United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued December 4, 2015 Decided June 14, 2016

No. 15-1063

UNITED STATES TELECOM ASSOCIATION, ET AL.,
PETITIONERS

v.

FEDERAL COMMUNICATIONS COMMISSION AND UNITED STATES OF AMERICA,
RESPONDENTS

INDEPENDENT TELEPHONE & TELECOMMUNICATIONS ALLIANCE, ET AL.,
INTERVENORS

Consolidated with 15-1078, 15-1086, 15-1090, 15-1091, 15-1092, 15-1095, 15-1099, 15-1117, 15-1128, 15-1151, 15-1164

On Petitions for Review of an Order of
the Federal Communications Commission

Peter D. Keisler argued the cause for petitioners United States Telecom Association, et al. With him on the joint briefs were *Michael K. Kellogg*, *Scott H. Angstreich*, *Miguel A. Estrada*, *Theodore B. Olson*, *Jonathan C. Bond*, *Stephen E.*

Coran, *S. Jenell Trigg*, *Jeffrey A. Lamken*, *David H. Solomon*, *Russell P. Hanser*, *Rick C. Chessen*, *Neal M. Goldberg*, *Michael S. Schooler*, *Matthew A. Brill*, *Matthew T. Murchison*, *Jonathan Y. Ellis*, *Helgi C. Walker*, *Michael R. Huston*, *Kathleen M. Sullivan*, *James P. Young*, *C. Frederick Beckner III*, *David L. Lawson*, *Gary L. Phillips*, and *Christopher M. Heimann*. *Dennis Corbett* and *Kellam M. Conover* entered appearances.

Brett A. Shumate argued the cause for petitioners Alamo Broadband Inc. and Daniel Berninger. With him on the briefs were *Andrew G. McBride*, *Eve Klindera Reed*, *Richard E. Wiley*, and *Bennett L. Ross*.

Earl W. Comstock argued the cause for petitioners Full Service Network, et al. With him on the briefs were *Robert J. Gastner* and *Michael A. Graziano.*

Bryan N. Tramont and *Craig E. Gilmore* were on the briefs for *amicus curiae* Mobile Future in support of petitioners CTIA-The Wireless Association and AT&T Inc.

Bryan N. Tramont was on the brief for *amicus curiae* Telecommunications Industry Association in support of petitioners. *Russell P. Hanser* entered an appearance.

William S. Consovoy, *Thomas R. McCarthy*, and *J. Michael Connolly* were on the brief for *amicus curiae* Center for Boundless Innovation in support of petitioners United States Telecom Association, National Cable & Telecommunications Association, CTIA-The Wireless Association, American Cable Association, Wireless Internet Service Providers Association, AT&T Inc., CenturyLink, Alamo Broadband Inc., and Daniel Berninger.

Thomas R. McCarthy, *William S. Consovoy*, and *J. Michael Connolly* were on the brief for *amici curiae* Members of Congress in support of petitioners United States Telecom Association, National Cable & Telecommunications Association, CTIA-The Wireless Association, American Cable Association, Wireless Internet Service Providers Association, AT&T Inc., Centurylink, Alamo Broadband Inc., and Daniel Berninger.

R. Benjamin Sperry was on the brief for *amici curiae* International Center for Law & Economics and Administrative Law Scholars in support of petitioners United States Telecom Association, National Cable & Telecommunications Association, CTIA-The Wireless Association, American Cable Association, Wireless Internet Service Providers Association, AT&T Inc., Centurylink, Alamo Broadband Inc., and Daniel Berninger.

David A. Balto was on the brief for *amicus curiae* Richard Bennett in support of petitioners United States Telecom Association, National Cable & Telecommunications Association, CTIA-The Wireless Association, AT&T Inc., American Cable Association, Centurylink, Wireless Internet Service Providers Association, Alamo Broadband Inc., and Daniel Berninger.

David A. Balto was on the brief for *amici curiae* Georgetown Center for Business and Public Policy and Thirteen Prominent Economists and Scholars in support of petitioners United States Telecom Association, National Cable & Telecommunications Association, CTIA-The Wireless Association, AT&T Inc., American Cable Association, Centurylink, Wireless Internet Service Providers Association, Alamo Broadband Inc., and Daniel Berninger.

John P. Elwood, *Kate Comerford Todd*, and *Steven P. Lehotsky* were on the brief for *amici curiae* The National Association of Manufacturers, et al. in support of petitioners.

Christopher S. Yoo was on the brief for *amicus curiae* Christopher S. Yoo in support of petitioners.

Cory L. Andrews was on the brief for *amici curiae* Former FCC Commissioner Harold Furchtgott-Roth and Washington Legal Foundation in support of petitioners. *Richard A. Samp* entered an appearance.

Hans Bader, *Sam Kazman*, and *Russell D. Lukas* were on the brief for *amicus curiae* Competitive Enterprise Institute in support of petitioners.

Kim M. Keenan and *David Honig* were on the brief for *amicus curiae* Multicultural Media, Telecom and Internet Council in support of petitioners.

Lawrence J. Spiwak was on the brief for *amicus curiae* Phoenix Center for Advanced Legal and Economic Public Policy Studies in support of petitioners.

William J. Kirsch was on the briefs for *amicus curiae* William J. Kirsch in support of petitioners.

C. Boyden Gray, *Adam J. White*, and *Adam R.F. Gustafson* were on the briefs for intervenors TechFreedom, et al. in support of United States Telecom Association, National Cable & Telecommunications Association, CTIA-The Wireless Association, American Cable Association, Wireless Internet Service Providers Association, AT&T Inc., CenturyLink, Alamo Broadband Inc., and Daniel Berninger. *Bradley A. Benbrook* entered an appearance.

Jonathan B. Sallet, General Counsel, Federal Communications Commission, and *Jacob M. Lewis*, Associate General Counsel, argued the causes for respondents. With them on the brief were *William J. Baer*, Assistant Attorney General, U.S. Department of Justice, *David I. Gelfand*, Deputy Assistant Attorney General, *Kristen C. Limarzi*, *Robert J. Wiggers*, *Nickolai G. Levin*, Attorneys, *David M. Gossett*, Deputy General Counsel, Federal Communications Commission, *James M. Carr*, *Matthew J. Dunne*, and *Scott M. Noveck*, Counsel. *Richard K. Welch*, Counsel, Federal Communications Commission, entered an appearance.

Kevin Russell and *Pantelis Michalopoulos* argued the cause for intervenors, Cogent Communications, Inc., et al. in support of respondents. With them on the joint brief were *Markham C. Erickson*, *Stephanie A. Roy*, *Andrew W. Guhr*, *Robert M. Cooper*, *Scott E. Gant*, *Hershel A. Wancjer*, *Christopher J. Wright*, *Scott Blake Harris*, *Russell M. Blau*, *Joshua M. Bobeck*, *Sarah J. Morris*, *Kevin S. Bankston*, *Seth D. Greenstein*, *Robert S. Schwartz*, *Marvin Ammori*, *Michael A. Cheah*, *Deepak Gupta*, *Erik Stallman*, *Matthew F. Wood*, *James Bradford Ramsay*, *Jennifer Murphy*, *Harold Jay Feld*, *David Bergmann*, and *Colleen L. Boothby*. *Hamish Hume* and *Patrick J. Whittle* entered appearances.

Michael K. Kellogg, *Scott H. Angstreich*, *Miguel A. Estrada*, *Theodore B. Olson*, *Jonathan C. Bond*, *Stephen E. Coran*, *S. Jenell Trigg*, *Jeffrey A. Lamken*, *Matthew A. Brill*, *Matthew T. Murchison*, *Jonathan Y. Ellis*, *Helgi C. Walker*, and *Michael R. Huston* were on the joint brief for intervenors AT&T Inc., et al. in support of respondents in case no. 15-1151.

Christopher Jon Sprigman was on the brief for *amici curiae* Members of Congress in support of respondents.

Gregory A. Beck was on the brief for First Amendment Scholars as *amici curiae* in support of respondents.

Michael J. Burstein was on the brief for Professors of Administrative Law as *amici curiae* in support of respondents.

Andrew Jay Schwartzman was on the brief for *amicus curiae* Tim Wu in support of respondents.

Andrew Jay Schwartzman was on the brief for *amicus curiae* Open Internet Civil Rights Coalition in support of respondents.

Joseph C. Gratz and *Alexandra H. Moss* were on the brief for *amici curiae* Automattic Inc., et al. in support of respondents.

Markham C. Erickson and *Andrew W. Guhr* were on the brief for *amicus curiae* Internet Association in support of respondents.

J. Carl Cecere and *David T. Goldberg* were on the brief for *amici curiae* Reed Hundt, et al. in support of respondents.

Anthony P. Schoenberg and *Deepak Gupta* were on the brief for *amici curiae* Engine Advocacy, et al. in support of respondents.

Anthony R. Segall was on the brief for *amici curiae* Writers Guild of America, et al. in support of respondents.

Allen Hammond was on the brief for *amici curiae* The Broadband Institute of California and The Media Alliance in support of respondents.

Corynne McSherry and *Arthur B. Spitzer* were on the brief for *amici curiae* Electronic Frontier Foundation, et al. in support of respondents.

Eric G. Null was on the brief for *amicus curiae* Consumer Union of the U.S., Inc. in support of respondents.

Alexandra Sternburg and *Henry Goldberg* were on the brief for *amici curiae* Computer & Communications Industry and Mozilla in support of respondents.

Krista L. Cox was on the brief for *amici curiae* American Library Association, et al. in support of respondents.

Phillip R. Malone and *Jeffrey T. Pearlman* were on the brief for *amici curiae* Sascha Meinrath, Zephyr Teachout and 45,707 Users of the Internet in support of respondents.

Before: TATEL and SRINIVASAN, *Circuit Judges*, and WILLIAMS, *Senior Circuit Judge*.

Opinion for the Court filed by *Circuit Judges* TATEL and SRINIVASAN.

Opinion concurring in part and dissenting in part filed by *Senior Circuit Judge* WILLIAMS.

TATEL and SRINIVASAN, *Circuit Judges*: For the third time in seven years, we confront an effort by the Federal Communications Commission to compel internet openness—commonly known as net neutrality—the principle that broadband providers must treat all internet traffic the same regardless of source. In our first decision, *Comcast Corp. v. FCC*, 600 F.3d 642 (D.C. Cir. 2010), we held that the Commission had failed to cite any statutory authority that would justify its order compelling a broadband provider to adhere to certain open internet practices. In response, relying on section 706 of the Telecommunications Act of 1996, the Commission issued an order imposing transparency, anti-blocking, and anti-discrimination requirements on broadband providers. In our second opinion, *Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014), we held that section 706 gives the Commission authority to enact open internet rules. We nonetheless vacated the anti-blocking and anti-discrimination provisions because the Commission had chosen to classify broadband service as an information service under the Communications Act of 1934, which expressly prohibits the Commission from applying common carrier regulations to such services. The Commission then promulgated the order at issue in this case—the 2015 Open Internet Order—in which it reclassified broadband service as a telecommunications service, subject to common carrier regulation under Title II of the Communications Act. The Commission also exercised its statutory authority to forbear from applying many of Title II's provisions to broadband service and promulgated five rules to promote internet openness. Three separate groups of petitioners, consisting primarily of broadband providers and their associations, challenge the Order, arguing that the Commission lacks statutory authority to reclassify broadband as a telecommunications service, that even if the Commission has such authority its decision was arbitrary and capricious, that the Commission impermissibly classified mobile broadband as a commercial mobile service, that the Commission impermissibly forbore from certain provisions of Title II, and that some of the rules violate the First Amendment. For the reasons set forth in this opinion, we deny the petitions for review.

I.

Called "one of the most significant technological advancements of the 20th century," Senate Committee on Commerce, Science and Transportation, Report on Online Personal Privacy Act, Sen. Rep. No. 107-240, at 7 (2002), the internet has four major participants: end users, broadband providers, backbone networks, and edge providers. Most end users connect to the internet through a broadband provider, which delivers high-speed internet access using technologies such as cable modem service, digital subscriber line (DSL) service, and fiber optics. *See* In re Protecting and Promoting the Open Internet ("2015 Open Internet Order" or "the Order"), 30 FCC Rcd. 5601, 5682–83 ¶ 188, 5751 ¶ 346. Broadband providers interconnect with backbone networks—"long-haul fiber-optic links and high-speed routers capable of transmitting vast amounts of data." *Verizon*, 740 F.3d at 628 (citing In re Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control, 20 FCC Rcd. 18,433, 18,493 ¶ 110 (2005)). Edge providers, like Netflix, Google, and Amazon, "provide content, services, and applications over the Internet." *Id.* at 629 (citing In re Preserving the Open Internet ("2010 Open Internet Order"), 25 FCC Rcd. 17,905, 17,910 ¶ 13 (2010)). To bring this all together, when an end user wishes to check last night's baseball scores on ESPN.com, his computer sends a signal to his broadband provider, which in turn transmits it across the backbone to ESPN's broadband provider, which transmits the signal to ESPN's computer. Having received the signal, ESPN's computer breaks the scores into packets of information which travel back across ESPN's broadband provider network to the backbone and then across the end user's broadband provider network to the end user, who will then know that the Nats won 5 to 3. In recent years, some edge providers, such as Netflix and Google, have begun connecting directly to broadband providers' networks, thus avoiding the need to interconnect with the backbone, 2015 Open Internet Order, 30 FCC Rcd. at 5610 ¶ 30, and some broadband providers, such as Comcast and AT&T, have begun developing their own backbone networks, *id.* at 5688 ¶ 198.

Proponents of internet openness "worry about the relationship between broadband providers and edge providers." *Verizon*, 740 F.3d at 629. "They fear that broadband providers might prevent their end-user subscribers from accessing certain edge providers altogether, or might degrade the quality of their end-user subscribers' access to certain edge providers, either as a means of favoring their own competing content or services or to enable them to collect fees from certain edge providers." *Id.* Thus, for example, "a broadband provider like Comcast might limit its end-user subscribers' ability to access the *New York Times* website if it wanted to spike traffic to its own news website, or it might degrade the quality of the connection to a search website like Bing if a competitor like Google paid for prioritized access." *Id.*

Understanding the issues raised by the Commission's current attempt to achieve internet openness requires familiarity with its past efforts to do so, as well as with the history of broadband regulation more generally.

A.

Much of the structure of the current regulatory scheme derives from rules the Commission established in its 1980 Computer II Order. The Computer II rules distinguished between "basic services" and "enhanced services." Basic services, such as telephone service, offered "pure transmission capability over a communications path that is virtually transparent in terms of its interaction with customer supplied information." In re Amendment of Section 64.702 of the Commission's Rules and Regulations ("Computer II"), 77 F.C.C. 2d 384, 420 ¶ 96 (1980). Enhanced services consisted of "any offering over the telecommunications network which is more than a basic transmission service," for example, one in which "computer processing applications are used to act on the content, code, protocol, and other aspects of the subscriber's information," such as voicemail. *Id.* at 420 ¶ 97. The rules subjected basic services, but not enhanced services, to common carrier treatment under Title II of the Communications Act. *Id.* at 387 ¶¶ 5–7. Among other things, Title II requires that carriers "furnish . . . communication service upon reasonable request," 47 U.S.C. § 201(a), engage in no "unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities, or services," *id.* § 202(a), and charge "just and reasonable" rates, *id.* § 201(b).

The Computer II rules also recognized a third category of services, "adjunct-to-basic" services: enhanced services, such as "speed dialing, call forwarding, [and] computer-provided directory assistance," that facilitated use of a basic service. *See* In re Implementation of the Non-Accounting Safeguards ("Non-Accounting Safeguards Order"), 11 FCC Rcd. 21,905, 21,958 ¶ 107 n.245 (1996). Although adjunct-to-basic services fell within the definition of enhanced services, the Commission nonetheless treated them as basic because of their role in facilitating basic services. *See* Computer II, 77 F.C.C. 2d at 421 ¶ 98 (explaining that the Commission would not treat as an enhanced service those services used to "facilitate [consumers'] use of traditional telephone services").

Fifteen years later, Congress, borrowing heavily from the Computer II framework, enacted the Telecommunications Act of 1996, which amended the Communications Act. The Telecommunications Act subjects a "telecommunications service," the successor to basic service, to common carrier regulation under Title II. 47 U.S.C. § 153(51) ("A telecommunications carrier shall be treated as a common carrier under [the Communications Act] only to the extent that it is engaged in providing telecommunications services."). By contrast, an "information service," the successor to an enhanced service, is not subject to Title II. The Telecommunications Act defines a "telecommunications service" as "the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used." *Id.* § 153(53). It defines telecommunications as "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." *Id.* § 153(50). An information service is an "offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications." *Id.* § 153(24). The appropriate regulatory treatment therefore turns on what services a provider offers to the public: if it offers telecommunications, that service is subject to Title II regulation.

Tracking the Commission's approach to adjunct-to-basic services, Congress also effectively created a third category for information services that facilitate use of a telecommunications service. The "telecommunications management exception" exempts from information service treatment—and thus treats as a telecommunications service—"any use [of an information service] for the management, control, or operation of a telecommunications system or the management of a telecommunications service." *Id.*

The Commission first applied this statutory framework to broadband in 1998 when it classified a portion of DSL service—broadband internet service furnished over telephone lines—as a telecommunications service. *See* In re Deployment of Wireline Services Offering Advanced Telecommunications Capability ("Advanced Services Order"), 13 FCC Rcd. 24,012, 24,014 ¶ 3, 24,029–30 ¶¶ 35–36 (1998). According to the Commission, the transmission component of DSL—the phone lines that carried the information—was a telecommunications service. *Id.* at 24,029–30 ¶¶ 35–36. The Commission classified the internet access delivered via the phone lines, however, as a separate offering of an information service. *Id.* at 24,030 ¶ 36. DSL providers that supplied the phone lines and the internet access therefore offered both a telecommunications service and an information service.

Four years later, the Commission took a different approach when it classified cable modem service—broadband service provided over cable lines—as solely an information service. In re Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities ("Cable Broadband Order"), 17 FCC Rcd. 4798, 4823 ¶¶ 39–40 (2002). In its 2002 Cable Broadband Order, the Commission acknowledged that when providing the information service component of broadband—which, according to the Commission, consisted of several distinct applications, including email and online newsgroups, *id.* at 4822–23 ¶ 38—cable broadband providers transmit information and thus use telecommunications. In the Commission's view, however, the transmission functioned as a component of a "single, integrated information service," rather than as a standalone offering. *Id.* at 4823 ¶ 38. The Commission therefore classified them together as an information service. *Id.* at 4822–23 ¶¶ 38–40.

The Supreme Court upheld the Commission's classification of cable modem service in *National Cable & Telecommunications Ass'n v. Brand X Internet Services*, 545 U.S. 967, 986 (2005). Applying the principles of statutory interpretation established in *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984), the Court explained that the key statutory term "offering" in the definition of "telecommunications service" is ambiguous. *Brand X*, 545 U.S. at 989. What a company offers, the Court reasoned, can refer to either the "single, finished product" or the product's individual components. *Id.* at 991. According to the Court, resolving that question in the context of broadband service requires the Commission to determine whether the information service and the telecommunications components "are functionally integrated . . . or functionally separate." *Id.* That question "turns not on the language of [the Communications Act], but on the factual particulars of how Internet technology works and how it is provided, questions *Chevron* leaves to the Commission to resolve in the first instance." *Id.* Examining the classification at *Chevron*'s second step—reasonableness—the Court deferred to the Commission's finding that "the high-speed transmission used to provide [the information service] is a functionally integrated component of that service," *id.* at 998, and upheld the order, *id.* at 1003. Three Justices dissented, arguing that cable broadband providers offered telecommunications in the form of the "physical connection" between their computers and end users' computers. *See id.* at 1009 (Scalia, J., dissenting).

Following *Brand X*, the Commission classified other types of broadband service, such as DSL and mobile broadband service, as integrated offerings of information services without a standalone offering of telecommunications. *See, e.g.*, In re Appropriate Regulatory Treatment for

Broadband Access to the Internet over Wireless Networks ("2007 Wireless Order"), 22 FCC Rcd. 5901, 5901–02 ¶ 1 (2007) (mobile broadband); In re Appropriate Framework for Broadband Access to the Internet over Wireline Facilities ("2005 Wireline Broadband Order"), 20 FCC Rcd. 14,853, 14,863–64 ¶ 14 (2005) (DSL).

B.

Although the Commission's classification decisions spared broadband providers from Title II common carrier obligations, the Commission made clear that it would nonetheless seek to preserve principles of internet openness. In the 2005 Wireline Broadband Order, which classified DSL as an integrated information service, the Commission announced that should it "see evidence that providers of telecommunications for Internet access or IP-enabled services are violating these principles," it would "not hesitate to take action to address that conduct." 2005 Wireline Broadband Order, 20 FCC Rcd. at 14,904 ¶ 96. Simultaneously, the Commission issued a policy statement signaling its intention to "preserve and promote the open and interconnected nature of the public Internet." In re Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 FCC Rcd. 14,986, 14,988 ¶ 4 (2005).

In 2007, the Commission found reason to act when Comcast customers accused the company of interfering with their ability to access certain applications. *Comcast*, 600 F.3d at 644. Because Comcast voluntarily adopted new practices to address the customers' concerns, the Commission "simply ordered [Comcast] to make a set of disclosures describing the details of its new approach and the company's progress toward implementing it." *Id.* at 645. As authority for that order, the Commission cited its section 4(i) "ancillary jurisdiction." 47 U.S.C. § 154(i) ("The Commission 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 re Formal Complaint of Free Press and Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications, 23 FCC Rcd. 13,028, 13,034–41 ¶¶ 14–22 (2008). In *Comcast*, we vacated that order because the Commission had failed to identify any grant of statutory authority to which the order was reasonably ancillary. 600 F.3d at 644.

C.

