant input from various stakeholders as to the potential implications and complications of the FCC taking this action.
- We expect to see the FCC ramp up efforts to address data breaches, particularly with regard to Customer Proprietary Network Information (CPNI). The FCC has increased enforcement action against telecommunications carriers for data privacy violations related to CPNI in recent years, including by issuing Notices of Apparent Liability against major carriers in 2020 for selling access to customer location information without taking reasonable measures to protect against unauthorized access to that information.
- More recently, Chairwoman Rosenworcel issued letters of inquiry to the top 15 mobile providers requesting information on their data retention and data privacy policies and general practices. The FCC signaled its continued interest in this topic by releasing a new NPRM that proposes to modify its data breach reporting requirements. These modifications, if adopted, would expand the definition of the term "breach" to include both intentional and accidental disclosures of CPNI, and impose additional reporting obligations on providers in the event that a breach occurs. The Commission also sought comment on its authority to regulate breaches involving other types of data beyond CPNI, including social security numbers and financial information.

Communications Merger Review



Notwithstanding macroeconomic and geopolitical factors that are causing market disruption, including the ongoing invasion of Ukraine, continuing supply chain issues, and inflation/rate hikes, there remains significant cash in the system to get deals done.

Potential and Proposed Mergers

- Evidence suggests there are buyers with an appetite for M&A. Pending and proposed mergers include:
 - Luxembourg-based satellite rivals, SES SA and Intelsat, are reported to be in merger discussions.
 - California-based Viasat and London-based Inmarsat have agreed to a \$7.3 billion merger. Following an investigation by the U.K.'s Competition and Marketing Authority (CMA) regarding concerns that the merger could harm competition in the inflight connectivity market, the CMA unconditionally approved the proposed transaction on May 9, 2023. On May 19, 2023, the FCC also approved the transaction. European Commission review is ongoing and is the last regulatory approval needed to close.
 - U.K. satellite firm OneWeb has agreed to be acquired by French rival Eutelsat.
 - U.S. regional TV station operator Tegna Inc. sought to be acquired by hedge fund Standard General.
 Opponents raised concerns about the proposed transaction's effect on newsroom staffing, union agreements and retransmission consent agreements at Tegna's stations, and in February 2023 the FCC's Media Bureau designated the deal for a hearing before an administrative law judge (ALJ), an action that can in and of itself doom a proposed transaction given the lengthy process associated with hearings before an ALJ. The transaction parties raised challenges to the Bureau's designation order

- both at the FCC and in the D.C. Circuit, which challenges were unsuccessful, and on May 22, 2023, Tegna announced that the merger agreement had been terminated following the expiration of the financing arrangements on which the proposed transaction was contingent.
- Rumors persist regarding the long-discussed potential merger between satellite TV operators DISH Network and DIRECTV. The companies attempted to merge in 2002, but the deal was rejected by federal regulators over concern that it would reduce video options. Such concerns are arguably significantly less valid today, given the fracturing of the video market and the numerous online video streaming applications now available.

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