Following *Comcast*, the Commission issued a notice of inquiry, seeking comment on whether it should reclassify broadband as a telecommunications service. *See* In re Framework for Broadband Internet Service, 25 FCC Rcd. 7866, 7867 ¶ 2 (2010). Rather than reclassify broadband, however, the Commission adopted the 2010 Open Internet Order. *See* 25 FCC Rcd. 17,905. In that order, the Commission promulgated three rules: (1) a transparency rule, which required broadband providers to "disclose the network management practices, performance characteristics, and terms and conditions of their broadband services"; (2) an anti-blocking rule, which prohibited broadband providers from "block[ing] lawful content, applications, services, or non-harmful devices"; and (3) an anti-discrimination rule, which established that broadband providers "may not unreasonably discriminate in transmitting lawful network traffic." *Id.* at 17,906 ¶ 1. The transparency rule applied to both "fixed" broadband, the service a consumer uses on her laptop when she is at home, and "mobile" broadband, the service a consumer uses on her iPhone when she is riding the bus to work. *Id.* The anti-blocking rule applied in full only to fixed broadband, but the order prohibited mobile broadband providers from "block[ing] lawful websites, or block[ing] applications that compete with their voice or video telephony services." *Id.* The anti-discrimination rule applied only to fixed broadband. *Id.* According to the Commission, mobile broadband warranted different treatment because, among other things, "the mobile ecosystem is experiencing very rapid innovation and change," *id.* at 17,956 ¶ 94, and "most consumers have more choices for mobile broadband than for fixed," *id.* at 17,957 ¶ 95. In support of its rules, the Commission relied primarily on section 706 of the Telecommunications Act, which requires that the Commission "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans," 47 U.S.C. § 1302(a). 25 FCC Rcd. at 17,968–72 ¶¶ 117–23.

In *Verizon*, we upheld the Commission's conclusion that section 706 provides it authority to promulgate open internet rules. According to the Commission, such rules encourage broadband deployment because they "preserve and facilitate the 'virtuous circle' of innovation that has driven the explosive growth of the Internet." *Verizon*, 740 F.3d at 628. Under the Commission's "virtuous circle" theory, "Internet openness . . . spurs investment and development by edge providers, which leads to increased end-user demand for broadband access, which leads to increased investment in broadband network infrastructure and technologies, which in turns leads to further innovation and development by edge providers." *Id.* at 634. Reviewing the record, we concluded that the Commission's "finding that Internet openness fosters . . . edge-provider innovation . . . was . . . reasonable and grounded in substantial evidence" and that the Commission had "more than adequately supported and explained its conclusion that edge-provider innovation leads to the expansion and improvement of broadband infrastructure." *Id.* at 644.

We also determined that the Commission had "adequately supported and explained its conclusion that, absent rules such as those set forth in the [2010 Open Internet Order], broadband providers represent[ed] a threat to Internet openness and could act in ways that would ultimately inhibit the speed and extent of future broadband deployment." *Id.* at 645. For example, the Commission noted that "broadband providers like AT & T and Time Warner have acknowledged that online video aggregators such as Netflix and Hulu compete directly with their own core video subscription service," *id.* (internal quotation marks omitted), and that, even absent direct competition, "[b]roadband providers . . . have powerful incentives to accept fees from edge providers, either in return for excluding their competitors or for granting them prioritized access to end users," *id.* at 645–46. Importantly, moreover, the Commission found that "broadband providers have the technical . . . ability to impose such restrictions," noting that there was "little dispute that broadband providers have the technological ability to distinguish between and discriminate against certain types of Internet traffic." *Id.* at 646. The Commission also "convincingly detailed how broadband providers' [gatekeeper] position in the market gives them the economic power to restrict edge-provider traffic and charge for the services they furnish edge providers." *Id.* Although the providers' gatekeeper position would have brought them little benefit if end users could have easily switched providers, "we [saw] no basis for questioning the Commission's conclusion that end users [were] unlikely to react in this fashion." *Id.* The Commission "detailed . . . thoroughly . . . the costs of switching," and found that "many end users may have no option to switch, or at least face very limited options." *Id.* at 647.

Finally, we explained that although some record evidence supported Verizon's insistence that the order would have a detrimental effect on broadband deployment, other record evidence suggested the opposite. *Id.* at 649. The case was thus one where "'the available data do[] not settle a regulatory issue and the agency must then exercise its judgment in moving from the facts and probabilities on the record to a policy conclusion.'" *Id.* (alteration in original) (quoting *Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 52 (1983)). The Commission, we concluded, had "offered 'a rational connection between the facts found and the choice made.'" *Id.* (quoting *State Farm*, 463 U.S. at 52).

We nonetheless vacated the anti-blocking and anti-discrimination rules because they unlawfully subjected broadband providers to per se common carrier treatment. *Id.* at 655, 658–59. As we explained, the Communications Act provides that "[a] telecommunications carrier shall be treated as a common carrier . . . only to the extent that it is engaged in providing telecommunications services." *Id.* at 650 (quoting 47 U.S.C. § 153(51)). The Commission, however, had classified broadband not as a telecommunications service, but rather as an information service, exempt from common carrier regulation. *Id.* Because the anti-blocking and anti-discrimination rules required broadband providers to offer service indiscriminately—the common law test for a per se common carrier obligation—they ran afoul of the Communications Act. *See id.* at 651–52, 655, 658–59. We upheld the transparency rule, however, because it imposed no per se common carrier obligations on broadband providers. *Id.* at 659.

D.

A few months after our decision in *Verizon*, the Commission issued a notice of proposed rulemaking to "find the best approach to protecting and promoting Internet openness." In re Protecting and Promoting the Open Internet ("NPRM"), 29 FCC Rcd. 5561, 5563 ¶ 4 (2014). After receiving nearly four million comments, the Commission promulgated the order at issue in this case, the 2015 Open Internet Order. 30 FCC Rcd. at 5624 ¶ 74.

The Order consists of three components. First, the Commission reclassified both fixed and mobile "broadband Internet access service" as telecommunications services. *Id.* at 5743–44 ¶ 331. For purposes of the Order, the Commission defined "broadband Internet access service" as "a mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service." *Id.* at 5745–46 ¶ 336 (footnote omitted). Because the Commission concluded that the telecommunications service offered to end users necessarily includes the arrangements that broadband providers make with other networks to exchange traffic—commonly referred to as "interconnection arrangements"—the Commission determined that Title II would apply to those arrangements as well. *Id.* at 5686 ¶ 195. The Commission also reclassified mobile broadband service, which it had previously deemed a "private mobile service," exempt from common carrier regulation, as a "commercial mobile service," subject to such regulation. *Id.* at 5778 ¶ 388.

In the Order's second component, the Commission carried out its statutory mandate to forbear "from applying any regulation or any provision" of the Communications Act if it determines that the provision is unnecessary to ensure just and reasonable service or protect consumers and determines that forbearance is "consistent with the public interest." 47

U.S.C. § 160(a). Specifically, the Commission forbore from applying certain Title II provisions to broadband service, including section 251's mandatory unbundling requirements. 2015 Open Internet Order, 30 FCC Rcd. at 5804–05 ¶ 434, 5849–51 ¶ 513.

In the third portion of the Order, the Commission promulgated five open internet rules, which it applied to both fixed and mobile broadband service. The first three of the Commission's rules, which it called "bright-line rules," ban blocking, throttling, and paid prioritization. *Id.* at 5647 ¶ 110. The anti-blocking and anti-throttling rules prohibit broadband providers from blocking "lawful content, applications, services, or non-harmful devices" or throttling—degrading or impairing—access to the same. *Id.* at 5648 ¶ 112, 5651 ¶ 119. The anti-paid-prioritization rule bars broadband providers from "favor[ing] some traffic over other traffic . . . either (a) in exchange for consideration (monetary or otherwise) from a third party, or (b) to benefit an affiliated entity." *Id.* at 5653 ¶ 125. The fourth rule, known as the "General Conduct Rule," prohibits broadband providers from "unreasonably interfer[ing] with or unreasonably disadvantag[ing] (i) end users' ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice, or (ii) edge providers' ability to make lawful content, applications, services, or devices available to end users." *Id.* at 5660 ¶ 136. The Commission set forth a nonexhaustive list of factors to guide its application of the General Conduct Rule, which we discuss at greater length below. *See id.* at 5661–64 ¶¶ 138–45. Finally, the Commission adopted an enhanced transparency rule, which builds upon the transparency rule that it promulgated in its 2010 Open Internet Order and that we sustained in *Verizon*. *Id.* at 5669–82 ¶¶ 154–85.

Several groups of petitioners now challenge the Order: US Telecom Association, an association of service providers, along with several other providers and associations; Full Service Network, a service provider, joined by other such providers; and Alamo Broadband Inc., a service provider, joined by an edge provider, Daniel Berninger. TechFreedom, a think tank devoted to technology issues, along with a service provider and several individual investors and entrepreneurs, has intervened on the side of petitioners US Telecom and Alamo. Cogent, a service provider, joined by several edge providers, users, and organizations, has intervened on the side of the Commission.

In part II, we address petitioners' arguments that the Commission has no statutory authority to reclassify broadband as a telecommunications service and that, even if it possesses such authority, it acted arbitrarily and capriciously. In part III, we address challenges to the Commission's regulation of interconnection arrangements under Title II. In part IV, we consider arguments that the Commission lacks statutory authority to classify mobile broadband service as a "commercial mobile service" and that, in any event, its decision to do so was arbitrary and capricious. In part V, we assess the contention that the Commission impermissibly forbore from certain provisions of Title II. In part VI, we consider challenges to the open internet rules. And finally, in part VII, we evaluate the claim that some of the open internet rules run afoul of the First Amendment.

Before addressing these issues, we think it important to emphasize two fundamental principles governing our responsibility as a reviewing court. First, our "role in reviewing agency regulations . . . is a limited one." *Ass'n of American Railroads v. Interstate Commerce Commission*, 978 F.2d 737, 740 (D.C. Cir. 1992). Our job is to ensure that an agency has acted "within the limits of [Congress's] delegation" of authority, *Chevron*, 467 U.S. at 865, and that its action is not "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," 5 U.S.C. § 706(2)(A). Critically, we do not "inquire as to whether the agency's decision is wise as a policy matter; indeed, we are forbidden from substituting our judgment for that of the agency." *Ass'n of American Railroads*, 978 F.2d at 740 (alteration and internal quotation marks omitted). Nor do we inquire whether "some or many economists would disapprove of the [agency's] approach" because "we do not sit as a panel of referees on a professional economics journal, but as a panel of generalist judges obliged to defer to a reasonable judgment by an agency acting pursuant to congressionally delegated authority." *City of Los Angeles v. U.S. Department of Transportation*, 165 F.3d 972, 978 (D.C. Cir. 1999). Second, we "sit to resolve only legal questions presented and argued by the parties." *In re Cheney*, 334 F.3d 1096, 1108 (D.C. Cir. 2003), *vacated and remanded on other grounds sub nom. Cheney v. U.S. District Court for the District of Columbia*, 542 U.S. 367 (2004); *see also, e.g.*, *United Parcel Service, Inc. v. Mitchell*, 451 U.S. 56, 61 n.2 (1981) ("We decline to consider this argument since it was not raised by either of the parties here or below."). "It is not our duty" to consider "novel arguments a [party] could have made but did not." *United States v. Laureys*, 653 F.3d 27, 32 (D.C. Cir. 2011). "The premise of our adversarial system is that appellate courts do not sit as self-directed boards of legal inquiry and research, but essentially as arbiters of legal questions presented and argued by the parties before them." *Carducci v. Regan*, 714 F.2d 171, 177 (D.C. Cir. 1983). Departing from this rule would "deprive us in substantial measure of that assistance of counsel which the system assumes—a deficiency that we can perhaps supply by other means, but not without altering the character of our institution." *Id.* With these two critical principles in mind, we turn to the first issue in this case—the Commission's reclassification of broadband as a "telecommunications service."

II.

In the Open Internet Order, the Commission determined that broadband service satisfies the statutory definition of a telecommunications service: "the offering of telecommunications for a fee directly to the public." 47 U.S.C. § 153(53). In accordance with *Brand X*, the Commission arrived at this conclusion by examining consumer perception of what broadband providers offer. 2015 Open Internet Order, 30 FCC Rcd. at 5750 ¶ 342. In *Brand X*, the Supreme Court held that it was "consistent with the statute's terms" for the Commission to take into account "the end user's perspective" in classifying a service as "information" or "telecommunications." 545 U.S. at 993. Specifically, the Court held that the Commission had reasonably concluded that a provider supplies a telecommunications service when it makes a "'stand-alone' offering of telecommunications, *i.e.*, an offered service that, from the user's perspective, transmits messages unadulterated by computer processing." *Id.* at 989. In the Order, the Commission concluded that consumers perceive broadband service both as a standalone offering and as providing telecommunications. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5765 ¶ 365. These conclusions about consumer perception find extensive support in the record and together justify the Commission's decision to reclassify broadband as a telecommunications service.

With respect to its first conclusion—that consumers perceive broadband as a standalone offering—the Commission explained that broadband providers offer two separate types of services: "a broadband Internet access service," *id.* at 5750 ¶ 341, which provides "the ability to transmit data to and from Internet endpoints," *id.* at 5755 ¶ 350; and "'add-on' applications, content, and services that are generally information services," *id.* at 5750 ¶ 341, such as email and cloud-based storage programs, *id.* at 5773 ¶ 376. It found that from the consumer's perspective, "broadband Internet access service is today sufficiently independent of these information services that it is a separate offering." *Id.* at 5757–58 ¶ 356.

In support of its conclusion, the Commission pointed to record evidence demonstrating that consumers use broadband principally to access third-party content, not email and other add-on applications. "As more American households have gained access to broadband Internet access service," the Commission explained, "the market for Internet-based services provided by parties other than broadband Internet access providers has flourished." *Id.* at 5753 ¶ 347. Indeed, from 2003 to 2015, the number of websites increased from "approximately 36 million" to "an estimated 900 million." *Id.* By one estimate, two edge providers, Netflix and YouTube, "account for 50 percent of peak Internet download traffic in North America." *Id.* at 5754 ¶ 349.

That consumers focus on transmission to the exclusion of add-on applications is hardly controversial. Even the most limited examination of contemporary broadband usage reveals that consumers rely on the service primarily to access third-party content. The "typical consumer" purchases broadband to use "third-party apps such as Facebook, Netflix, YouTube, Twitter, or MLB.tv, or . . . to access any of thousands of websites." Computer & Communications Industry Association Amicus Br. 7. As one amicus succinctly explains, consumers today "pay telecommunications providers for access to the Internet, and *access* is exactly what they get. For *content*, they turn to [the] creative efforts . . . of others." Automattic Amicus Br. 1.

Indeed, given the tremendous impact third-party internet content has had on our society, it would be hard to deny its dominance in the broadband experience. Over the past two decades, this content has transformed nearly every aspect of our lives, from profound actions like choosing a leader, building a career, and falling in love to more quotidian ones like hailing a cab and watching a movie. The same assuredly cannot be said for broadband providers' own add-on applications.

The Commission found, moreover, that broadband consumers not only focus on the offering of transmission but often avoid using the broadband providers' add-on services altogether, choosing instead "to use their high-speed Internet connections to take advantage of competing services offered by third parties." 2015 Open Internet Order, 30 FCC Rcd. at 5753 ¶ 347. For instance, two third-party email services, Gmail and Yahoo! Mail, were "among the ten Internet sites most frequently visited during the week of January 17, 2015, with approximately 400 million and 350 million visits respectively." *Id.* at 5753 ¶ 348. Some "even advise consumers specifically *not* to use a broadband provider-based email address[] because a consumer cannot take that email address with them if he or she switches providers." *Id.*

Amici Members of Congress in Support of Respondents provide many more examples of third-party content that consumers use in lieu of broadband provider content, examples that will be abundantly familiar to most internet users. "[M]any consumers," they note, "have spurned the applications . . . offered by their broadband Internet access service provider, in favor of services and applications offered by third parties, such as . . . news and related content on nytimes.com or washingtonpost.com or Google News; home pages on Microsoft's MSN or Yahoo!'s 'my.yahoo'; video content on Netflix or YouTube or Hulu; streaming music on Spotify or Pandora or Apple Music; and on-line shopping on Amazon.com or Target.com, as well as many others in each category." Members of Congress for Resp'ts Amicus Br. 22.

In support of its second conclusion—that from the user's point of view, the standalone offering of broadband service provides telecommunications—the Commission explained that "[u]sers rely on broadband Internet access service to transmit 'information of the user's choosing,' 'between or among points specified by the user,'" without changing the form or content of that information. 2015 Open Internet Order, 30 FCC Rcd. at 5761 ¶ 361 (quoting 47 U.S.C. § 153(50)); *see also id.* at 5762–63 ¶ 362. The Commission grounded that determination in record evidence that "broadband Internet access service is marketed today primarily as a conduit for the transmission of data across the Internet." *Id.* at 5757 ¶ 354. Specifically, broadband providers focus their advertising on the speed of transmission. For example, the Commission quoted a Comcast ad offering "the consistently fast speeds you need, even during peak hours"; an RCN ad promising the ability "to upload and download in a flash"; and a Verizon ad claiming that "[w]hatever your life demands, there's a Verizon FiOS plan with the perfect upload/download speed for you." *Id.* at 5755 ¶ 351 (alteration in original) (internal quotation marks omitted). The Commission further observed that "fixed broadband providers use transmission speeds to classify tiers of service offerings and to distinguish their offerings from those of competitors." *Id.*

Those advertisements, moreover, "link higher transmission speeds and service reliability with enhanced access to the Internet at large—to any 'points' a user may wish to reach." *Id.* at 5756 ¶ 352. For example, RCN brags that its service is "ideal for watching Netflix," and Verizon touts its service as "work[ing] well for uploading and sharing videos on YouTube." *Id.* Based on the providers' emphasis on how useful their services are for accessing third-party content, the Commission found that end users view broadband service as a mechanism to transmit data of their own choosing to their desired destination—i.e., as a telecommunications service.

In concluding that broadband qualifies as a telecommunications service, the Commission explained that although broadband often relies on certain information services to transmit content to end users, these services "do not turn broadband Internet access service into a functionally integrated information service" because "they fall within the telecommunications system management exception." *Id.* at 5765 ¶ 365. The Commission focused on two such services. The first, DNS, routes end users who input the name of a website to its numerical IP address, allowing users to reach the website without having to remember its multidigit address. *Id.* at 5766 ¶ 366. The second, caching, refers to the process of storing copies of web content at network locations closer to users so that they can access it more quickly. *Id.* at 5770 ¶ 372. The Commission found that DNS and caching fit within the statute's telecommunications management exception because both services are "simply used to facilitate the transmission of information so that users can access other services." *Id.*

Petitioners assert numerous challenges to the Commission's decision to reclassify broadband. Finding that none has merit, we uphold the classification. Significantly, although our colleague believes that the Commission acted arbitrarily and capriciously when it reclassified broadband, he agrees that the Commission has statutory authority to classify broadband as a telecommunications service. Concurring & Dissenting Op. at 10.

A.

Before addressing petitioners' substantive challenges to the Commission's reclassification of broadband service, we must consider two procedural arguments, both offered by US Telecom.

First, US Telecom asserts that the Commission violated section 553 of the Administrative Procedure Act, which requires that an NPRM "include . . . either the terms or substance of the proposed rule or a description of the subjects and issues involved." 5 U.S.C. § 553(b)(3). According to US Telecom, the Commission violated this requirement because the NPRM proposed relying on section 706, not Title II; never explained that the Commission would justify reclassification based on consumer perception; and failed to signal that it would rely on the telecommunications management exception.

Under the APA, an NPRM must "provide sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully." *Honeywell International, Inc. v. EPA*, 372 F.3d 441, 445 (D.C. Cir. 2004) (internal quotation marks omitted). The final rule, however, "need not be the one proposed in the NPRM." *Agape Church, Inc. v. FCC*, 738 F.3d 397, 411 (D.C. Cir. 2013). Instead, it "need only be a 'logical outgrowth' of its notice." *Covad Communications Co. v. FCC*, 450 F.3d 528, 548 (D.C. Cir. 2006). An NPRM satisfies the logical outgrowth test if it "expressly ask[s] for comments on a particular issue or otherwise ma[kes] clear that the agency [is] contemplating a particular change." *CSX Transportation, Inc. v. Surface Transportation Board*, 584 F.3d 1076, 1081 (D.C. Cir. 2009).

The Commission's NPRM satisfied this standard. Although the NPRM did say that the Commission was considering relying on section 706, it also "expressly asked for comments" on whether the Commission should reclassify broadband: "[w]e seek comment on whether the Commission should rely on its authority under Title II of the Communications Act, including . . . whether we should revisit the Commission's classification of broadband Internet access service as an information service . . . ." NPRM, 29 FCC Rcd. at 5612 ¶ 148 (footnote omitted).

US Telecom's second complaint—that the NPRM failed to provide a meaningful opportunity to comment on the Commission's reliance on consumer perception—is equally without merit. In *Brand X*, the Supreme Court explained that classification under the Communications Act turns on "what the consumer perceives to be the . . . finished product." 545 U.S. at 990. Given this, and given that the NPRM expressly stated that the Commission was considering reclassifying broadband as a telecommunications service, interested parties could "comment meaningfully" on the possibility that the Commission would follow *Brand X* and look to consumer perception.

Brand X also provides the answer to US Telecom's complaint about the telecommunications management exception. In *Brand X*, the Court made clear that to reclassify broadband as a telecommunications service, the Commission would need to conclude that the telecommunications component of broadband was "functionally separate" from the information services component. *Id.* at 991. Moreover, the dissent expressly noted that the Commission could reach this conclusion in part by determining that certain information services fit within the telecommunications management exception. "[The] exception," the dissent explained, "would seem to apply to [DNS and caching]. DNS, in particular, is scarcely more than routing information . . . ." *Id.* at 1012–13 (Scalia, J., dissenting). As they could with consumer perception, therefore, interested parties could "comment meaningfully" on the Commission's use of the telecommunications management exception.

US Telecom next argues that the Commission violated the Regulatory Flexibility Act by failing to conduct an adequate Final Regulatory Flexibility Analysis regarding the effects of reclassification on small businesses. *See* 5 U.S.C. § 604(a). We lack jurisdiction to entertain this argument. Under the Communications Act, for a party to challenge an order based "on questions of fact or law upon which the Commission . . . has been afforded no opportunity to pass," a party must "petition for reconsideration." 47 U.S.C. § 405(a). Because the Commission included its Final Regulatory Flexibility Analysis in the Order, US Telecom had to file a petition for reconsideration if it wished to object to the analysis. US Telecom failed to do so.

B.

This brings us to petitioners' substantive challenges to reclassification. Specifically, they argue that the Commission lacks statutory authority to reclassify broadband as a telecommunications service. They also argue that, even if it has such authority, the Commission failed to adequately explain why it reclassified broadband from an information service to a telecommunications service. Finally, they contend that the Commission had to determine that broadband providers were common carriers under this court's *NARUC* test in order to reclassify.

1.

In addressing petitioners' first argument, we follow the Supreme Court's decision in *Brand X* and apply *Chevron*'s two-step analysis. *Brand X*, 545 U.S. at 981 ("[W]e apply the *Chevron* framework to the Commission's interpretation of the Communications Act."). At *Chevron* step one, we ask "whether Congress has directly spoken to the precise question at issue." *Chevron*, 467 U.S. at 842. Where "the intent of Congress is clear, that is the end of the matter; for [we], as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Id.* at 842–43. But if "the statute is silent or ambiguous with respect to the specific issue," we proceed to *Chevron* step two, where "the question for the court is whether the agency's answer is based on a permissible construction of the statute." *Id.* at 843.

As part of its challenge to the Commission's reclassification, US Telecom argues that broadband is unambiguously an information service, which would bar the Commission from classifying it as a telecommunications service. The Commission maintains, however, that *Brand X* established that the Communications Act is ambiguous with respect to the proper classification of broadband. As the Commission points out, the Court explained that whether a carrier provides a "telecommunications service" depends on whether it makes an "offering" of telecommunications. *Brand X*, 545 U.S. at 989; *see also* 47 U.S.C. § 153(53) ("The term 'telecommunications service' means the *offering* of telecommunications for a fee directly to the public . . . ." (emphasis added)). The term "offering," the Court held, is ambiguous. *Brand X*, 545 U.S. at 989.

Seeking to escape *Brand X*, US Telecom argues that the Court held only that the Commission could classify as a telecommunications service the "last mile" of transmission, which US Telecom defines as the span between the end user's computer and the broadband provider's computer. Here, however, the Commission classified "the *entire* broadband service from the end user all the way to edge providers" as a telecommunications service. US Telecom Pet'rs' Br. 44. According to US Telecom, "[t]he ambiguity addressed in *Brand X* thus has no bearing here because the Order goes beyond the scope of whatever ambiguity [the statute] contains." *Id.* (second alteration in original) (internal quotation marks omitted).

We have no need to resolve this dispute because, even if the *Brand X* decision was only about the last mile, the Court focused on the nature of the functions broadband providers offered to end users, not the length of the transmission pathway, in holding that the "offering" was ambiguous. As discussed earlier, the Commission adopted that approach in the Order in concluding that the term was ambiguous as to the classification question presented here: whether the "offering" of broadband internet access service can be considered a telecommunications service. In doing so, the Commission acted in accordance with the Court's instruction in *Brand X* that the proper classification of broadband turns "on the factual particulars of how Internet technology works and how it is provided, questions *Chevron* leaves to the Commission to resolve in the first instance." 545 U.S. at 991.

US Telecom makes several arguments in support of its contrary position that broadband is unambiguously an information service. None persuades us. First, US Telecom contends that the statute's text makes clear that broadband service "qualifies under *each* of the eight, independent parts of the [information service] definition," US Telecom Pet'rs' Br. 30—namely, that it "offer[s] . . . a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications," 47 U.S.C. § 153(24). Accordingly, US Telecom argues, broadband service "cannot fall within the mutually exclusive category of telecommunications service." US Telecom Pet'rs' Br. 30 (internal quotation marks and footnote omitted). But this argument ignores that under the statute's definition of "information service," such services are provided "via telecommunications." 47 U.S.C. § 153(24). This, then, brings us back to the basic question: do broadband providers make a standalone offering of telecommunications? US Telecom's argument fails to provide an unambiguous answer to that question.

US Telecom next claims that 47 U.S.C. § 230, enacted as part of the Communications Decency Act of 1996, a portion of the Telecommunications Act, "confirms that Congress understood Internet access to be an information service." US Telecom Pet'rs' Br. 33. Section 230(b) states that "[i]t is the policy of the United States . . . to promote the continued development of the Internet and other interactive computer services and other interactive media." 47 U.S.C. § 230(b)(1). In turn, section 230(f) defines an "interactive computer service" "[a]s used in this section" as "any information service, system, or access software provider that provides or enables computer access by multiple users to a computer server, including specifically a service or system that provides access to the Internet." *Id.* § 230(f)(2). According to US Telecom, this definition of "interactive computer service" makes clear that an information service "includes an Internet access service." US Telecom Pet'rs' Br. 33. As the Commission pointed out in the Order, however, it is "unlikely that Congress would attempt to settle the regulatory status of broadband Internet access services in such an oblique and indirect manner, especially given the opportunity to do so when it adopted the Telecommunications Act of 1996." 30 FCC Rcd. at 5777 ¶ 386; *see Whitman v. American Trucking Ass'ns*, 531 U.S. 457, 468 (2001) ("Congress . . . does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.").

Finally, US Telecom argues that "[t]he statutory context and history confirm the plain meaning of the statutory text." US Telecom Pet'rs' Br. 33. According to US Telecom, while the Computer II regime was in effect, the Commission classified "gateway services allowing access to information stored by third parties" as enhanced services, and Congress incorporated that classification into the Communications Act when it enacted the Telecommunications Act's information/telecommunications service dichotomy. *Id.* at 33–35. "Those 'gateways,'" US Telecom insists, "involved the same 'functions and services associated with Internet access.'" *Id.* at 34 (quoting In re Federal-State Joint Board on Universal Service, 13 FCC Rcd. 11,501 ¶ 75 (1998)). This argument suffers from a significant flaw: nothing in the Telecommunications Act suggests that Congress intended to freeze in place the Commission's existing classifications of various services. Indeed, such a reading of the Telecommunications Act would conflict with the Supreme Court's holding in *Brand X* that classification of broadband "turns . . . on the factual particulars of how Internet technology works and how it is provided, questions *Chevron* leaves to the Commission to resolve in the first instance." 545 U.S. at 991.

Amici Members of Congress in Support of Petitioners advance an additional argument that post-

Telecommunications Act legislative history "demonstrates that Congress never delegated to the Commission" authority to regulate broadband service as a telecommunications service. Members of Congress for Pet'rs Amicus Br. 4. In support, they point out that Congress has repeatedly tried and failed to enact open internet legislation, confirming, in their view, that the Commission lacks authority to issue open internet rules. But as the Supreme Court has made clear, courts do not regard Congress's "attention" to a matter subsequently resolved by an agency pursuant to statutory authority as "legislative history demonstrating a congressional construction of the meaning of the statute." *American Trucking Ass'ns v. Atchison, Topeka, & Santa Fe Railway Co.*, 387 U.S. 397, 416–17 (1967). Following this approach, we have rejected attempts to use legislative history to cabin an agency's statutory authority in the manner amici propose. For example, in *Advanced Micro Devices v. Civil Aeronautics Board*, petitioners challenged the Civil Aeronautics Board's rules adopting a more deferential approach to the regulation of international cargo rates. 742 F.2d 1520, 1527–28 (D.C. Cir. 1984). Petitioners asserted that the Board had no authority to promulgate the rules because "Congress deliberately eschewed the course now advanced by the [Board]," *id.* at 1541, when it tried and failed to enact legislation that would have put "limits on the Board's ratemaking functions regarding international cargo," *id.* at 1523. Rejecting petitioners' argument, we explained that "Congress's failure to enact legislation . . . d[oes] not preclude analogous rulemaking." *Id.* at 1542 (citing *American Trucking Ass'ns*, 387 U.S. at 416–18). In that case, as here, the relevant question was whether the agency had statutory authority to promulgate its regulations, and, as we explained, "congressional inaction or congressional action short of the enactment of positive law . . . is often entitled to no weight" in answering that question. *Id.* at 1541. Amici also argue that Congress's grants to the Commission of "narrow authority over circumscribed aspects of the Internet" indicate that the Commission lacks "the authority it claims here." Members of Congress for Pet'rs Amicus Br. 9. None of the statutes amici cite, however, have anything to do with the sort of common carrier regulations at issue here.

Full Service Network also urges us to resolve this case at *Chevron* step one, though it takes the opposite position of US Telecom. According to Full Service Network, broadband is unambiguously a telecommunications service because it functions primarily as a transmission service. That argument clearly fails in light of *Brand X*, which held that classification of broadband as an information service was permissible.

Brand X also requires that we reject intervenor TechFreedom's argument that the reclassification issue is controlled by the Supreme Court's decision in *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120 (2000). In that case, the Court held that "Congress ha[d] clearly precluded the FDA from asserting jurisdiction to regulate tobacco products." *Id.* at 126. The Court emphasized that the FDA had disclaimed any authority to regulate tobacco products for more than eighty years and that Congress had repeatedly legislated against this background. *Id.* at 143–59. Furthermore, the Court observed, if the FDA did have authority to regulate the tobacco industry, given its statutory obligations and its factual findings regarding the harmful effects of tobacco, the FDA would have had to ban tobacco products, a result clearly contrary to congressional intent. *See id.* at 135–43. If Congress sought to "delegate a decision of such economic and political significance" to the agency, the Court noted, it would have done so clearly. *Id.* at 160. Relying on *Brown & Williamson*, TechFreedom urges us to exercise "judicial skepticism of the [Commission's] power grab." TechFreedom Intervenor Br. 18.

TechFreedom ignores *Brand X*. As explained above, the Supreme Court expressly recognized that Congress, by leaving a statutory ambiguity, had delegated to the Commission the power to regulate broadband service. By contrast, in *Brown & Williamson* the Court held that Congress had "precluded" the FDA from regulating cigarettes.

This brings us, then, to petitioners' and intervenors' *Chevron* step two challenges.

First, US Telecom argues that the Commission's classification is unreasonable because many broadband providers offer information services, such as email, alongside internet access. According to US Telecom, because broadband providers still offer such services, consumers must perceive that those providers offer an information service. For its part, the Commission agreed that broadband providers offer email and other services, but simply concluded that "broadband Internet access service is today sufficiently independent of these information services that it is a separate offering." 2015 Open Internet Order, 30 FCC Rcd. at 5758 ¶ 356. US Telecom nowhere challenges that conclusion, and for good reason: the record contains extensive evidence that consumers perceive a standalone offering of transmission, separate from the offering of information services like email and cloud storage. *See supra* at 25–27.

US Telecom next contends that the Commission's reclassification of broadband was unreasonable because DNS and caching do not fall within the Communications Act's telecommunications management exception. As noted above, that exception excludes from the definition of an information service "any [service] for the management, control, or operation of a telecommunications system or the management of a telecommunications service." 47 U.S.C. § 153(24). The Commission found that "[w]hen offered as part of a broadband Internet access service, caching [and] DNS [are] simply used to facilitate the transmission of information so that users can access other services." 2015 Open Internet Order, 30 FCC Rcd. at 5770 ¶ 372. Challenging this interpretation, US Telecom argues that DNS and caching fall outside the exception because neither "manage[s] a telecommunications system or service," US Telecom Pet'rs' Br. 39, but are instead examples of the "many core information-service functions associated with Internet access," *id.* at 37. US Telecom claims that the Commission's use of the telecommunications management exception was also unreasonable because the Commission "contends that the *same functions*—DNS and caching—are used for telecommunications management when offered as part of Internet access, but are an *information service* when third-party content providers similarly offer them." *Id.* at 40. We are unpersuaded.

First, the Commission explained that the Communications Act's telecommunications management exception encompasses those services that would have qualified as "adjunct-to-basic" under the Computer II regime. 2015 Open Internet Order, 30 FCC Rcd. at 5766–67 ¶ 367 (citing Non-Accounting Safeguards Order, 11 FCC Rcd. at 21,958 ¶ 107). To qualify as an adjunct-to-basic service, a service had to be "'basic in purpose and use' in the sense that [it] facilitate[d] use of the network, and . . . [it] could 'not alter the fundamental character of the [telecommunications service].'" *Id.* at 5767 ¶ 367 (last alteration in original) (quoting In re North American Telecommunications Ass'n, 101 F.C.C. 2d 349, 359 ¶ 24, 360 ¶ 27 (1985)) (some internal quotation marks omitted). The Commission concluded that

DNS and caching satisfy this test because both services facilitate use of the network without altering the fundamental character of the telecommunications service. DNS does so by "allow[ing] more efficient use of the telecommunications network by facilitating accurate and efficient routing from the end user to the receiving party." *Id.* at 5768 ¶ 368. Caching qualifies because it "enabl[es] the user to obtain more rapid retrieval of information through the network." *Id.* at 5770 ¶ 372 (internal quotation marks omitted). US Telecom does not challenge the applicability of the adjunct-to-basic standard, nor does it give us any reason to believe that the Commission's application of that standard was unreasonable. *See GTE Service Corp. v. FCC*, 224 F.3d 768, 772 (D.C. Cir. 2000) ("[W]e will defer to the [Commission's] interpretation of [the Communications Act] if it is reasonable in light of the text, the structure, and the purpose of [the Communications Act].").

As to US Telecom's second point, the Commission justified treating third-party DNS and caching services differently on the ground that when such services are "provided on a stand-alone basis by entities other than the provider of Internet access service[,] . . . there would be no telecommunications service to which [the services are] adjunct." 2015 Open Internet Order, 30 FCC Rcd. at 5769 ¶ 370 n.1046. Again, US Telecom has given us no basis for questioning the reasonableness of this conclusion. Once a carrier uses a service that would ordinarily be an information service—such as DNS or caching—to manage a telecommunications service, that service no longer qualifies as an information service under the Communications Act. The same service, though, when unconnected to a telecommunications service, remains an information service.

Intervenor TechFreedom makes one additional *Chevron* step two argument. It contends that this case resembles *Utility Air Regulatory Group v. EPA*, in which the Supreme Court reviewed EPA regulations applying certain statutory programs governing air pollution to greenhouse gases. 134 S. Ct. 2427, 2437 (2014). EPA had "tailored" the programs to greenhouse gases by using different numerical thresholds for triggering application of the programs than those listed in the statute because using "the statutory thresholds would [have] radically expand[ed] those programs." *Id.* at 2437–38. Rejecting this approach, the Supreme Court held that because the statute's numerical thresholds were "unambiguous," EPA had no "authority to 'tailor' [them] to accommodate its greenhouse-gas-inclusive interpretation of the permitting triggers." *Id.* at 2446. "[T]he need to rewrite clear provisions of the statute," the Court declared, "should have alerted EPA that it had taken a wrong interpretive turn." *Id.* According to TechFreedom, the Commission's need to extensively forbear from Title II similarly reveals the "incoherence" of its decision. TechFreedom Intervenor Br. 21.

This case is nothing like *Utility Air*. Far from rewriting clear statutory language, the Commission followed an express statutory mandate requiring it to "forbear from applying any regulation or any provision" of the Communications Act if certain criteria are met. 47 U.S.C. § 160(a). Nothing in the Clean Air Act gave EPA any comparable authority. Accordingly, the Commission's extensive forbearance does not suggest that the Order is unreasonable.

2.

We next consider US Telecom's argument that the Commission failed to adequately explain why, having long classified broadband as an information service, it chose to reclassify it as a telecommunications service. Under the

APA, we must "determine whether the Commission's actions were 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.'" *Verizon*, 740 F.3d at 635 (quoting 5 U.S.C. § 706(2)(A)). As noted at the outset of our opinion, "[o]ur role in this regard is a limited one, and we will not substitute our judgment for that of the agency." *EarthLink, Inc. v. FCC*, 462 F.3d 1, 9 (D.C. Cir. 2006). Provided that the Commission has "articulate[d] . . . a 'rational connection between the facts found and the choice made,'" we will uphold its decision. *Verizon*, 740 F.3d at 643–44 (alteration in original) (quoting *State Farm*, 463 U.S. at 52) (some internal quotation marks omitted); *see also FERC v. Electric Power Supply Ass'n*, 136 S. Ct. 760, 784 (2016) ("Our important but limited role is to ensure that [the agency] engaged in reasoned decisionmaking—that it weighed competing views, selected [an approach] with adequate support in the record, and intelligibly explained the reasons for making that choice.").

As relevant here, "[t]he APA's requirement of reasoned decision-making ordinarily demands that an agency acknowledge and explain the reasons for a changed interpretation." *Verizon*, 740 F.3d at 636. "An agency may not, for example, depart from a prior policy *sub silentio* or simply disregard rules that are still on the books." *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). That said, although the agency "must show that there are good reasons for the new policy[,] . . . it need not demonstrate to a court's satisfaction that the reasons for the new policy are *better* than the reasons for the old one." *Id.*

US Telecom contends that the Commission lacked good reasons for reclassifying broadband because "as *Verizon* made clear, and as the [Commission] originally recognized, it could have adopted appropriate Open Internet rules based upon

§ 706 *without* reclassifying broadband." US Telecom Pet'rs' Br. 54 (internal citations omitted). But the Commission did not believe it could do so. Specifically, the Commission found it necessary to establish three bright-line rules, the anti-blocking, anti-throttling, and anti-paid-prioritization rules, 2015 Open Internet Order, 30 FCC Rcd. at 5607 ¶ 14, all of which impose per se common carrier obligations by requiring broadband providers to offer indiscriminate service to edge providers, *see Verizon*, 740 F.3d at 651–52. "[I]n light of *Verizon*," the Commission explained, "absent a classification of broadband providers as providing a 'telecommunications service,' the Commission could only rely on section 706 to put in place open Internet protections that steered clear of regulating broadband providers as common carriers *per se*." 2015 Open Internet Order, 30 FCC Rcd. at 5614 ¶ 42. This, in our view, represents a perfectly "good reason" for the Commission's change in position.

Raising an additional argument, US Telecom asserts that reclassification "will undermine" investment in broadband. US Telecom Pet'rs' Br. 54. The partial dissent agrees, pointing specifically to 47 U.S.C. § 207, which subjects Title II common carriers to private complaints. Concurring & Dissenting Op. at 24. The Commission, however, reached a different conclusion with respect to reclassification's impact on broadband investment. It found that "Internet traffic is expected to grow substantially in the coming years," driving investment, 2015 Open Internet Order, 30 FCC Rcd. at 5792 ¶ 412; that Title II regulation had not stifled investment when applied in other circumstances, *id.* at 5793–94 ¶ 414; and that "major infrastructure providers have indicated that they will in fact continue to invest under the [Title II] framework," *id.* at 5795 ¶ 416. In any event, the Commission found that the virtuous cycle—spurred by the open internet rules—provides an ample counterweight, in that any harmful effects on broadband investment "are far outweighed by positive effects on innovation and investment in other areas of the ecosystem that [its] core broadband polices will promote." *Id.* at 5791 ¶ 410. In reviewing these conclusions, we ask not whether they "are correct or are the ones that we would reach on our own, but only whether they are reasonable." *EarthLink*, 462 F.3d at 12 (internal quotation marks omitted). Moreover, "[a]n agency's predictive judgments about areas that are within the agency's field of discretion and expertise are entitled to *particularly deferential* review, as long as they are reasonable." *Id.* (internal quotation marks omitted). The Commission has satisfied this highly deferential standard. As to section 207, the Commission explained that "[a]lthough [it] appreciate[d] carriers' concerns that [its] reclassification decision could create investment-chilling regulatory burdens and uncertainty, [it] believe[d] that any effects are likely to be short term and will dissipate over time as the marketplace internalizes [the] Title II approach." 2015 Open Internet Order, 30 FCC Rcd. at 5791 ¶ 410. This too is precisely the kind of "predictive judgment[] . . . within the agency's field of discretion and expertise" that we do not second guess.

In a related argument, the partial dissent contends that the Commission lacked "good reasons" for reclassifying because its rules, particularly the General Conduct Rule, will decrease future investment in broadband by increasing regulatory uncertainty. Although US Telecom asserts in the introduction to its brief that the rules "will undermine future investment by large and small broadband providers," US Telecom Pet'rs' Br. 4, it provides no further elaboration on this point and never challenges *reclassification* on the ground that the rules will harm broadband investment. As we have said before, "[i]t is not enough merely to mention a possible argument in the most skeletal way, leaving the court to do counsel's work." *New York Rehabilitation Care Management, LLC v. NLRB*, 506

F.3d 1070, 1076 (D.C. Cir. 2007) (internal quotation marks omitted). Given that no party adequately raised this argument, we decline to consider it. *See In re Cheney*, 334 F.3d at 1108 (Reviewing courts "sit to resolve only legal questions presented and argued by the parties.").

Finally, the partial dissent disagrees with our conclusion that the Commission had "good reasons" to reclassify because, according to the partial dissent, it failed to make "a finding of market power or at least a consideration of competitive conditions." Concurring & Dissenting Op. at 10. But nothing in the statute requires the Commission to make such a finding. Under the Act, a service qualifies as a "telecommunications service" as long as it constitutes an "offering of telecommunications for a fee directly to the public." 47 U.S.C. § 153(53). As explained above, *supra* at 24, when interpreting this provision in *Brand X*, the Supreme Court held that classification of broadband turns on consumer perception, *see* 545 U.S. at 990 (explaining that classification depends on what "the consumer perceives to be the integrated finished product"). Nothing in *Brand X* suggests that an examination of market power or competition in the market is a prerequisite to classifying broadband. True, as the partial dissent notes, the Supreme Court cited the Commission's findings regarding the level of competition in the market for cable broadband as further support for the agency's decision to classify cable broadband as an information service. *See id.* at 1001 (describing the Commission's conclusion that market conditions supported taking a deregulatory approach to cable broadband service). But citing the Commission's economic findings as additional support for its approach is a far cry from *requiring* the Commission to find market power. The partial dissent also cites several Commission decisions in support of the proposition that the Commission has "for nearly four decades made the presence or prospect of competition the touchstone for refusal to apply Title II." Concurring & Dissenting Op. at 12. All of those cases, however, predate the 1996 Telecommunications Act, which established the statutory test that *Brand X* considered and that we apply here.

US Telecom raises a distinct arbitrary and capricious argument. It contends that the Commission needed to satisfy a heightened standard for justifying its reclassification. As US Telecom points out, the Supreme Court has held that "the APA requires an agency to provide more substantial justification when 'its new policy rests upon factual findings that contradict those which underlay its prior policy; or when its prior policy has engendered serious reliance interests that must be taken into account.'" *Perez v. Mortgage Bankers Ass'n*, 135 S. Ct. 1199, 1209 (2015) (quoting *Fox Television*, 556 U.S. at 515). "[I]t is not that further justification is demanded by the mere fact of policy change[,] but that a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy." *Fox Television*, 556 U.S. at 515–16. Put another way, "[i]t would be arbitrary and capricious to ignore such matters." *Id.* at 515.

US Telecom believes that the Commission failed to satisfy the heightened standard because it departed from factual findings it made regarding consumer perception in its 2002 Cable Broadband Order without pointing to any changes in how consumers actually view broadband. According to US Telecom, even in 2002, when the Commission classified broadband as an information service, consumers used broadband primarily as a means to access third-party content and broadband providers marketed their services based on speed. As we have explained, however, although in 2002 the Commission found that consumers perceived an integrated offering of an information service, in the present order the Commission cited ample record evidence supporting its current view that consumers perceive a standalone offering of transmission. *See supra* at 25–27. It thus satisfied the APA's requirement that an agency provide a "reasoned explanation . . . for disregarding facts and circumstances that underlay . . . the prior policy." *Fox Television*, 556 U.S. at 515–16. Nothing more is required.

Presenting an argument quite similar to US Telecom's, the partial dissent asserts that the Commission needed to do more than justify its current factual findings because, in this case, "the agency explicitly invoke[d] changed circumstances" as a basis for reclassifying broadband. Concurring & Dissenting Op. at 10. At least when an agency relies on a change in circumstances, the partial dissent reasons, "*Fox* requires us to examine whether there is really anything new." *Id.* at 4. But we need not decide whether there "is really anything new" because, as the partial dissent acknowledges, *id.*, the Commission concluded that changed factual circumstances were not critical to its classification decision: "[E]ven assuming, *arguendo*, that the facts regarding how [broadband service] is offered had not changed, in now applying the Act's definitions to these facts, we find that the provision of [broadband service] is best understood as a telecommunications service, as discussed [herein] . . . and disavow our prior interpretations to the extent they held otherwise." 2015 Open Internet Order, 30 FCC Rcd. at 5761 ¶ 360 n.993.

US Telecom next argues that the Commission "could not rationally abandon its prior policy without account[ing] for reliance interests that its prior policy engendered." US Telecom Pet'rs' Br. 51 (alteration in original) (internal quotation marks omitted). The Commission, however, did not fail to "account" for reliance interests. *Fox Television*, 556 U.S. at 515. Quite to the contrary, it expressly considered the claims of reliance and found that "the regulatory status of broadband Internet access service appears to have, at most, an indirect effect (along with many other factors) on investment." 2015 Open Internet Order, 30 FCC Rcd. at 5760 ¶ 360. The Commission explained that "the key drivers of investment are demand and competition," not the form of regulation. *Id.* at 5792 ¶ 412. Additionally, the Commission noted that its past regulatory treatment of broadband likely had a particularly small effect on investment because the regulatory status of broadband service was settled for only a short period of time. *Id.* at 5760–61 ¶ 360. As the Commission pointed out, just five years after *Brand X* upheld the Commission's classification of broadband as an information service, the Commission asked in a notice of inquiry whether it should reclassify broadband as a telecommunications service. *Id.* at 5760 ¶ 360.

The partial dissent finds the Commission's explanation insufficient and concludes that it failed "to make a serious assessment of [broadband providers'] reliance." Concurring & Dissenting Op. at 8. With regard to the Commission's conclusion that the regulatory status of broadband had only an indirect effect on investment, the partial dissent believes that this explanation is an "irrelevance" because "[t]he proposition that 'many other factors' affect investment is a truism" and thus the explanation "tells us little about how much" the prior classification "accounts for the current robust broadband infrastructure." *Id.* at 5. But the Commission did more than simply state that the regulatory classification of broadband was one of many relevant factors. It went on to explain why other factors, namely, increased demand for broadband and increased competition to provide it, were more significant drivers of broadband investment. 2015 Open Internet Order, 30 FCC Rcd. at 5760 ¶ 360 & n.986; *id.* at 5792 ¶ 412. We also disagree with the partial dissent's assertion that the Commission "misread[] the history of the classification of broadband" when it found that the unsettled regulatory treatment of broadband likely diminished the extent of investors' reliance on the prior classification. Concurring & Dissenting Op. at 7. As explained above, *supra* at 13–16, the Commission classified broadband for the first time in 1998, when it determined that the phone lines used in DSL service qualified as a telecommunications service. *See* Advanced Services Order, 13 FCC Rcd. at 24,014 ¶ 3, 24,029–30 ¶¶ 35–36. Then, in 2002 the Commission classified cable broadband service as an information service, *see* Cable Broadband Order, 17 FCC Rcd. at 4823 ¶¶ 39–40, a classification that was challenged and not definitively settled until 2005 when the Supreme Court decided *Brand X*. Only five years later, the Commission sought public comment on whether it should reverse course and classify broadband as a telecommunications service. *See* In re Framework for Broadband Internet Service, 25 FCC Rcd. at 7867 ¶ 2. Given this shifting regulatory treatment, it was not unreasonable for the Commission to conclude that broadband's particular classification was less important to investors than increased demand. Contrary to our colleague, "[w]e see no reason to second guess these factual determinations, since the court properly defers to policy determinations invoking the [agency's] expertise in evaluating complex market conditions." *Gas Transmission Northwest Corp. v. FERC*, 504 F.3d 1318, 1322 (D.C. Cir. 2007) (internal quotation marks and alteration omitted).

3.

Finally, we consider US Telecom's argument that the Commission could not reclassify broadband without first determining that broadband providers were common carriers under this court's *NARUC* test. *See National Ass'n of Regulatory Utility Commissioners v. FCC*, 533 F.2d 601 (D.C. Cir. 1976); *National Ass'n of Regulatory Utility Commissioners v. FCC*, 525 F.2d 630 (D.C. Cir. 1976). Under that test, "a carrier has to be regulated as a common carrier if it will make capacity available to the public indifferently or if the public interest requires common carrier operation." *Virgin Islands Telephone Corp. v. FCC*, 198 F.3d 921, 924 (D.C. Cir. 1999) (internal quotation marks omitted). As the Commission points out, however, this argument ignores that the Communications Act "provides that '[a] telecommunications carrier shall be treated as a common carrier . . . to the extent that it is engaged in providing telecommunications services,'" Resp'ts' Br. 79 (alteration and omission in original) (quoting 47 U.S.C. § 153(51)), and that "[t]he Act thus authorizes—indeed, requires—broadband providers to be treated as common carriers once they are found to offer telecommunications service," *id.* The Communications Act in turn defines a telecommunications service as "the offering of telecommunications for a fee directly to the public," 47 U.S.C. § 153(53), and the Commission found that broadband providers satisfy this statutory test: "[h]aving affirmatively determined that broadband Internet access service involves 'telecommunications,' we also find . . . that broadband Internet access service providers offer broadband Internet access service 'directly to the public.'" 2015 Open Internet Order, 30 FCC Rcd. at 5763 ¶ 363. Other than challenging the Commission's interpretation of the term "offering"—an argument which we have already rejected, *see supra* section II.B.1—US Telecom never questions the Commission's application of the statute's test for common carriage. Moreover, US Telecom cites no case, nor are we aware of one, holding that when the Commission invokes the statutory test for common carriage, it must also apply the *NARUC* test.

III.

Having thus rejected petitioners' arguments against reclassification, we turn to US Telecom's challenges to the Commission's regulation of interconnection arrangements—arrangements that broadband providers make with other networks to exchange traffic in order to ensure that their end users can access edge provider content anywhere on the internet. Broadband providers have such arrangements with backbone networks, as well as with certain edge providers, such as Netflix, that connect directly to broadband provider networks. In the Order, the Commission found that regulation of interconnection arrangements was necessary to ensure broadband providers do not "use terms of interconnection to disadvantage edge providers" or "prevent[] consumers from reaching the services and applications of their choosing." 2015 Open Internet Order, 30 FCC Rcd. at 5694 ¶ 205. Several commenters, the Commission pointed out, had emphasized "the potential for anticompetitive behavior on the part of broadband Internet access service providers that serve as gatekeepers to the edge providers . . . seeking to deliver Internet traffic to the broadband providers' end users." *Id.* at 5691 ¶ 200.

As authority for regulating interconnection arrangements, the Commission relied on Title II. "Broadband Internet access service," it explained, "involves the exchange of traffic between a . . . broadband provider and connecting networks," since "[t]he representation to retail customers that they will be able to reach 'all or substantially all Internet endpoints' necessarily includes the promise to make the interconnection arrangements necessary to allow that access." *Id.* at 5693–94 ¶ 204. Because the "same data is flowing between the end user and edge consumer," the end user necessarily experiences any discriminatory treatment of the edge provider, the Commission reasoned, making interconnection "simply derivative of" the service offered to end users. *Id.* at 5748–49 ¶ 339.

As a result, the Commission concluded that it could regulate interconnection arrangements under Title II as a component of broadband service. *Id.* at 5686 ¶ 195. It refrained, however, from applying the General Conduct Rule or any of the bright-line rules to interconnection arrangements because, given that it "lack[ed] [a] background in practices addressing Internet traffic exchange," it would be "premature to adopt prescriptive rules to address any problems that have arisen or may arise." *Id.* at 5692–93 ¶ 202. Rather, it explained that interconnection disputes would be evaluated on a case-by-case basis under sections 201, 202, and 208 of the Communications Act. *See id.* at 5686–87 ¶ 195. US Telecom presents two challenges to the Commission's decision to regulate interconnection arrangements under Title II, one procedural and one substantive. We reject both.

Echoing its arguments with respect to reclassification, US Telecom first claims that the NPRM provided inadequate notice that the Commission would regulate interconnection arrangements under Title II. As we noted above, an NPRM satisfies APA notice obligations when it "expressly ask[s] for comments on a particular issue or otherwise ma[kes] clear that the agency [is] contemplating a particular change." *CSX Transportation, Inc.*, 584 F.3d at 1081. The NPRM did just that. It expressly asked whether the Commission should apply its new rules—rules which it had signaled might depend upon Title II reclassification, NPRM, 29 FCC Rcd. at 5612 ¶ 148—to interconnection arrangements. The NPRM explained that the 2010 Open Internet Order had applied only "to a broadband provider's use of its own network . . . but [had] not appl[ied] . . . to the exchange of traffic between networks." NPRM, 29 FCC Rcd. at 5582 ¶ 59. Although the

Commission "tentatively conclude[d] that [it] should maintain this approach, . . . [the NPRM sought] comment on whether [the Commission] should change [its] conclusion." *Id.*

US Telecom insists that the NPRM was nonetheless inadequate because it nowhere suggested that the Commission might justify regulating interconnection arrangements under Title II on the basis that they are a component of the offering of telecommunications to end users. Under the APA, an NPRM provides adequate notice as long as it reveals the "substance of the proposed rule or a description of the subjects and issues involved." 5 U.S.C. § 553(b)(3). An NPRM does so if it "provide[s] sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully." *Honeywell International, Inc.*, 372 F.3d at 445 (internal quotation marks omitted). Again, the NPRM did just that. It asked whether the Commission should expand its reach beyond "a broadband provider's use of its own network" in order to "ensure that a broadband provider would not be able to evade our open Internet rules by engaging in traffic exchange practices." NPRM, 29 FCC Rcd. at 5582 ¶ 59. By focusing on the threat that broadband providers might block edge provider access to end users at an earlier point in the transmission pathway, the NPRM allowed interested parties to comment meaningfully on the possibility that the Commission would consider interconnection arrangements to be part of the offering of telecommunications to end users. Indeed, interested parties interpreted the NPRM as presenting just that possibility. To take one example, COMPTEL explained in its comments that "as feared by the Commission in its [NPRM], a [broadband] provider can simply evade the Commission's 2010 rules by moving its demand for an access fee upstream to the entry point to the [broadband provider's network]." Letter from Markham C. Erickson, Counsel to COMPTEL, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127, at 10 (Feb. 19, 2015). Because "[t]he interconnection point is simply a literal extension of the [broadband provider's network]," COMPTEL explained, "applying the same open Internet rules to the point of interconnection is a logical extension of the *2010 Open Internet Order* and clearly in line with the Commission's . . . proposal [in the NPRM]." *Id.*

US Telecom next argues that our decision in *Verizon* prevents the Commission from regulating interconnection arrangements under Title II without first classifying the arrangements as an offering of telecommunications to edge providers and backbone networks. As US Telecom points out, *Verizon* recognized that broadband, and thus interconnection arrangements, provides a service not only to end users but also to edge providers and backbone networks, namely, the ability to reach the broadband provider's users. *Verizon*, 740 F.3d at 653. According to US Telecom, *Verizon* therefore requires the Commission to classify this service to edge providers and backbone networks as a telecommunications service before it regulates interconnection arrangements under Title II.

US Telecom misreads *Verizon*. Although *Verizon* does recognize that broadband providers' delivery of broadband to end users also provides a service to edge providers, *id.*, it does not hold that the Commission must classify broadband as a telecommunications service in both directions before it can regulate the interconnection arrangements under Title II. The problem in *Verizon* was not that the Commission had misclassified the service between carriers and edge providers but that the Commission had failed to classify broadband service as a Title II service at all. The Commission overcame this problem in the Order by reclassifying broadband service—and the interconnection arrangements necessary to provide it—as a telecommunications service.

IV.

We now turn to the Commission's treatment of mobile broadband service, i.e., high-speed internet access for mobile devices such as smartphones and tablets. As explained above, the Commission permissibly found that mobile broadband—like all broadband—is a telecommunications service subject to common carrier regulation under Title II of the Communications Act. We address here a second set of provisions that pertain to the treatment of mobile broadband as common carriage.

Those provisions, found in Title III of the Communications Act, segregate "mobile services" into two, mutually exclusive categories: "commercial mobile services" and "private mobile services." 47 U.S.C. § 332(c). Providers of commercial mobile services—mobile services that are, among other things, available "to the public" or "a substantial portion of the public"—are subject to common carrier regulation. *Id.* § 332(c)(1), (d)(1). Providers of private mobile services, by contrast, "shall not . . . be treated as [] common carrier[s]." *Id.* § 332(c)(2).

In 2007, the Commission initially classified mobile broadband as a private mobile service. At the time, the Commission considered mobile broadband a "nascent" service. 2007 Wireless Order, 22 FCC Rcd. at 5922 ¶ 59. In the 2015 Order we now review, the Commission found that, "[i]n sharp contrast to 2007," the "mobile broadband marketplace has evolved such that hundreds of millions of consumers now use mobile broadband to access the Internet." 2015 Open Internet Order, 30 FCC Rcd. at 5785 ¶ 398. The Commission thus concluded that "today's mobile broadband

Internet access service, with hundreds of millions of subscribers," is not a "private" mobile service "that offer[s] users access to a discrete and limited set of endpoints." *Id.* at 5788–89 ¶ 404. Rather, "[g]iven the universal access provided today and in the foreseeable future by and to mobile broadband and its present and anticipated future penetration rates in the United States," the Commission decided to "classify[] mobile broadband Internet access as a commercial mobile service" subject to common carrier regulation. *Id.* at 5786 ¶ 399; *see generally id.* at 5778–88 ¶¶ 388–403.

Petitioners CTIA and AT&T ("mobile petitioners") challenge the Order's reclassification of mobile broadband as a commercial mobile service. In their view, mobile broadband is, and must be treated as, a private mobile service, and therefore cannot be subject to common carrier regulation. We reject mobile petitioners' arguments and find that the Commission's reclassification of mobile broadband as a commercial mobile service is reasonable and supported by the record.

A.

In assessing whether the Commission permissibly reclassified mobile broadband as a commercial rather than a private mobile service, we begin with an overview of the governing statutory and regulatory framework and of the Commission's application of that framework to mobile broadband. The statute defines "commercial mobile service" as "any mobile service . . . that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public, as specified by regulation by the Commission." 47 U.S.C. § 332(d)(1). The statute then defines "private mobile service" strictly in the negative, i.e., as "any mobile service . . . that is not a commercial mobile service or the functional equivalent of a commercial mobile service, as specified by regulation by the Commission." *Id.* § 332(d)(3).

Because private mobile service is a residual category defined in relation to commercial mobile service, the definition of commercial mobile service is the operative one for our purposes. There is no dispute that mobile broadband meets three of the four parts of the statutory definition of commercial mobile service. Mobile broadband is a "mobile service"; it "is provided for profit"; and it is available "to the public" or "a substantial portion of the public." *Id.* § 332(d)(1). In those respects, mobile broadband bears the hallmarks of a commercial—and hence not a private—mobile service. The sole remaining question is whether mobile broadband also "makes interconnected service available." *Id.*

The statute defines "interconnected service" as "service that is interconnected with the public switched network (as such terms are defined by regulation by the Commission)." *Id.* § 332(d)(2). Until the Order, the Commission in turn defined the "public switched network" as a set of *telephone* (cellular and landline) networks, with users' ten-digit telephone numbers making up the interconnected endpoints of the network. Specifically, "public switched network" meant "[a]ny common carrier switched network . . . that use[s] the North American Numbering Plan in connection with the provision of switched services." 47 C.F.R. § 20.3 (prior version effective through June 11, 2015). The "North American Numbering Plan" (NANP) is the ten-digit telephone numbering plan used in the United States. *See* In re Implementation of Sections 3(n) & 332 of the Communications Act ("1994 Order"), 9 FCC Rcd. 1411, 1437 ¶ 60 n.116 (1994).

In 1994, when the Commission initially established that definition of "public switched network," cellular telephone (i.e., mobile voice) service was the major mobile service; mobile broadband did not yet exist. Noting that the "purpose of the public switched network is to allow the public to send or receive messages to or from anywhere in the nation," the Commission observed that the NANP fulfilled that purpose by providing users with "ubiquitous access" to all other users. *Id.* at 1436–37 ¶¶ 59–60; *see* 2015 Open Internet Order, 30 FCC Rcd. at 5779 ¶ 391. Because mobile voice users could interconnect with the public switched network as then defined (the network of ten-digit telephone numbers), mobile voice was classified as a "commercial"—as opposed to "private"—"mobile service." 1994 Order, 9 FCC Rcd. at 1454–55 ¶ 102. It therefore was subject to common carrier treatment.

In 2007, the Commission first classified the then-emerging platform of mobile broadband. The Commission determined that mobile broadband users could not interconnect with the public switched network—defined at the time as the telephone network—because mobile broadband uses IP addresses, not telephone numbers. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5784 ¶ 397; 2007 Wireless Order, 22 FCC Rcd. at 5917–18 ¶ 45. Mobile broadband thus was not considered an "interconnected service" (or, therefore, a commercial mobile service), i.e., a "service that is interconnected with the public switched network" as that term was then "defined by . . . the Commission." 47 U.S.C. § 332(d)(2). Presumably in light of mobile broadband's "nascent" status at the time, 2007 Wireless Order, 22 FCC Rcd. at 5922 ¶ 59, the Commission gave no evident consideration to expanding its definition of the "public switched network" so as to encompass IP addresses in addition to telephone numbers.

In the 2015 Order, the Commission determined that it should expand its definition of the public switched network in that fashion to "reflect[] the current network landscape." 30 FCC Rcd. at 5779 ¶ 391; *see id.* at 5786 ¶ 399. The Commission took note of "evidence of the extensive changes that have occurred in the mobile marketplace." *Id.* at 5785–86 ¶ 398. For instance, as of the end of 2014, nearly three-quarters "of the entire U.S. age 13+ population was communicating with smart phones," and "by 2019," according to one forecast, "North America will have nearly 90% of its installed base[] converted to smart devices and connections." *Id.* at 5785 ¶ 398. In addition, the Commission noted that the "hundreds of millions of consumers" who already "use[d] mobile broadband" as of 2015 could "send or receive communications to or from anywhere in the nation, whether connected with other mobile broadband subscribers, fixed broadband subscribers, or the hundreds of millions of websites available to them over the Internet." *Id.* Those significant developments, the Commission found, "demonstrate[] the ubiquity and wide scale use of mobile broadband Internet access service today." *Id.* at 5786 ¶ 398.

The upshot is that, just as mobile voice (i.e., cellular telephone) service in 1994 provided "ubiquitous access" for members of the public to communicate with one another "from anywhere in the nation," mobile broadband by 2015 had come to provide the same sort of ubiquitous access. *Id.* at 5779–80 ¶ 391, 5785–86 ¶¶ 398–99. And the ubiquitous access characterizing both mobile voice and mobile broadband stands in marked contrast to "the private mobile service[s] of 1994, such as a private taxi dispatch service, services that offered users access to a discrete and limited set of endpoints." *Id.* at 5789 ¶ 404; *see* 1994 Order, 9 FCC Rcd. at 1414 ¶ 4. In recognition of the similarity of mobile broadband to mobile voice as a universal medium of communication for the general public—and the dissimilarity of mobile broadband to closed private networks such as those used by taxi companies or local police and fire departments—the Commission in 2015 sought to reclassify "today's broadly available mobile broadband" service as a commercial mobile service like mobile voice, rather than as a private mobile service like those employed by closed police or fire department networks. 2015 Open Internet Order, 30 FCC Rcd. at 5786 ¶ 399; *see* 1994 Order, 9 FCC Rcd. at 1414 ¶ 4. Aligning mobile broadband with mobile voice based on their affording similarly ubiquitous access, moreover, was in keeping with Congress's objective in establishing a defined category of "commercial mobile services" subject to common carrier treatment: to "creat[e] regulatory symmetry among similar mobile services." 1994 Order, 9 FCC Rcd. at 1413 ¶ 2; *see* 2015 Open Internet Order, 30 FCC Rcd. at 5786 ¶ 399; H.R. Rep. No. 103-111 at 259 (May 25, 1993) (noting that amendments to section 332 were intended to ensure "that services that provide equivalent mobile services are regulated in the same manner").

In the interest of achieving that regulatory symmetry and bringing mobile broadband into alignment with mobile voice as a commercial mobile service, the Commission updated its definition of the "public switched network" to include both users reachable by ten-digit phone numbers *and* users reachable by IP addresses. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5779 ¶ 391. The newly expanded definition of "public switched network" thus covers "the network that includes any common carrier switched network . . . that use[s] the North American Numbering Plan, *or public IP addresses*, in connection with the provision of switched services." *Id.* (emphasis added) (alteration in original); 47 C.F.R. § 20.3; *see Bell Atlantic Telephone Cos. v. FCC*, 206 F.3d 1, 4 (D.C. Cir. 2000) ("[T]he internet is a 'distributed packet-switched network.'"). And because the public switched network now includes IP addresses, the Commission found that mobile broadband qualifies as an "interconnected service," i.e., "service that is interconnected with the public switched network" as redefined. 47 U.S.C. § 332(d)(2); *see* 2015 Open Internet Order, 30 FCC Rcd. at 5779–80 ¶ 391, 5786 ¶ 399.

According to the Commission, then, mobile broadband meets all parts of the statutory definition of a "commercial mobile service" subject to common carrier regulation: it is a "mobile service . . . that is provided for profit and makes interconnected service available . . . to the public or . . . a substantial portion of the public." 47 U.S.C. § 332(d)(1). We find the Commission's reclassification of mobile broadband as a commercial mobile service under that definition to be reasonable and supported by record evidence demonstrating the "rapidly growing and virtually universal use of mobile broadband service" today. 2015 Open Internet Order, 30 FCC Rcd. at 5786 ¶ 399. In support of its reclassification decision, the Commission relied on, and recounted in detail, evidence of the explosive growth of mobile broadband service and its near universal use by the public. *See id.* at 5635–38 ¶¶ 88–92, 5779 ¶ 391, 5785–86 ¶¶ 398–99. In the face of that evidence, we see no basis for concluding that the Commission was required in 2015 to continue classifying mobile broadband as a "private" mobile service.

B.

Mobile petitioners offer two principal arguments in support of their position that mobile broadband nonetheless must be treated as a private mobile service rather than a commercial mobile service. First, they argue that "public switched network" is a term of art confined to the public switched *telephone* network. Second, they contend that, even if the Commission can expand the definition of public switched network to encompass users with IP addresses in addition to users with telephone numbers, mobile broadband still fails to qualify as an "interconnected service."

We reject both arguments. In mobile petitioners' view, mobile broadband (or any non-telephone mobile service)—no matter how universal, widespread, and essential a medium of communication for the public it may become—must *always* be considered a "private mobile service" and can *never* be considered a "commercial mobile service." Nothing in the statute compels attributing to Congress such a wooden, counterintuitive understanding of those categories. Rather, Congress expressly delegated to the Commission the authority to define—and hence necessarily to update and revise—those categories' key definitional components, "public switched network" and "interconnected service." 47 U.S.C. § 332(d); *see* 2015 Open Internet Order, 30 FCC Rcd. at 5783–84 ¶ 396.

"In this sort of case, there is no need to rely on the presumptive delegation to agencies of authority to define ambiguous or imprecise terms we apply under the *Chevron* doctrine, for the delegation of interpretative authority is express." *Women Involved in Farm Economics v. U.S. Department of Agriculture*, 876 F.2d 994, 1000–01 (D.C. Cir. 1989) (citation omitted); *see Rush University Medical Center v. Burwell*, 763 F.3d 754, 760 (7th Cir. 2014); 2015 Open Internet Order, 30 FCC Rcd. at 5783 ¶ 396 & n.1145. We find the Commission's exercise of that express definitional authority to be a reasoned and reasonable interpretation of the statute. We therefore sustain the Commission's reclassification of mobile broadband as a commercial mobile service against mobile petitioners' challenges. In light of that disposition, we need not address the Commission's alternative finding that mobile broadband, even if not a commercial mobile service, is still subject to common carrier treatment as the "functional equivalent" of a commercial mobile service. *See* 47 U.S.C. § 332(d)(3); 2015 Open Internet Order, 30 FCC Rcd. at 5788–90 ¶¶ 404–08.

1.

We first consider mobile petitioners' challenge to the Commission's updated definition of "public switched network." That term, as set out above, forms an integral component of the statutory definition of "commercial mobile service." Any such service must qualify as an "interconnected service," defined in the statute as "service that is interconnected with the public switched network." 47 U.S.C. § 332(d)(1)–(2). And Congress expressly gave the Commission the authority to define the public switched network, *id.* § 332(d)(2), which the Commission exercised by revising its definition in the Order. As we have explained, the Commission, relying on the growing universality of mobile broadband as a medium of communication for the public, expanded the definition of the public switched network so that it now uses IP addresses in addition to telephone numbers in connection with the provision of switched services.

Mobile petitioners argue that Congress intended "public switched network" to mean—forever—"public switched *telephone* network," and that the Commission thus lacks authority to expand the definition of the network to include endpoints other than telephone numbers. We are unpersuaded. Mobile petitioners' interpretation necessarily contemplates adding a critical word ("telephone") that Congress left out of the statute, an unpromising avenue for an argument about the meaning of the words Congress used. *See, e.g.*, *Adirondack Medical Center v. Sebelius*, 740 F.3d 692, 699–700 (D.C. Cir. 2014); *Public Citizen, Inc. v. Rubber Manufacturers Ass'n*, 533 F.3d 810, 816 (D.C. Cir. 2008). If

Congress meant for the phrase "public switched network" to carry the more restrictive meaning attributed to it by mobile petitioners, Congress could (and presumably would) have used the more limited—and more precise—term "public switched telephone network." Indeed, Congress used that precise formulation in another, later-enacted statute. *See* 18 U.S.C. § 1039(h)(4). Here, though, Congress elected to use the more general term "public switched network," which by its plain language can reach beyond telephone networks alone. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5783 ¶ 396.

Not only did Congress decline to invoke the term "public switched telephone network," but it also gave the Commission express authority to define the broader term it used instead. *See* 47 U.S.C. § 332(d)(2). Mobile petitioners conceive of "public switched network" as a term of art referring only to a network using telephone numbers. But if that were so, it is far from clear why Congress would have invited the Commission to define the term, rather than simply setting out its ostensibly fixed meaning in the statute. We instead agree with the Commission that, in granting the Commission general definitional authority, Congress "expected the notion [of the public switched network] to evolve and therefore charged the Commission with the continuing obligation to define it." 2015 Open Internet Order, 30 FCC Rcd. at 5783 ¶ 396.

It is of no moment that Congress, in another statute, used the term "public switched network" in a context indicating an intention to refer to the telephone network. *See* 47 U.S.C. § 1422(b)(1)(B)(ii) (referring to "the public Internet or the public switched network"). That statute, unlike section 332(d)(2), contains no grant of authority to the Commission to define the term. And it was enacted during the time when the

Commission's prior, longstanding regulatory definition of "public switched network" was in effect. Because the Commission at the time had defined the "public switched network" by reference to the telephone network, it is unsurprising that Congress would have assumed the term to have that meaning. But that assumption by no means indicates that Congress meant to divest the Commission of the definitional authority it had expressly granted the Commission in section 332(d)(2). We do not understand Congress's express grant of definitional authority to have come burdened with an unstated intention to compel the Commission to forever retain a definition confined to one specific type of "public switched network," i.e., the telephone network.

We therefore reject mobile petitioners' counter-textual argument that the statutory phrase "public switched network" must be understood as if Congress had used the phrase "public switched *telephone* network." Instead, the more general phrase "public switched network," by its terms, reaches any network that is both "public" and "switched." Mobile petitioners do not dispute that a network using both IP addresses and telephone numbers is "public" and "switched." As the Commission explained, its expansion of the network to include the use of IP addresses involves a "switched" network in that it "reflects the emergence and growth of packet *switched* Internet Protocol-based networks," and it also involves a "public" network in that "today's broadband Internet access networks use their own unique addressing identifier, IP addresses, to give users a universally recognized format for sending and receiving messages across the country and worldwide." 2015 Open Internet Order, 30 FCC Rcd. at 5779–80 ¶ 391 (emphasis added). The Commission thus permissibly considered a network using telephone numbers and IP addresses to be a "public switched network."

2.

Mobile petitioners next challenge the Commission's understanding of "interconnected service." That term, too, is an integral part of the definition of commercial mobile service. A commercial mobile service must "make[] interconnected service available . . . to the public or to . . . a substantial portion of the public." 47 U.S.C. § 332(d)(1). And "interconnected service" is "service that is interconnected with the public switched network." *Id.* § 332(d)(2). As with the phrase "public switched network," Congress gave the Commission express authority to define the term "interconnected service." *Id.*

The Commission has defined "interconnected service" as a service "that gives subscribers the capability to communicate to or receive communication from all other users on the public switched network." 47 C.F.R. § 20.3 (prior version effective through June 11, 2015); *see* 2015 Open Internet Order, 30 FCC Rcd. at 5779 ¶ 390. (We note that, in the 2015 Order, the Commission excised the word "all" from that definition. But as we explain below, the Commission considered that adjustment a purely conforming one with no substantive effect; we use the prior language to confirm that mobile broadband would qualify as interconnected service regardless of the Commission's adjustment.)

The question under the Commission's definition of "interconnected service," then, is whether mobile broadband "gives subscribers the capability to communicate to or receive communication from all other users on the public switched network" as redefined to encompass devices using both IP addresses and telephone numbers. 47 C.F.R. § 20.3 (prior version effective through June 11, 2015). The Commission reasonably found that mobile broadband gives users that "capability." *See* 2015 Open Internet Order, 30 FCC Rcd. at 5779–80 ¶¶ 390–91, 5785–86 ¶ 398, 5787 ¶ 401.

As an initial matter, there is no dispute about the "capability" of mobile broadband subscribers to "communicate to" other mobile broadband users. As the Commission explained in the Order—and as is undisputed—"mobile broadband . . . gives its users the capability to send and receive communications from all other users of the Internet." *Id.* at 5785 ¶ 398. The remaining issue for the Commission therefore concerned communications from mobile broadband users to telephone users: whether mobile broadband "gives subscribers the capability to communicate to" users via telephone numbers. 47 C.F.R. § 20.3. The Commission concluded that it does.

Specifically, the Commission determined that mobile broadband gives a subscriber the capability to communicate with a telephone user through the use of Voice over Internet Protocol (VoIP) applications. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5786–87 ¶¶ 400–01. (Skype, FaceTime, and Google Voice and Hangouts are popular examples of VoIP applications.) VoIP technology enables a mobile broadband user to send a voice call from her IP address to the recipient's telephone number. As a result, a mobile broadband user with a VoIP application on her tablet can call her friend's home phone number even if the caller's tablet lacks cellular voice access (and thus has no assigned telephone number). When she dials her friend's telephone number, the VoIP service sends the call from her tablet's IP address over the mobile broadband network to connect to the telephone network and, ultimately, to her friend's home phone. As such, mobile broadband, through VoIP, "gives subscribers the capability to communicate to" telephone users. 47 C.F.R. § 20.3.

In 2007, when the Commission first considered the proper classification of then-nascent mobile broadband, the Commission had a different understanding about the relationship between mobile broadband and VoIP. At that time, the Commission considered VoIP applications to be a separate, non-integrated service, such that VoIP's ability to connect internet and telephone users was not thought to render mobile broadband an interconnected service. *See* 2007 Wireless Order, 22 FCC Rcd. at 5917–18 ¶ 45. But when the Commission revisited the issue nearly a decade later in the Order we now review, the Commission found that its "previous determination about the relationship between mobile broadband Internet access and VoIP applications in the context of section 332 no longer accurately reflects the current technological landscape." 2015 Open Internet Order, 30 FCC Rcd. at 5787 ¶ 401. In particular, it concluded that VoIP applications now function as an integrated aspect of mobile broadband, rather than as a functionally distinct, separate service. The Commission therefore found that mobile broadband "today, through the use of VoIP, . . . gives subscribers the capability to communicate with all NANP endpoints." *Id.*

In reaching that conclusion, the Commission emphasized that "changes in the marketplace . . . highlight the convergence between mobile voice and data networks that has occurred since the Commission first addressed the classification of mobile broadband Internet access in 2007." *Id.* The record before the Commission substantially supports that understanding, as well as the associated finding that the relationship between VoIP applications and mobile broadband today significantly differs from that of 2007. For instance, in 2007, Apple's iPhone—the only device at the time even "resembling a modern smart phone"—had just been released and was available through only one mobile carrier. Letter from Harold Feld, et al., Public Knowledge to Marlene H. Dortch, FCC, at 10, GN Dkt. Nos. 14-28 & 10-127 (Dec. 19, 2014) ("Public Knowledge 12/19 Letter"). Commenters drew the Commission's attention to its recognition in 2007 that "mobile broadband available with a standard mobile phone of the time 'enable[d] users to access a limited selection of websites' and primarily offered extremely limited functionality such as email." *Id.* (citing 2007 Wireless Order, 22 FCC Rcd. at 5906 ¶ 11 & n.43). Because of those limitations, "[i]ndependent 'app stores' that allow for seamless downloading and integration of standalone applications [e.g., VoIP applications] into the customer's handset did not exist" in 2007. *Id*.

The Commission also noted that, today, mobile broadband is dramatically faster: the average network connection speed "exploded" in just three years, going from an average connection speed of 709 kilobytes per second (kbps) in 2010 to an average speed of 2,058 kbps for all devices and 9,942 kbps for smartphones by 2013. 2015 Open Internet Order, 30 FCC Rcd. at 5636 ¶ 89 & n.170. Partly as a result, access to the internet and applications on one's mobile phone is no longer confined to a small number of functions. Rather, "there has been substantial growth" even since 2010—far more so since 2007—"in the digital app economy . . . and VoIP" in particular. *Id.* at 5626 ¶ 76.

In addition, the Commission cited a letter which explained that, because VoIP applications (such as FaceTime on Apple devices and Google Hangouts on Android devices) now come "bundled with the primary operating systems available in every smartphone," they are no longer "rare and clearly functionally distinct" as they were in 2007. Letter from Michael Calabrese, Open Technology Institute, et al., to Marlene H. Dortch, FCC, at 6, GN Dkt. Nos. 14-28 & 10-127

(Dec. 11, 2014) ("OTI 12/11 Letter"); *see* 2015 Open Internet Order, 30 FCC Rcd. at 5787 ¶ 401 n.1168. Any distinction between calls made with a device's "native" dialing capacity and those made through VoIP thus has become "increasingly inapt." OTI 12/11 Letter at 5; *see* Public Knowledge 12/19 Letter at 10.

The Commission accordingly found that "[t]oday, mobile VoIP . . . is among the increasing number of ways in which users communicate indiscriminately between NANP and IP endpoints on the public switched network." 2015 Open Internet Order, 30 FCC Rcd. at 5787 ¶ 401; *see* Resp'ts' Br. 99 (relying on that finding). In light of those developments, the Commission reasonably determined that mobile broadband today is interconnected with the newly defined public switched network. It "gives subscribers the capability to communicate to . . . other users on the public switched network," whether the recipient has an IP address, telephone number, or both. 47 C.F.R. § 20.3; *see* 2015 Open Internet Order, 30 FCC Rcd. at 5779–80 ¶ 391, 5785–87 ¶¶ 398–401.

In contending otherwise, mobile petitioners argue that mobile broadband *itself* is not "interconnected with the public switched network," 47 U.S.C. § 332(d)(2), because mobile broadband does not allow subscribers to interconnect with telephone users unless subscribers take the step of using a VoIP application. Nothing in the statute, however, compels the Commission to draw a talismanic (and elusive) distinction between (i) mobile broadband alone enabling a connection, and (ii) mobile broadband enabling a connection through use of an adjunct application such as VoIP. To the contrary, the statute grants the Commission express authority to define "interconnected service." 47 U.S.C. § 332(d)(2). And the Commission permissibly exercised that authority to determine that—in light of the increased availability, use, and technological and functional integration of VoIP applications—mobile broadband should now be considered interconnected with the telephone network. Indeed, even for communications from one mobile broadband user to another, mobile broadband generally works in conjunction with a native or third-party application of some sort (e.g., an email application such as Gmail or a messaging application such as WhatsApp) to facilitate transmission of users' messages. The conjunction of mobile broadband and VoIP to enable IP-to-telephone communications is no different.

That is especially apparent in light of the Commission's regulatory definition of "interconnected service." The regulation calls for assessing whether mobile broadband "gives subscribers the *capability* to communicate to" telephone users. 47 C.F.R. § 20.3 (emphasis added). Mobile petitioners do not challenge the Commission's understanding that a "capability to communicate" suffices to establish an interconnected service, and we see no ground for rejecting the Commission's conclusion that mobile broadband gives subscribers the "capability to communicate to" telephone users through VoIP. And although the regulation also references "receiv[ing] communications from" others in the network, *id.*, mobile petitioners also do not challenge the Commission's understanding that the capability *either* to "communicate to *or* receive communication from" is enough, *id.* (emphasis added). Consequently, the capability of mobile broadband users "to communicate to" telephone users via VoIP suffices to render the network—and, most importantly, its users—"interconnected."

Mobile petitioners note what they perceive to be a separate problem associated with communications running in the reverse direction (i.e., the capability of mobile broadband users to "receive communications from" telephone users).

That ostensible problem pertains, not to mobile *broadband* service, but instead to mobile *voice* service. In particular, mobile petitioners argue that, if the public switched network can be defined to use both IP addresses and telephone numbers, mobile voice service would no longer qualify as an "interconnected service" because telephone users cannot establish a connection to IP users. The result, mobile petitioners submit, is that the one network everyone agrees was intended to qualify as a commercial mobile service—mobile voice—would necessarily become a private mobile service. We are unconvinced.

As a starting point, the Commission's Order takes up the proper classification of mobile broadband, not mobile voice. The Commission thus did not conduct a formal assessment of whether mobile voice would qualify as an interconnected service under the revised definition of public switched network. But were the Commission to address that issue in a future proceeding, it presumably would note that, regardless of whether mobile voice users can "communicate to" mobile broadband users from their telephones, they can "receive communication from" mobile broadband users through VoIP for the reasons already explained. 47 C.F.R. § 20.3. That capability would suffice to render mobile voice an "interconnected service" under the Commission's regulatory definition of that term. *Id.*

Moreover, insofar as the Commission may be asked in the future to formally address whether mobile voice qualifies as an interconnected service, the Commission could assess at that time whether there exists the "capability" of communications in the reverse direction, i.e., the capability of mobile voice users to "communicate to" IP users from their telephones. *Id.* We note that the Commission had information before it in this proceeding indicating that a mobile broadband (or other computer) user can employ a service enabling her to receive telephone calls to her IP address. *See* Public Knowledge 12/19 Letter at 11 n.50 (describing a television commercial demonstrating Apple's Continuity service, which enables an iPhone 6 user with mobile voice service to call an iPad user with mobile broadband service); Use Continuity to connect your iPhone, iPad, iPod touch, and Mac, https://support.apple.com/en-us /HT204681 (last visited June 14, 2016) ("With Continuity, you can make and receive cellular phone calls from your iPad, iPod touch, or Mac when your iPhone is on the same Wi-Fi network."); *see also* Receive Google Voice calls with Hangouts, https://support.google.com/hangouts/answer /6079064 (last visited June 14, 2016) (describing how the "Google Voice" and "Hangouts" services allow mobile broadband users to receive calls from telephone users); What is a Skype Number?, https://support.skype.com/en/faq/FA331 /what-is-a-skype-number (last visited June 14, 2016) (describing how a "Skype Number" enables mobile broadband users to receive calls from telephone users).

For those reasons, we reject mobile petitioners' argument that the Commission's classification of mobile broadband as an "interconnected service" is impermissible because of its supposed implications for the classification of mobile voice. Rather, the Commission permissibly found that mobile broadband now qualifies as interconnected because it gives subscribers the ability to communicate to all users of the newly defined public switched network. In the words of the Commission: "mobile broadband Internet access service today, through the use of VoIP, messaging, and similar applications, effectively gives subscribers the capability to communicate with all NANP endpoints as well as with all users of the Internet." 2015 Open Internet Order, 30 FCC Rcd. at 5787 ¶ 401.

Finally, the finding that mobile broadband today "gives subscribers the capability to communicate with *all* NANP endpoints," *id.* (emphasis added), confirms the immateriality of the Commission's removal of the word "all" from its regulatory definition of "interconnected service." As mentioned earlier, that regulation, until the Order, defined interconnected service as a service "that gives subscribers the capability to communicate to or receive communication from *all* other users on the public switched network." 47 C.F.R. § 20.3 (prior version effective through June 11, 2015) (emphasis added). In the updated definition, the Commission left that language unchanged except that it removed the word "all." *See* 47 C.F.R. § 20.3 (current version effective June 12, 2015). Mobile petitioners attach great significance to the removal of "all," assuming that the change enabled the Commission to find mobile broadband to be an "interconnected service" even though, according to mobile petitioners, broadband users have no capability to communicate with telephone users. By excising the word "all," mobile petitioners assert, the Commission could find that mobile broadband is an interconnected service based on the ability of users to communicate only with *some* in the network (fellow broadband users) notwithstanding the lack of any capability to communicate with others in the network (telephone users). Absent the latter ability, mobile petitioners argue, mobile broadband cannot actually be considered "interconnected" with the telephone network.

Mobile petitioners' argument rests on a mistaken understanding of the Commission's actions. The Commission did not rest its finding that mobile broadband is an "interconnected service" solely on an assumption that it would be enough for broadband subscribers to be able to communicate with *some* in the network (only fellow IP users), even if there were no capability at all to communicate with others (telephone users). To the contrary, the Commission, as explained, found that mobile broadband—through VoIP—"gives subscribers the ability to communicate with *all* NANP endpoints as well as with *all* users of the Internet." 2015 Open Internet Order, 30 FCC Rcd. at 5787 ¶ 401 (emphasis added). Once we accept that finding, as we have, we need not consider petitioners' argument challenging what the Commission characterizes as merely a "conforming" change with no independent substantive effect. *See id.* at 5787–88 ¶ 402 & n.1175. (Specifically, the Commission notes that the removal of "all" was meant to reiterate a carve-out that has always existed in the regulation: another part of the definition of "interconnected service" establishes that a service qualifies as "interconnected" even if it "restricts access in certain limited ways," such as a service that blocks access to 900 numbers. *Id.* (quoting 47 C.F.R. § 20.3); *id.* at 5787 ¶ 402 n.1172.)

In the end, then, the removal of "all" is of no consequence to the Commission's rationale for finding that mobile broadband constitutes an "interconnected service." Mobile broadband, the Commission reasonably concluded, gives users the capability to communicate to *all* other users in the newly defined public switched network, whether users with an IP address, users with a telephone number, or users with both. *See id.* at 5787 ¶ 401. Because mobile broadband thus can be considered an interconnected service, the Commission acted permissibly in reclassifying mobile broadband as a commercial mobile service subject to common carrier regulation, rather than a private mobile service immune from such regulation.

3.

Mobile petitioners also argue that the Commission has failed to "point to any change in the technology or functionality of mobile broadband" sufficient to justify reclassifying mobile broadband as a commercial mobile service. US Telecom Pet'rs' Br. 68. This argument fares no better in the mobile context than it did in the Title II reclassification context. Even if the Commission had not demonstrated changed factual circumstances—which, as described above, we think it has—mobile petitioners' argument would fail because the Commission need only provide a "reasoned explanation" for departing from its prior findings. *See Fox Television*, 556 U.S. at 515–16 ("[I]t is not that further justification is demanded by the mere fact of policy change[,] but that a reasoned explanation is needed for disregarding facts and circumstances that underlay . . . the prior policy."). It has done so here.

4.

Finally, we agree with the Commission that the need to avoid a statutory contradiction in the treatment of mobile broadband provides further support for its reclassification as a commercial mobile service. Each of the two statutory schemes covering mobile broadband requires classifying a service in a particular way before it can be subject to common carrier treatment. Under Title II, broadband must be classified as a "telecommunications service." Under Title III, mobile broadband must be classified as a "commercial mobile service." Because the two classifications do not automatically move in tandem, the Commission must make two distinct classification decisions. To avoid the contradictory result of classifying mobile broadband providers as common carriers under Title II while rendering them immune from common carrier treatment under Title III, the Commission, upon reclassifying broadband generally—including mobile—as a telecommunications service, reclassified mobile broadband as a commercial mobile service. *See* 2015 Open Internet Order at 5788 ¶ 403.

Avoiding that statutory contradiction not only assures consistent regulatory treatment of mobile broadband across Titles II and III, but it also assures consistent regulatory treatment of mobile broadband and fixed broadband, in furtherance of the Commission's objective that "[b]roadband users should be able to expect that they will be entitled to the same Internet openness protections no matter what technology they use to access the Internet." 2015 Open Internet Order, 30 FCC Rcd. at 5638 ¶ 92. When consumers use a mobile device (such as a tablet or smartphone) to access the internet, they may establish a connection either through mobile broadband or through a Wi-Fi connection at home, in the office, or at an airport or coffee shop. Such Wi-Fi connections originate from a landline broadband connection, which is now a telecommunications service regulated as a common carrier under Title II. If a consumer loses her Wi-Fi connection for some reason while accessing the internet—including, for instance, if she walks out the front door of her house, and thus out of Wi-Fi range—her device could switch automatically from a Wi-Fi connection to a mobile broadband connection. If mobile broadband were classified as a private mobile service, her ongoing session would no longer be subject to common carrier treatment. In that sense, her mobile device could be subject to entirely different regulatory rules depending on how it happens to be connected to the internet at any particular moment—which could change from one minute to the next, potentially even without her awareness.

The Commission's decision to reclassify mobile broadband as a commercial mobile service prevents that counterintuitive outcome by assuring consistent regulatory treatment of fixed and mobile broadband. By contrast, if mobile broadband—despite the public's "rapidly growing and virtually universal use" of the service today, *id.* at 5786

¶ 399—must still be classified as a "private" mobile service, broadband users may no longer experience "the same Internet openness protections no matter what technology they use to access the Internet." *Id.* at 5638 ¶ 92.

C.

Mobile petitioners also challenge the sufficiency of the Commission's notice, particularly with respect to its redefinition of the public switched network as well as its removal of the word "all" from the definition of interconnected service. As noted above, the APA requires that an NPRM "include . . . either the terms or substance of the proposed rule or a description of the subjects and issues involved." 5 U.S.C. § 553(b). But the APA also requires us to take "due account" of "the rule of prejudicial error." *Id.* § 706.

A deficiency of notice is harmless if the challengers had actual notice of the final rule, *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 549 (D.C. Cir. 1983), or if they cannot show prejudice in the form of arguments they would have presented to the agency if given a chance, *Owner-Operator Independent Drivers Ass'n v. Federal Motor Carrier Safety Administration*, 494 F.3d 188, 202 (D.C. Cir. 2007). Both circumstances are present here, and each independently supports our conclusion that any lack of notice was ultimately harmless. As such, we need not decide whether the Commission gave adequate notice of its redefinition of the public switched network in the NPRM.

As mobile petitioners acknowledge, Vonage raised the idea of redefining the public switched network in its comments, pointing out the Commission's "authority to interpret the key terms in th[e] definition [of commercial mobile service], including 'interconnected' and 'public switched network.'" Vonage Holdings Corp. Comments at 43, GN Dkt. Nos. 14-28 & 10-127 (July 18, 2014). Mobile petitioner CTIA responded to that point in its reply comments, disputing Vonage's underlying assumption that mobile broadband users can connect with all telephone users, *see* CTIA Reply Comments at 45, GN Dkt. Nos. 14-28 & 10-127 (Sept. 15, 2014), thereby recognizing that the definition of public switched network was in play.

In addition, over the course of several months before finalization and release of the Order, mobile petitioners (and others) submitted multiple letters to the Commission concerning the potential for redefining the public switched network. *See, e.g.*, Letter from Henry G. Hultquist, AT&T, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Feb. 13, 2015) ("AT&T 2/13 Letter"); Letter from Scott Bergmann, CTIA, to Marlene H. Dortch, FCC, at 13-18, GN Dkt. Nos. 14-28 & 10-127 (Feb. 10, 2015); Letter from Scott Bergmann, CTIA, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Jan. 14, 2015) ("CTIA 1/14 Letter"); Letter from Gary L. Phillips, AT&T, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Feb. 2, 2015); Letter from Scott Bergmann, CTIA, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Dec. 22, 2014) ("CTIA 12/22 Letter"); Letter from Scott Bergmann, CTIA, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Oct. 17, 2014) ("CTIA 10/17 Letter").

We have previously charged petitioners challenging an agency rule with actual notice based on letters like those submitted by mobile petitioners. *See Sierra Club v. Costle*, 657 F.2d 298, 355 (D.C. Cir. 1981). But we have even more evidence of actual notice here. Mobile petitioners note in their letters that, in meetings with the Commission, they discussed the substance of their arguments here, including issues surrounding the redefinition of public switched network. *See* AT&T 2/13 Letter at 1 (noting a meeting with representatives from Commissioners O'Rielly's and Pai's offices on February 11, 2015); CTIA 1/14 Letter at 1 (noting a meeting with representatives from Commissioner Pai's office on January 12, 2015); CTIA 12/22 Letter at 1 (noting a meeting with representatives from the Commission's General Counsel's office and representatives from the Wireless Telecommunications Bureau on December 18, 2014); CTIA 10/17 Letter at 1 (noting a meeting with the Commission's General Counsel and a representative from the Wireline Competition Bureau on October 15, 2014). Thus, even if the redefinition of public switched network was a "novel proposal" by Vonage during the comment period, it is clear from mobile petitioners' own letters that they had actual notice that the Commission was considering adoption of that proposal. *See National Mining Ass'n v. Mine Safety & Health Administration*, 116 F.3d 520, 531–32 (D.C. Cir. 1997).

In addition, in those letters, letters from others supporting mobile petitioners' views, and responsive letters from groups like New America's Open Technology Institute and Public Knowledge, mobile petitioners engaged in a detailed, substantive back-and-forth about the precise issues they challenge here. Reclassification of mobile broadband and redefinition of the public switched network were the focal points of that discussion, in which petitioners exchanged arguments about technology and policy with the groups supporting a broader definition of the public switched network. *See* Letters from CTIA and AT&T, *supra*; Letter from Michael Calabrese, Open Technology Institute, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Jan. 27, 2015); Letter from Harold Feld, Public Knowledge, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Jan. 15, 2015); Letter from William H. Johnson, Verizon, to

Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Dec. 24, 2014); Public Knowledge 12/19 Letter; Letter from Michael E. Glover, Verizon, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Oct. 29, 2014); OTI 12/11 Letter; Letter from William H. Johnson, Verizon, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Oct. 17, 2014).

In those exchanges, mobile petitioners raised and fiercely debated all of the same arguments they now raise before us, thus demonstrating not only the presence of actual notice, but also the absence of new arguments they might present to the Commission on remand. Indeed, when asked at oral argument, mobile petitioners could not list any new argument on the issue of the redefinition of public switched network. *See* Oral Arg. Tr. 74–79, 84–87.

Mobile petitioners also allege that the Commission gave inadequate notice of the removal of "all" from the definition of interconnected service. Any such failure, however, was also harmless. As noted above, not only does the Commission claim that the removal of "all" was inconsequential to the regulation, but that adjustment also has no bearing on our decision to uphold the Commission's reclassification decision. We would uphold the Commission's decision regardless of whether the Commission validly removed "all" from the definition of "interconnected service." Mobile petitioners thus cannot show prejudice from any lack of notice. *See Steel Manufacturers Ass'n v. EPA*, 27 F.3d 642, 649 (D.C. Cir. 1994) (explaining that inability to comment on one rationale for rule was harmless when agency had "adequate and independent grounds" for rule).

Mobile petitioners, for those reasons, fail to show the prejudice required by the APA to succeed on their arguments of insufficient notice. We therefore reject their challenges.

V.

Having upheld the Commission's reclassification of broadband services, both fixed and mobile, we consider next Full Service Network's challenges to the Commission's decision to forbear from applying portions of the Communications Act to those services. Section 10 of the Communications Act provides that the Commission "shall forbear from applying any regulation or any provision" of the Communications Act to a telecommunications service or carrier if three criteria are satisfied: (1) "enforcement of such regulation or provision is not necessary to ensure that" the carrier's practices "are just and reasonable and are not unjustly or unreasonably discriminatory," 47 U.S.C. § 160(a)(1); (2) "enforcement of such regulation or provision is not necessary for the protection of consumers," *id.* § 160(a)(2); and (3) "forbearance from applying such provision or regulation is consistent with the public interest," *id.* § 160(a)(3). Under the third criterion, "the Commission shall consider whether forbearance . . . will promote competitive market conditions, including the extent to which such forbearance will enhance competition among providers of telecommunications services." *Id.* § 160(b). Thus, section 10 imposes a mandatory obligation upon the Commission to forbear when it finds these conditions are met.

Section 10(c) gives any carrier the right to "submit a petition to the Commission requesting" forbearance. *Id.* § 160(c). In regulations issued pursuant to section 10(c), the Commission requires "petitions for forbearance" to include a "[d]escription of relief sought," make a prima facie case that the statutory criteria for forbearance are satisfied, identify any related matters, and provide any necessary evidence. 47 C.F.R. § 1.54.

In the Order, the Commission decided to forbear from numerous provisions of the Communications Act. 2015 Open Internet Order, 30 FCC Rcd. at 5616 ¶ 51. Full Service Network raises both procedural and substantive challenges to the Commission's forbearance decision. None succeeds.

A.

Full Service Network first argues that the Commission should have followed its regulatory requirements governing forbearance petitions even though it forbore of its own accord. In the Order, the Commission rejected this contention, stating that "[b]ecause the Commission is forbearing on its own motion, it is not governed by its procedural rules insofar as they apply, by their terms, to section 10(c) petitions for forbearance." *Id.* at 5806 ¶ 438.

"[W]e review an agency's interpretation of its own regulations with 'substantial deference.'" *In re Sealed Case*, 237 F.3d 657, 667 (D.C. Cir. 2001) (quoting *Thomas Jefferson University v. Shalala*, 512 U.S. 504, 512 (1994)). The agency's interpretation "will prevail unless it is 'plainly erroneous or inconsistent' with the plain terms of the disputed regulation." *Everett v. United States*, 158 F.3d 1364, 1367 (D.C. Cir. 1998) (quoting *Auer v. Robbins*, 519 U.S. 452, 461 (1997)).

The Commission's interpretation of its regulations easily satisfies this standard. By their own terms, the regulations apply to "petitions for forbearance," and nowhere say anything about what happens when, as here, the Commission decides to forbear without receiving a petition. *See* 47 C.F.R. § 1.54. To the extent this silence renders the regulations ambiguous in the circumstance before us, the Commission's interpretation is hardly "plainly erroneous." *Everett*, 158 F.3d at 1367 (internal quotation marks omitted).

Full Service Network also contends that the NPRM violated the APA's notice requirement because it nowhere identified the rules from which the Commission later decided to forbear. The NPRM, however, listed the provisions from which the Commission likely would not forbear, which by necessary implication indicated that the Commission would consider forbearing from all others. The NPRM did so by citing a 2010 notice of inquiry, in which the Commission had

> contemplated that, if it were to classify the Internet connectivity component of broadband Internet access service, it would forbear from applying all but a handful of core statutory provisions—sections 201, 202, 208, and 254—to the service. In addition, the Commission identified sections 222 and 255 as provisions that could be excluded from forbearance, noting that they have attracted longstanding and broad support in the broadband context.

NPRM, 29 FCC Rcd. at 5616 ¶ 154 (footnotes and internal quotation marks omitted). The NPRM sought "further and updated comment" on that course of action. *Id.* Thus, Full Service Network "should have anticipated that" the Commission would consider forbearing from all remaining Title II provisions. *Covad Communications Co.*, 450 F.3d at 548. Indeed, Full Service Network anticipated that the Commission would do just that. In its comments, Full Service Network argued that the Commission should not forbear from the provisions at issue here, thus demonstrating that it had no trouble "comment[ing] meaningfully," *Honeywell International, Inc.*, 372 F.3d at 445. *See* Letter from Earl W. Comstock, Counsel for Full Service Network and TruConnect, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Feb. 20, 2015); Letter from Earl W. Comstock, Counsel for Full Service Network and TruConnect, to

Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127, at 1 (Feb. 3, 2015).

B.

Full Service Network contends that the Commission acted arbitrarily and capriciously in forbearing from the mandatory network connection and facilities unbundling requirements contained in sections 251 and 252. As relevant here, section 251 requires telecommunications carriers "to interconnect directly or indirectly" with other carriers and prohibits them from "impos[ing] unreasonable or discriminatory conditions or limitations on[] the resale of . . . telecommunications services." 47 U.S.C. § 251(a)(1), (b)(1). "Incumbent local exchange carrier[s]," meaning carriers who "provided telephone exchange service" in a particular area as of the effective date of the Telecommunications Act, must provide nondiscriminatory access to their existing networks and unbundled access to network elements in order to allow service-level competition through resale. *Id.* § 251(c), (h)(1). Section 252 sets standards for contracts that implement section 251 obligations.

Full Service Network first argues that section 10(a)(3)'s public interest determination "must be made for each regulation, provision and market . . . using the definition and context of that provision in the [Communications] Act." Full Service Network Pet'rs' Br. 14–15 (emphasis omitted). Because section 251 "applies to 'local exchange carriers,'" Full Service Network contends, "the geographic market, as the name implies and the definition in the [Communications] Act confirms, is local and not national." *Id.* at 15 (emphasis omitted) (quoting 47 U.S.C. § 251).

Our decision in *EarthLink, Inc. v. FCC*, 462 F.3d 1, forecloses this argument. There, EarthLink made a similar argument—that the inclusion of the phrase "geographic markets" in section 10 meant that the Commission could not "forbear on a nationwide basis" from separate unbundling requirements in section 271 "without considering more localized regions individually." *Id.* at 8. Rejecting this argument, we focused on the language of section 10, and held that "[o]n its face, the statute imposes no particular mode of market analysis or level of geographic rigor." *Id.* Rather, "the language simply contemplates that the FCC might sometimes forbear in a subset of a carrier's markets; it is silent about how to determine when such partial relief is appropriate." *Id.* For the same reason, Full Service Network cannot rope section 251's requirements into the Commission's section 10 analysis.

Full Service Network's argument is also inconsistent with our decision in *Verizon Telephone Cos. v. FCC*, 570 F.3d 294 (D.C. Cir. 2009). There, Verizon sought forbearance from section 251 in some of its telephone-service markets. *Id.* at 299. The Commission denied Verizon's petition, finding insufficient evidence of facilities-based competition to render the provision's application unnecessary to protect the interests of consumers under section 10(a)(2) and to satisfy section 10(a)(3)'s public-interest requirement. *Id.* Challenging that decision, Verizon argued that the Commission's forbearance decision was incompatible with the text of section 251 because section 251 required the Commission to find that lack of access would "'impair the ability of the telecommunications carrier seeking access to provide . . . service[],'" which the Commission had not done. *Id.* at 300 (omission and alteration in original) (quoting 47 U.S.C. § 251). We rejected this argument, explaining that "[t]he dispute before this court . . . concerns whether the statutory text of § 10—not § 251—contradicts the FCC's interpretation." *Id.* We found reasonable the Commission's conclusion that its section 10 analysis did not need to incorporate any statutory requirement arising from section 251. *Id.* at 300–01. We do so again here.

Full Service Network next challenges the Commission's finding that "the availability of other protections adequately addresses commenters' concerns about forbearance from the interconnection provisions under the section 251/252 framework." 2015 Open Internet Order, 30 FCC Rcd. at 5849–50 ¶ 513 (footnote omitted). Specifically, Full Service Network attacks the Commission's determination that section 201 gives it sufficient authority to ensure that broadband networks connect to one another for the mutual exchange of traffic. Section 201 requires "every common carrier engaged in interstate or foreign communication by wire or radio to furnish such communication service upon reasonable request therefor" and, upon an order of the Commission, "to establish physical connections with other carriers, to establish through routes and charges applicable thereto and the divisions of such charges, and to establish and provide facilities and regulations for operating such through routes." 47 U.S.C. § 201(a). "All charges, practices, classifications, and regulations for and in connection with such communication service, shall be just and reasonable . . . ." *Id.* § 201(b). Section 251 includes a savings provision that "[n]othing in this section shall be construed to limit or otherwise affect the Commission's authority under section 201." *Id.* § 251(i).

Full Service Network first contends that the Commission's authority under section 201 does not extend to physical co-location, under which local exchange carriers must allow third-party providers to physically locate cables on their property in furtherance of network connections. In support, Full Service Network relies on our decision in *Bell Atlantic Telephone Cos. v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994), in which we refused to uphold under section 201 a Commission rule requiring physical co-location. The rule, we reasoned, would unnecessarily raise Takings Clause issues because the Commission could use virtual co-location, where local exchange carriers maintain equipment that third-party providers can use, to implement section 201's "physical connection" requirement without raising constitutional issues. *Id.* at 1446. So while Full Service Network is correct that *Bell Atlantic* imposes one limit on the Commission's reach under section 201, that case also demonstrates that the Commission retains authority to regulate network connections under that section.

Next, Full Service Network argues that section 152(b), which "prevent[s] the Commission from taking intrastate action solely because it further[s] an interstate goal," *AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366, 381 (1999), prohibits the Commission from "us[ing] its interstate authority under [section] 201 to regulate broadband Internet access service that is an intrastate 'telephone exchange service' under the [Communications] Act," Full Service Network Pet'rs' Br. 17 (emphasis omitted) (quoting 47 U.S.C. § 153(54)). According to Full Service Network, the Commission erred by refusing to determine whether broadband service qualifies as a "telephone exchange service" because that definition would prevent the Commission from classifying the internet as jurisdictionally interstate.

In the Order, the Commission "reaffirm[ed] [its] longstanding conclusion" that broadband service falls within its jurisdiction as an interstate service. 2015 Open Internet Order, 30 FCC Rcd. at 5803 ¶ 431; *see* Cable Broadband Order, 17 FCC Rcd. at 4832 ¶ 59; In re GTE Telephone

Operating Cos. GTOC Tariff No. 1, GTOC Transmittal No. 1148, 13 FCC Rcd. 22,466, 22,474–83 ¶¶ 16–32 (1998). "The Internet's inherently global and open architecture," the Commission reasoned, "mak[es] end-to-end jurisdictional analysis extremely difficult—if not impossible—when the services at issue involve the Internet." 2015 Open Internet Order, 30 FCC Rcd. at 5803 ¶ 431 (internal quotation marks omitted). The Commission also determined that because it had found the section 10 criteria met as to section 251, it had no reason to "resolve whether broadband Internet access service could constitute 'telephone exchange service'" under section 251. *Id.* at 5851 ¶ 513 n.1575.

We approved the Commission's jurisdictional approach in *Core Communications, Inc. v. FCC*, 592 F.3d 139, 144 (D.C. Cir. 2010). Although the petitioners in that case never challenged the general framework of the Commission's "end-to-end analysis, . . . under which the classification of a communication as local or interstate turns on whether its origin and destination are in the same state," *id.* at 142, we recognized that

> [d]ial-up internet traffic is special because it involves interstate communications that are delivered through local calls; it thus simultaneously implicates the regimes of both § 201 and of §§ 251–252. Neither regime is a subset of the other. They intersect, and dial-up internet traffic falls within that intersection. Given this overlap, § 251(i)'s specific saving of the Commission's authority under § 201 against any negative implications from § 251 renders the Commission's reading of the provisions at least reasonable.

Id.; *see also National Ass'n of Regulatory Utility Commissioners v. FCC*, 746 F.2d 1492, 1501 (D.C. Cir. 1984) ("[W]e have concluded that the FCC has broad power to regulate physically intrastate facilities where they are used for interstate communication."). To be sure, *Core Communications* concerned dial-up internet access, but because broadband involves a similar mix of local facilities and interstate information networks, we see no meaningful distinction between the interpretation approved in *Core Communications* and the one the Commission offered here. Nor do we see any reason to obligate the Commission to determine the legal status of each underlying "hypothetical regulatory obligation[]" that could result from any particular Communications Act provision prior to undertaking the section 10 forbearance analysis. *AT & T Inc. v. FCC*, 452 F.3d 830, 836–37 (D.C. Cir. 2006).

Full Service Network's final argument is not especially clear. It appears to claim that the Commission provided inadequate support for its forbearance decision. Pointing out that in prior proceedings the Commission had found that mandatory unbundling in the telephone context would promote competition and emphasizing that Congress passed section 251 to foster competition, Full Service Network argues that "[section 10] surely requires more to support forbearance than an assertion by the FCC that 'other authorities' are adequate and the public interest will be better served by enhancing the agency's discretion." Full Service Network Pet'rs' Br. 20.

In evaluating Full Service Network's argument that the Commission failed to provide adequate justification for its forbearance decision, we are guided by "the traditional 'arbitrary and capricious' standard," *Cellular Telecommunications & Internet Ass'n v. FCC*, 330 F.3d 502, 507–08 (D.C. Cir. 2003), under which "the agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made," *State Farm*, 463 U.S. at 43 (internal quotation marks omitted). We have applied this standard to section 10 forbearance decisions and have "consistently deferred to [such decisions], except in cases where the Commission deviated without explanation from its past decisions or did not discuss section 10's criteria at all." *Verizon v. FCC*, 770 F.3d 961, 969 (D.C. Cir. 2014) (internal citations omitted).

In the Order, the Commission identified two bases for forbearing from sections 251 and 252. First, it considered evidence from commenters who argued that "last-mile unbundling requirements . . . led to depressed investment in the European broadband marketplace." 2015 Open Internet Order, 30 FCC Rcd. at 5796 ¶ 417. Those commenters identified several studies suggesting that mandatory unbundling had reduced investment in broadband infrastructure in Europe relative to the United States. *See* Letter from Maggie McCready, Verizon, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127 (Jan. 26, 2015); Letter from Kathryn Zachem, Comcast, to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28 & 10-127, at 5–7 (Dec. 24, 2014) (identifying Martin H. Thelle & Bruno Basalisco, Copenhagen Economics, How Europe Can Catch Up With the US: A Contrast of Two Contrary Broadband Models (2013)); Letter from Christopher S. Yoo to Marlene H. Dortch, FCC, GN Dkt. Nos. 14-28, 10-127, 09-191 (June 10, 2014). The Commission reasoned that its decision to forbear from section 251's unbundling requirement, in combination with regulation under other provisions of Title II, would avoid similar problems and encourage further deployment because the scheme "establishes the regulatory predictability needed by all sectors of the Internet industry to facilitate prudent business planning, without imposing undue burdens that might interfere with entrepreneurial opportunities." 2015 Open Internet Order, 30 FCC Rcd. at 5796 ¶ 417.

The Commission also identified "numerous concerns about the burdens—or, at a minimum, regulatory uncertainty—that would be fostered by a sudden, substantial expansion of the actual or potential regulatory requirements and obligations relative to the status quo from the near-term past," in which many broadband providers were not subject to any aspect of Title II. *Id.* at 5839 ¶ 495. In reaching this conclusion, the Commission drew from its experience with the mobile voice industry, which "thrived under a market-based Title II regime" that included significant forbearance, "demonstrating that robust investment is not inconsistent with a light-touch Title II regime." *Id.* at 5799–800 ¶ 423.

Full Service Network argues that the Commission's "prior predictions of 'vibrant intermodal competition' . . . 'cannot be reconciled with marketplace realities.'" Full Service Network Pet'rs' Reply Br. 10 (quoting 2015 Open Internet Order, 30 FCC Rcd. at 5743 ¶ 330). As we noted above, however, "[a]n agency's predictive judgments about areas that are within the agency's field of discretion and expertise are entitled to *particularly deferential* review, as long as they are reasonable." *EarthLink*, 462 F.3d at 12 (internal quotation marks omitted). In this case, the Commission's predictive judgments about the effect mandatory unbundling would have on broadband deployment were perfectly reasonable and supported by record evidence. Multiple studies provided evidence that mandatory unbundling harmed investment in Europe. Such evidence, combined with the Commission's experience in using a "light touch" regulatory program for mobile voice, demonstrates "a rational connection between the facts found and the choice made" to forbear from applying sections 251 and 252. *State Farm*, 463 U.S. at 43 (internal quotation marks omitted). The APA demands nothing more.

The partial dissent agrees with much of this, but nonetheless believes that the Commission acted arbitrarily and capriciously by "attempt[ing] to have it both ways" when it found a lack of competition in its reclassification decision, but simultaneously found adequate competition to justify forbearance. Concurring & Dissenting Op. at 67. The partial dissent also believes that the Commission's competition analysis was contrary to its own precedent. *Id.* at 66. Notably, however, and despite the partial dissent's assertion, *see id.* at 60–61, Full Service Network has never claimed that the Commission misapplied any of the section 10(a) factors, failed to analyze competitive effect as required by section 10(b), or acted contrary to its forbearance precedent. Indeed, when pressed at oral argument, Full Service Network disclaimed any intent to make these arguments. Oral Arg. Tr. 139–40. Full Service Network's argument regarding the Commission's competition analysis was confined to its contention that section 251's focus on local competition required the Commission to perform a local market analysis as part of its forbearance inquiry. As the partial dissent acknowledges, *EarthLink* "fully supports the Commission" on that score. Concurring & Dissenting Op. at 68. According to the partial dissent, however, by citing section 10(b) in its brief, Full Service Network presented a broader challenge to the Commission's competition analysis. *Id.* at 60–61. But Full Service Network cited section 10(b) only once, and only in the context of its argument that the Commission "must evaluate each provision [under section 10] using the definition and context of that provision in the Act," which, "[i]n the context of the local 'connection link' to the Internet that phone and cable company broadband service provides, . . . must be made on a local market-by-market basis." Full Service Network Pet'rs' Br. 15 (emphasis omitted). We have addressed that argument above, and Full Service Network makes no other section 10(b) argument. Because Full Service Network never presents in its briefs the arguments made by the partial dissent, those arguments lie outside the scope of our review.

VI.

We turn next to petitioners' challenges to the particular rules adopted by the Commission. As noted earlier, the Commission promulgated five rules in the Order: rules banning (i) blocking, (ii) throttling, and (iii) paid prioritization, 2015 Open Internet Order, 30 FCC Rcd. at 5647 ¶ 110; (iv) a General Conduct Rule, *id.* at 5660 ¶ 136; and (v) an enhanced transparency rule, *id.* at 5669–82 ¶¶ 154–85. Petitioners Alamo and Berninger (together, Alamo) challenge the anti-paid-prioritization rule as beyond the Commission's authority. US Telecom challenges the General Conduct Rule as unconstitutionally vague. We reject both challenges.

A.

In its challenge to the anti-paid-prioritization rule, petitioner Alamo contends that, even with reclassification of broadband as a telecommunications service, the Commission lacks authority to promulgate such a rule under section 201(b) of Title II and section 303(b) of Title III. The Commission, however, grounded the rules in "multiple, complementary sources of legal authority"—not only Titles II and III, but also section 706 of the Telecommunications Act of 1996 (now codified at 47 U.S.C. § 1302). *Id.* at 5720–21 ¶¶ 273–74. As to section 706, this court concluded in *Verizon* that it grants the Commission independent rulemaking authority. 740 F.3d at 635–42. Alamo nonetheless argues that the Commission lacks authority to promulgate rules under section 706. It rests that argument on a claim that this court's contrary conclusion in *Verizon* was dicta.

Alamo misreads *Verizon*. Our decision in that case considered three rules from the 2010 Open Internet Order: an anti-blocking rule, an anti-discrimination rule, and a transparency rule. *See id.* at 633. We determined that section 706 vests the Commission "with affirmative authority to enact measures encouraging the deployment of broadband infrastructure" and that the Commission had "reasonably interpreted section 706 to empower it to promulgate rules governing broadband providers' treatment of Internet traffic." *Id.* at 628. In doing so, we also found that the Commission's justification for those rules—"that they will preserve and facilitate the 'virtuous circle' of innovation that has driven the explosive growth of the Internet"—was reasonable and supported by substantial evidence. *Id.* We ultimately struck down the anti-blocking and anti-discrimination rules on the ground that they amounted to common carrier regulation without any accompanying determination that broadband providers should be regulated as common carriers. *See id.* at 655–58. But we upheld the Commission's transparency rule as a permissible and reasonable exercise of its section 706 authority, one that did not improperly impose common carrier obligations on broadband providers. *See id.* at 659. Because our findings with regard to the Commission's 706 authority were necessary to our decision to uphold the transparency rule, those findings cannot be dismissed as dicta. *Seminole Tribe of Florida v. Florida*, 517 U.S. 44, 67 (1996) ("When an opinion issues for the Court, it is not only the result but also those portions of the opinion necessary to that result by which we are bound."). We note, moreover, that the separate opinion concurring in part and dissenting in part agreed with the court's conclusion as to the existence of rulemaking authority under section 706 and made no suggestion that the conclusion was mere dicta. *See Verizon*, 740 F.3d at 659–68 (Silberman, J., concurring in part and dissenting in part).

Alamo does not contend that the anti-paid-prioritization rule falls outside the scope of the Commission's rulemaking authority under section 706 or is otherwise an improper exercise of that authority (if, as we held in *Verizon* and reiterate here, that authority exists in the first place). Alamo argues only that *Verizon* was wrong on the antecedent question of the Commission's authority to promulgate rules under section 706 at all. Unfortunately for Alamo, *Verizon* established precedent on the existence of the Commission's rulemaking authority under section 706 and thus controls our decision here. Consequently, we reject Alamo's challenges to the Commission's section 706 authority and to the anti-paid-prioritization rule.

Our colleague picks up where Alamo leaves off, arguing that, even if *Verizon*'s conclusions about the *existence* of the Commission's section 706 authority were not mere dicta, *Verizon*'s conclusions about the scope of that authority (including the permissibility of the Commission's reliance on the "virtuous cycle" of innovation) were dicta. Concurring & Dissenting Op. at 52. Both sets of conclusions, however, were necessary to our upholding the transparency rule. *See Verizon*, 740 F.3d at 639–40, 644–49. Consequently, as we held in *Verizon* and reaffirm today, the Commission's section 706 authority extends to rules "governing broadband providers' treatment of internet traffic"—including the anti-paid-prioritization rule—in reliance on the virtuous cycle theory. *Verizon*, 740 F.3d at 628; *see* 2015 Open Internet Order, 30 FCC Rcd. at 5625–34 ¶¶ 76–85; *id.* at 5623–24

¶¶ 281–82. Even if there were any lingering uncertainty about the import of our decision in *Verizon*, we fully adopt here our findings and analysis in *Verizon* concerning the existence and permissible scope of the Commission's section 706 authority, including our conclusion that the Commission's virtuous cycle theory provides reasonable grounds for the exercise of that authority.

That brings us to our colleague's suggestion that the Order embodies a "central paradox[]" in that the Commission relied on the Telecommunications Act to "increase regulation" even though the Act was "intended to 'reduce regulation.'" Concurring & Dissenting Op. at 53. We are unmoved. The Act, by its terms, aimed to "encourage the rapid deployment of new telecommunications technologies." Telecommunications Act of 1996, Pub. L. 104–104, 110 Stat 56. If, as we reiterate here (and as the partial dissent agrees), section 706 grants the Commission rulemaking authority, it is unsurprising that the grant of rulemaking authority might occasion the promulgation of additional regulation. And if, as is true here (and was true in *Verizon*), the new regulation is geared to promoting the effective deployment of new telecommunications technologies such as broadband, the regulation is entirely consistent with the Act's objectives.

B.

The Due Process Clause "requires the invalidation of laws [or regulations] that are impermissibly vague." *FCC v. Fox Television Stations, Inc.*, 132 S. Ct. 2307, 2317 (2012). US Telecom argues that the General Conduct Rule falls within that category. We disagree.

The General Conduct Rule forbids broadband providers from engaging in conduct that "unreasonably interfere[s] with or unreasonably disadvantage[s] (i) end users' ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice, or (ii) edge providers' ability to make lawful content, applications, services, or devices available to end users." 2015 Open Internet Order, 30 FCC Rcd. at 5660 ¶ 136. The Commission adopted the General Conduct Rule based on a determination that the three bright-line rules—barring blocking, throttling, and paid prioritization—were, on their own, insufficient "to protect the open nature of the Internet." *Id*. at 5659–60 ¶¶ 135–36. Because "there may exist other current or future practices that cause the type of harms [the] rules are intended to address," the Commission thought it "necessary" to establish a more general, no-unreasonable interference/disadvantage standard. *Id*. The standard is designed to be flexible so as to address unforeseen practices and prevent circumvention of the bright-line rules. The Commission will evaluate conduct under the General Conduct Rule on a case-by-case basis, taking into account a "non-exhaustive" list of seven factors. *Id*. at 5661 ¶ 138.

Before examining the merits of the vagueness challenge, we first address US Telecom's argument that the NPRM provided inadequate notice that the Commission would issue a General Conduct Rule of this kind. Although the Commission did not ultimately adopt the "commercially reasonable" standard proposed in the NPRM, the Commission specifically sought "comment on whether [it] should adopt a different rule to govern broadband providers' practices to protect and promote Internet openness." NPRM, 29 FCC Rcd. at 5604 ¶ 121. The NPRM further asked: "How can the Commission ensure that the rule it adopts sufficiently protects against harms to the open Internet, including broadband providers' incentives to disadvantage edge providers or classes of edge providers in ways that would harm Internet openness? Should the Commission adopt a rule that prohibits unreasonable discrimination and, if so, what legal authority and theories should we rely upon to do so?" *Id*. In light of those questions, US Telecom was on notice that the Commission might adopt a different standard to effectuate its goal of protecting internet openness.

US Telecom contends that the NPRM was nonetheless inadequate because general notice of the possible adoption of a new standard, without notice about the rule's content, is insufficient. But the NPRM described in significant detail the factors that would animate a new standard. *See*, *e.g.*, *id*. at 5605–06 ¶¶ 124–126; *id*. at 5607 ¶¶ 129–31; *id*. at 5608 ¶ 134. The factors that are to guide application of the General Conduct Rule significantly resemble those identified in the NPRM. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5661–64 ¶¶ 139–45. The Rule also adopted the "case-by-case," "totality of the circumstances" approach proposed in the NPRM. 29 FCC Rcd. at 5604 ¶ 122. By making clear that the Commission was considering establishment of a general standard and providing indication of its content, the NPRM offered adequate notice under the APA.

Moving to the substance of US Telecom's vagueness argument, we note initially that it comes to us as a facial challenge. Traditionally, a petitioner could succeed on such a claim "only if the enactment [wa]s impermissibly vague in all of its applications." *Village of Hoffman Estates v. Flipside, Hoffman Estates, Inc.*, 455 U.S. 489, 495 (1982). That high bar was grounded in the understanding that a "plaintiff who engages in some conduct that is clearly proscribed cannot complain of the vagueness of the law as applied to the conduct of others." *Holder v. Humanitarian Law Project*, 561 U.S. 1, 18–19 (2010) (internal quotation marks omitted). More recently, however, in *Johnson v. United States*, 135 S. Ct. 2551 (2015), the Supreme Court suggested some skepticism about that longstanding framework. Noting that past "*holdings* squarely contradict the theory that a vague provision is constitutional merely because there is some conduct that clearly falls within the provision's grasp," the Court described the "supposed requirement of vagueness in all applications" as a "tautology." *Id*. at 2561. We need not decide the full implications of *Johnson*, because we conclude that the General Conduct Rule satisfies due process requirements even if we do not apply *Hoffman*'s elevated bar for facial challenges.

Vagueness doctrine addresses two concerns: "first, that regulated parties should know what is required of them so they may act accordingly; second, precision and guidance are necessary so that those enforcing the law do not act in an arbitrary or discriminatory way." *Fox Television*, 132 S. Ct. at 2317. Petitioners argue that the General Conduct Rule is unconstitutionally vague because it fails to provide regulated entities adequate notice of what is prohibited. We are unpersuaded. Unlike the circumstances at issue in *Fox Television*, *id.* at 2317–18, the Commission here did not seek retroactively to enforce a new policy against conduct predating the policy's adoption. The General Conduct Rule applies purely prospectively. We find that the Rule gives sufficient notice to affected entities of the prohibited conduct going forward.

The degree of vagueness tolerable in a given statutory provision varies based on "the nature of the enactment." *Hoffman Estates*, 455 U.S. at 498. Thus, "the Constitution is most demanding of a criminal statute that limits First Amendment rights." *DiCola v. FDA*, 77 F.3d 504, 508 (D.C. Cir. 1996). The General Conduct Rule does not implicate that form of review because it regulates business conduct and imposes civil penalties. In such circumstances, "regulations will be found to satisfy due process so long as they are sufficiently specific that a reasonably prudent person, familiar with the conditions the regulations are meant to address and the objectives the regulations are meant to achieve, would have fair warning of what the regulations require." *Freeman United Coal Mining Co. v. Federal Mine Safety & Health Review Commission*, 108 F.3d 358, 362 (D.C. Cir. 1997).

That standard is met here. The Commission has articulated "the objectives the [General Conduct Rule is] meant to achieve," *id.*: to serve as a complement to the bright-line rules and advance the central goal of protecting consumers' ability to access internet content of their choosing. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5659–60 ¶¶ 135–37. The Commission set forth seven factors that will guide the determination of what constitutes unreasonable interference with, or disadvantaging of, end-user or edge-provider access: end-user control; competitive effects; consumer protection; effect on innovation, investment, or broadband deployment; free expression; application agnosticism; and standard practices. *See id.* at 5661–64 ¶¶ 139–45. The Commission's articulation of the Rule's objectives and specification of the factors that will inform its application "mark out the rough area of prohibited conduct," which suffices to satisfy due process in this context. *DiCola*, 77 F.3d at 509 (internal quotation marks omitted).

Moreover, the Commission did not merely set forth the factors; it also included a description of how each factor will be interpreted and applied. For instance, when analyzing the competitive effects of a practice, the Commission instructs that it will "review the extent of an entity's vertical integration as well as its relationships with affiliated entities." 2015 Open Internet Order, 30 FCC Rcd. at 5662 ¶ 140. The Commission defines a practice as application-agnostic if it "does not differentiate in treatment of traffic, or if it differentiates in treatment of traffic without reference to the content, application, or device." *Id.* at 5663 ¶ 144 n.344. Many of the paragraphs in that section of the Order also specifically identify the kind of conduct that would violate the Rule. The Commission explains, for example, that "unfair or deceptive billing practices, as well as practices that fail to protect the confidentiality of end users' proprietary information, will be unlawful." *Id.* at 5662 ¶ 141. It goes on to emphasize that the "rule is intended to include protection against fraudulent practices such as 'cramming' and 'slamming.'" *Id.* And "[a]pplication-specific network practices," including "those applied to traffic that has a particular source or destination, that is generated by a particular application . . . , [or] that uses a particular application- or transport- layer protocol," would trigger concern as well. *Id.* at 5663 ¶ 144 n.344.

Given that "we can never expect mathematical certainty from our language," those sorts of descriptions suffice to provide fair warning as to the type of conduct prohibited by the General Conduct Rule. *Grayned v. City of Rockford*, 408 U.S. 104, 110 (1972). To be sure, as a multifactor standard applied on a case-by-case basis, a certain degree of uncertainty inheres in the structure of the General Conduct Rule. But a regulation is not impermissibly vague because it is "marked by flexibility and reasonable breadth, rather than meticulous specificity." *Id.* (internal quotation marks omitted). Fair notice in these circumstances demands "no more than a reasonable degree of certainty." *Throckmorton v. National Transportation Safety Board*, 963 F.2d 441, 444 (D.C. Cir. 1992) (internal quotation marks omitted). We are mindful, moreover, that "by requiring regulations to be too specific courts would be opening up large loopholes allowing conduct which should be regulated to escape regulation."

Freeman, 108 F.3d at 362 (alterations and internal quotation marks omitted). That concern is particularly acute here, because of the speed with which broadband technology continues to evolve. The dynamic market conditions and rapid pace of technological development give rise to pronounced concerns about ready circumvention of particularized regulatory restrictions. The flexible approach adopted by the General Conduct Rule aims to address that concern in a field in which "specific regulations cannot begin to cover all of the infinite variety of conditions." *Id*. (alteration and internal quotation marks omitted).

Any ambiguity in the General Conduct Rule is therefore a far cry from the kind of vagueness this court considered problematic in *Timpinaro v. SEC*, 2 F.3d 453 (D.C. Cir. 1993), on which US Telecom heavily relies. In that case, we found a multifactor SEC rule defining a professional trading account to be unconstitutionally vague because "a trader would be hard pressed to know when he is in danger of triggering an adverse reaction." *Id.* at 460. We emphasized that "five of the seven factors . . . are subject to seemingly open-ended interpretation," and that the uncertainty is "all the greater when these mysteries are considered in combination, according to some undisclosed system of relative weights." *Id*. Unlike in *Timpinaro*, in which the factors were left unexplained, in this case, as noted, the Commission included a detailed paragraph clarifying and elaborating on each of the factors. And because the provision at issue in *Timpinaro* was a technical definition of a professional trading account, the context of the regulation shed little additional light on its meaning. In contrast, the knowledge that the General Conduct Rule was expressly adopted to complement the bright-line rules helps delineate the contours of the proscribed conduct here.

Finally, the advisory-opinion procedure accompanying the General Conduct Rule cures it of any potential lingering constitutional deficiency. The Commission announced in the Order that it would allow companies to obtain an advisory opinion concerning any "proposed conduct that may implicate the rules," in order to "enable companies to seek guidance on the propriety of certain open Internet practices before implementing them." 2015 Open Internet Order, 30 FCC Rcd. at 5706 ¶¶ 229–30. The opinions will be issued by the Enforcement Bureau and "will be publicly available." *Id*. at 5706–07 ¶¶ 229, 231. As a result, although the Commission did not reach a definitive resolution during the rulemaking process as to the permissibility under the General Conduct Rule of practices such as zero-rating and usage caps, *see id.* at 5666–67 ¶ 151, companies that seek to pursue those sorts of practices may petition for an advisory opinion and thereby avoid an inadvertent infraction. The opportunity to obtain prospective guidance thus provides regulated entities with "relief from [remaining] uncertainty." *DiCola*, 77 F.3d at 509; *see also Hoffman*, 455 U.S. at 498.

Petitioners argue that the advisory-opinion process is insufficient because opinions cannot be obtained for existing conduct, conduct subject to a pending inquiry, or conduct that is a "mere possibilit[y]." 2015 Open Internet Order, 30 FCC Rcd. at 5707 ¶ 232. But the fact that advisory opinions cannot be used for present conduct or conduct pending inquiry is integral to the procedure's purpose—to encourage providers to "be proactive about compliance" and obtain guidance on proposed actions *before* implementing them. *Id*. at 5706 ¶ 229. Petitioners also point out that the guidance provided in advisory opinions is not binding. *See id*. at 5708 ¶¶ 235. The Bureau's ability to adjust its views after issuing an advisory opinion, however, does not negate the procedure's usefulness for companies seeking to avoid inadvertent violations of the Rule. Nonbinding opinions thus are characteristic of advisory processes, including the Department of Justice Antitrust Division's business review letter procedure, which served as the model for the Commission's process. *See id*. Expecting the Bureau to issue final, irrevocable decisions on the permissibility of proposed conduct before seeing the actual effects of that conduct could produce anomalous results.

Our colleague also identifies certain perceived deficiencies in the advisory-opinion process. Notably, however, the partial dissent makes no argument that the General Conduct Rule is unconstitutionally vague. Rather, in arguing that the Commission's reclassification of broadband is arbitrary and capricious, the partial dissent criticizes the advisory-opinion process on the grounds that the Bureau could choose to refrain from offering answers and that the process will be slow. *See* Concurring & Dissenting Op. at 22–23. Insofar as those criticisms may seem germane to petitioners' vagueness challenge, we find them unpersuasive. Even if the Bureau's discretion about whether to provide an answer could be problematic in the absence of any further guidance in the Rule as to the kinds of conduct it prohibits, here, as explained, the Rule does provide such guidance. The advisory-opinion procedure simply acts as an additional resource available to companies in instances of particular uncertainty. Moreover, the partial dissent's suppositions about the slowness of the process stem solely from the absence of firm deadlines by which the Bureau must issue an opinion. There is no indication at this point, however, that the Bureau will fail to offer timely guidance.

In the end, the advisory-opinion procedure can be expected to provide valuable (even if imperfect) guidance to providers seeking to comply with the General Conduct Rule.

The procedure thereby alleviates any remaining concerns about the Rule's allegedly unconstitutional vagueness. For the reasons described, we uphold the Rule.

VII.

We finally turn to Alamo and Berninger's First Amendment challenge to the open internet rules. Having upheld the FCC's reclassification of broadband service as common carriage, we conclude that the First Amendment poses no bar to the rules.

A.

Before moving to the merits of the challenge, we must address intervenor Cogent's argument that Alamo and Berninger lack standing to bring this claim. Because the rules directly affect Alamo's business, we conclude that Alamo has standing.

In order to establish standing, a plaintiff must demonstrate an "injury in fact" that is "fairly traceable" to the defendant's action and that can be "redressed by a favorable decision." *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560–61 (1992) (alterations and internal quotation marks omitted). The dispute here is primarily about the first prong, injury in fact. An injury in fact requires "invasion of a legally protected interest which is (a) concrete and particularized, and (b) actual or imminent, not conjectural or hypothetical." *Id*. (citations and internal quotation marks omitted).

Alamo uses fixed wireless technology to provide internet service to customers outside San Antonio, Texas. *See* Alamo Br., Portman Decl. ¶ 2. The company claims it "is injured by the Order because it is a provider of broadband Internet access service that the FCC seeks to regulate." *Id.* ¶ 5 (italics omitted). As a broadband provider, Alamo is itself "an object of the action . . . at issue." *Lujan*, 504 U.S. at 561. When a person or company that is the direct object of an action petitions for review, "there is ordinarily little question that the action . . . has caused [it] injury, and that a judgment preventing . . . the action will redress it." *Id.* at 561–62. Here, however, Alamo seeks pre-enforcement review of the rules, which raises the question of whether it has demonstrated that the rules inflict a sufficiently concrete and actual injury. We conclude that Alamo has made the requisite showing.

Pre-enforcement review, particularly in the First Amendment context, does not require plaintiffs to allege that they "will in fact" violate the regulation in order to demonstrate an injury. *Susan B. Anthony List v. Driehaus*, 134 S. Ct. 2334, 2345 (2014). Standing "to challenge laws burdening expressive rights requires only a credible statement by the plaintiff of intent to commit violative acts and a conventional background expectation that the government will enforce the law." *Act Now to Stop War & End Racism Coalition v. District of Columbia*, 589 F.3d 433, 435 (D.C. Cir. 2009) (internal quotation marks omitted). Because "an agency rule, unlike a statute, is typically reviewable without waiting for enforcement," that principle applies with particular force here. *Chamber of Commerce v. FEC*, 69 F.3d 600, 604 (D.C. Cir. 1995).

Alamo explains that the "Open Internet conduct rules eliminate Alamo's discretion to manage the Internet traffic on its network." Portman Decl. ¶ 5. That statement indicates that, were it not for the rules, Alamo would explore alternative methods of managing internet traffic—namely blocking, throttling, or paid prioritization. In the context of this challenge, the company's "affidavit can only be understood to mean that" if the rules were removed, it would seek to exercise its discretion and explore business practices prohibited by the rules. *Ord v. District of Columbia*, 587 F.3d 1136, 1143 (D.C. Cir. 2009). Alamo has thus adequately manifested its "intention to engage in a course of conduct arguably affected with a constitutional interest, but proscribed by [regulation]." *Driehaus*, 134 S. Ct. at 2342 (internal quotation marks omitted). Its inability to follow through on that intention constitutes an injury in fact for purposes of pre-enforcement review of the rules.

That conclusion is fortified by the "strong presumption of judicial review under the Administrative Procedure Act" and the understanding that "the courts' willingness to permit pre-enforcement review is at its peak when claims are rooted in the First Amendment." *New York Republican State Committee v. SEC*, 799 F.3d 1126, 1135 (D.C. Cir. 2015) (internal quotation marks omitted). In order "to avoid the chilling effects that come from unnecessarily expansive proscriptions on speech," "courts have shown special solicitude" to such claims. *Id.* at 1135–36.

Because Alamo's standing enables us to consider the First Amendment arguments with respect to all three bright-line rules, we have no need to consider Berninger's standing. *See Rumsfeld v. Forum for Academic & Institutional Rights, Inc.*, 547 U.S. 47, 52 n.2 (2006).

B.

Alamo argues that the open internet rules violate the First Amendment by forcing broadband providers to transmit speech with which they might disagree. We are unpersuaded. We have concluded that the Commission's reclassification of broadband service as common carriage is a permissible exercise of its Title II authority, and Alamo does not challenge that determination. Common carriers have long been subject to nondiscrimination and equal access obligations akin to those imposed by the rules without raising any First Amendment question. Those obligations affect a common carrier's neutral transmission of *others'* speech, not a carrier's communication of its own message.

Because the constitutionality of each of the rules ultimately rests on the same analysis, we consider the rules together. The rules generally bar broadband providers from denying or downgrading end-user access to content and from favoring certain content by speeding access to it. In effect, they require broadband providers to offer a standardized service that transmits data on a nondiscriminatory basis. Such a constraint falls squarely within the bounds of traditional common carriage regulation.

The "basic characteristic" of common carriage is the "requirement [to] hold[] oneself out to serve the public indiscriminately." *Verizon*, 740 F.3d at 651 (internal quotation marks omitted). That requirement prevents common carriers from "mak[ing] individualized decisions, in particular cases, whether and on what terms to deal." *FCC v. Midwest Video Corp.*, 440 U.S. 689, 701 (1979) (internal quotation marks omitted). In the communications context, common carriers "make[] a public offering to provide communications facilities whereby all members of the public who choose to employ such facilities may communicate or transmit intelligence of their own design and choosing." *Id.* (alteration and internal quotation marks omitted). That is precisely what the rules obligate broadband providers to do.

Equal access obligations of that kind have long been imposed on telephone companies, railroads, and postal services, without raising any First Amendment issue. *See Denver Area Educational Telecommunications Consortium,* *Inc. v. FCC*, 518 U.S. 727, 739 (1996) (plurality opinion) (noting that the "speech interests" in leased channels are "relatively weak because [the companies] act less like editors, such as newspapers or television broadcasters, than like common carriers, such as telephone companies"); *FCC v. League of Women Voters of California*, 468 U.S. 364, 378 (1984) ("Unlike common carriers, broadcasters are entitled under the First Amendment to exercise the widest journalistic freedom consistent with their public duties." (alteration and internal quotation marks omitted)); *Columbia Broadcasting System, Inc. v. Democratic National Committee*, 412 U.S. 94, 106 (1973) (noting that the Senate decided in passing the Communications Act "to eliminate the common carrier obligation" for broadcasters because "it seemed unwise to put the broadcaster under the hampering control of being a common carrier and compelled to accept anything and everything that was offered him so long as the price was paid" (quoting 67 Cong. Rec. 12,502 (1926))). The Supreme Court has explained that the First Amendment comes "into play" only where "particular conduct possesses sufficient communicative elements," *Texas v. Johnson*, 491 U.S. 397, 404 (1989), that is, when an "intent to convey a particularized message [is] present, and in the surrounding circumstances the likelihood [is] great that the message would be understood by those who viewed it," *Spence v. Washington*, 418 U.S. 405, 410–11 (1974). The absence of any First Amendment concern in the context of common carriers rests on the understanding that such entities, insofar as they are subject to equal access mandates, merely facilitate the transmission of the speech of others rather than engage in speech in their own right.

As the Commission found, that understanding fully applies to broadband providers. In the Order, the Commission concluded that broadband providers "exercise little control over the content which users access on the Internet" and "allow Internet end users to access all or substantially all content on the Internet, without alteration, blocking, or editorial intervention," thus "display[ing] no such intent to convey a message in their provision of broadband Internet access services." 2015 Open Internet Order, 30 FCC Rcd. at 5869 ¶ 549. In turn, the Commission found, end users "expect that they can obtain access to all content available on the Internet, without the editorial intervention of their broadband provider." *Id*. Because "the accessed speech is not edited or controlled by the broadband provider but is directed by the end user," *id.* at 5869–70 ¶ 549, the Commission concluded that broadband providers act as "mere conduits for the messages of others, not as agents exercising editorial discretion subject to First Amendment protections," *id*. at 5870 ¶ 549. Petitioners provide us with no reason to question those findings.

Because the rules impose on broadband providers the kind of nondiscrimination and equal access obligations that courts have never considered to raise a First Amendment concern—i.e., the rules require broadband providers to allow "all members of the public who choose to employ such facilities [to] communicate or transmit intelligence of their own design and choosing," *Midwest Video*, 440 U.S. at 701 (internal quotation marks omitted)—they are permissible. Of course, insofar as a broadband provider might offer its own *content*—such as a news or weather site—separate from its internet access service, the provider would receive the same protection under the First Amendment as other producers of internet content. But the challenged rules apply only to the provision of internet access as common carriage, as to which equal access and nondiscrimination mandates present no First Amendment problem.

Petitioners and their amici offer various grounds for distinguishing broadband service from other kinds of common carriage, none of which we find persuasive. For instance, the rules do not automatically raise First Amendment concerns on the ground that the material transmitted through broadband happens to be speech instead of physical goods. Telegraph and telephone networks similarly involve the transmission of speech. Yet the communicative intent of the individual speakers who use such transmission networks does not transform the networks themselves into speakers. *See id.* at 700–01.

Likewise, the fact that internet speech has the capacity to reach a broader audience does not meaningfully differentiate broadband from telephone networks for purposes of the First Amendment claim presented here. Regardless of the scale of potential dissemination, both kinds of providers serve as neutral platforms for speech transmission. And while the extent of First Amendment protection can vary based on the content of the communications—speech on "matters of public concern," such as political speech, lies at the core of the First Amendment, *Snyder v. Phelps*, 562 U.S. 443, 451 (2011) (internal quotation marks omitted)—both telephones and the internet can serve as a medium of transmission for all manner of speech, including speech addressing both public and private concerns. The constitutionality of common carriage regulation of a particular transmission medium thus does not vary based on the potential audience size.

To be sure, in certain situations, entities that serve as conduits for speech produced by others receive First Amendment protection. In those circumstances, however, the entities are not engaged in indiscriminate, neutral transmission of any and all users' speech, as is characteristic of common carriage. For instance, both newspapers and "cable television companies use a portion of their available space to reprint (or retransmit) the communications of others, while at the same time providing some original content." *City of Los Angeles v. Preferred Communications, Inc.*, 476 U.S. 488, 494 (1986) (internal quotation marks omitted). Through both types of actions—creating "original programming" and choosing "which stations or programs to include in [their] repertoire"—newspapers and cable companies "seek[] to communicate messages on a wide variety of topics and in a wide variety of formats." *Id*.

In selecting which speech to transmit, newspapers and cable companies engage in editorial discretion. Newspapers have a finite amount of space on their pages and cannot "proceed to infinite expansion of . . . column space." *Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241, 257 (1974). Accordingly, they pick which articles and editorials to print, both with respect to original content and material produced by others. Those decisions "constitute the exercise of editorial control and judgment." *Id.* at 258. Similarly, cable operators necessarily make decisions about which programming to make available to subscribers on a system's channel space. As with newspapers, the "editorial discretion" a cable operator exercises in choosing "which stations or programs to include in its repertoire" means that operators "engage in and transmit speech." *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622, 636 (1994) (internal quotation marks omitted). The Supreme Court therefore applied intermediate First Amendment scrutiny to (but ultimately upheld) must-carry rules constraining the discretion of a cable company concerning which programming to carry on its channel menu. *See id.* at 661–62.

In contrast to newspapers and cable companies, the exercise of editorial discretion is entirely absent with respect to broadband providers subject to the Order. Unlike with the printed page and cable technology, broadband providers face no such constraints limiting the range of potential content they can make available to subscribers. Broadband providers thus are not required to make, nor have they traditionally made, editorial decisions about which speech to transmit. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5753 ¶ 347, 5756 ¶ 352, 5869–70 ¶ 549. In that regard, the role of broadband providers is analogous to that of telephone companies: they act as neutral, indiscriminate platforms for transmission of speech of any and all users.

Of course, broadband providers, like telephone companies, can face capacity constraints from time to time. Not *every* telephone call will be able to get through instantaneously at every moment, just as service to websites might be slowed at times because of significant network demand. But those kinds of temporary capacity constraints do not resemble the structural limitations confronting newspapers and cable companies. The latter naturally occasion the exercise of editorial discretion; the former do not.

If a broadband provider nonetheless were to *choose* to exercise editorial discretion—for instance, by picking a limited set of websites to carry and offering that service as a curated internet experience—it might then qualify as a First Amendment speaker. But the Order itself excludes such providers from the rules. The Order defines broadband internet access service as a "mass-market retail service"—i.e., a service that is "marketed and sold on a standardized basis"—that "provides the capability to transmit data to and receive data from all or substantially all Internet endpoints." 2015 Open Internet Order, 30 FCC Rcd. at 5745–46 ¶ 336 & n.879. That definition, by its terms, includes only those broadband providers that hold themselves out as neutral, indiscriminate conduits. Providers that may opt to exercise editorial discretion—for instance, by offering access only to a limited segment of websites specifically catered to certain content—would not offer a standardized service that can reach "substantially all" endpoints. The rules therefore would not apply to such providers, as the FCC has affirmed. *See* FCC Br. 81, 146 n.53.

With standard broadband internet access, by contrast, there is no editorial limitation on users' access to lawful internet content. As a result, when a subscriber uses her broadband service to access internet content of her own choosing, she does not understand the accessed content to reflect her broadband provider's editorial judgment or viewpoint. If it were otherwise—if the accessed content were somehow imputed to the broadband provider—the provider would have First Amendment interests more centrally at stake. *See Forum for Academic & Institutional Rights*, 547 U.S. at 63–65; *PruneYard Shopping Center v. Robins*, 447 U.S. 74, 86–88 (1980). But nothing about affording indiscriminate access to internet content suggests that the broadband provider *agrees* with the content an end user happens to access. Because a broadband provider does not—and is not understood by users to—"speak" when providing neutral access to internet content as common carriage, the First Amendment poses no bar to the open internet rules.

VIII.

For the foregoing reasons, we deny the petitions for review.

So ordered.

WILLIAMS, *Senior Circuit Judge*, concurring in part and dissenting in part: I agree with much of the majority opinion but am constrained to dissent. In my view the Commission's Order must be vacated for three reasons:

I. The Commission's justification of its switch in classification of broadband from a Title I information service to a Title II telecommunications service fails for want of reasoned decisionmaking. (a) Its assessment of broadband providers' reliance on the now-abandoned classification disregards the record, in violation of its obligation under *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). Furthermore, the Commission relied on explanations contrary to the record before it and failed to consider issues critical to its conclusion. *Motor Vehicles Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). (b) To the extent that the Commission relied on changed factual circumstances, its assertions of change are weak at best and linked to the Commission's change of policy by only the barest of threads. (c) To the extent that the Commission justified the switch on the basis of new policy perceptions, its explanation of the policy is watery thin and self-contradictory.

II. The Commission has erected its regulatory scheme on two statutory sections that would be brought into play by reclassification (if reclassification were supported by reasoned decisionmaking), but the two statutes do not justify the rules the Commission has adopted.

Application of Title II gives the Commission authority to apply § 201(b) of the Communications Act, 47 U.S.C. § 201(b). The Commission invokes a new interpretation of § 201 to sustain its ban on paid prioritization. But it has failed to offer a reasonable basis for that interpretation. Absent such a basis, the ban is not in accordance with law. 5 U.S.C. § 706(2)(A) & (C).

Application of Title II also removes an obstacle to most of the Commission's reliance on § 706 of the Telecommunications Act of 1996, 47 U.S.C. § 1302, namely any rules that have the effect of treating the subject firms as common carriers. See *Verizon Communications Inc. v. Federal Communications Commission*, 740 F.3d 623, 650 (2014). But the limits of § 706 itself render it inadequate to justify the ban on paid prioritization and kindred rules.

I discuss § 201(b) and § 706 in subparts A and B of part II.

III. The Commission's decision to forbear from enforcing a wide array of Title II's provisions is based on premises inconsistent with its reclassification of broadband. Its explicit refusal to take a stand on whether broadband providers (either as a group or in particular instances) may have market power manifests not only its doubt as to whether it could sustain any such finding but also its pursuit of a "Now you see it, now you don't" strategy. The Commission invokes something very like market power to justify its broad imposition of regulatory burdens, but then finesses the issue of market power in justifying forbearance.

Many of these issues are closely interlocked, making it hard to pursue a clear expository path. Most particularly, the best place for examining the Commission's explanation of the jewel in its crown—its ban on paid prioritization—is in discussion of its new interpretation of 47 U.S.C. § 201. But that explanation is important for understanding the Commission's failure to meet its obligations under *Fox Television*, above all the obligation to explain why such a ban promotes the "virtuous cycle," which (as the majority observes) is the primary justification for reclassification under Title II. Thus a discussion critical to part I of this opinion is deferred to part II. I ask the reader's indulgence for any resulting confusion.

* * *

I should preface the discussion by acknowledging that the Commission is under a handicap in regulating internet access under the Communications Act of 1934 as amended by the Telecommunications Act of 1996. The first was designed for regulating the AT&T monopoly, the second for guiding the telecommunications industry from that monopoly into a competitive future. The 1996 Act begins by describing itself as:

> An Act [t]o promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.

Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56. Two central paradoxes of the Commission's position are (1) its use of an Act intended to "reduce regulation" to instead increase regulation, and (2) its coupling adoption of a dramatically new policy whose rationality seems heavily dependent on the existing state of competition in the broadband industry, under an Act intended to "promote competition," with a resolute refusal even to address the state of competition. In the Commission's words, "Thus, these rules do not address, and are not designed to deal with, the acquisition or maintenance of market power or its abuse, real or potential." Order ¶ 11 n.12.

I

I agree with the majority that the Commission's reclassification of broadband internet as a telecommunications service may not run afoul of any statutory dictate in the Telecommunications Act. But in changing its interpretation, the Commission failed to meet the modest requirements of *Fox Television*.

Fox states that an agency switching policy must as always "show that there are good reasons for the new policy." 556 U.S. at 515. But in special circumstances more is required. An "agency need not always provide a more detailed justification than what would suffice for a new policy created on a blank slate. [But s]ometimes it must—when, for example, its new policy rests upon factual findings that contradict those which underlay its prior policy; or when its prior policy has engendered serious reliance interests that must be taken into account." *Id*.

Here the Commission justifies its decision on two bases: changed facts and a new policy judgment. To the extent it rests on new facts, *Fox* requires us to examine whether there is really anything new. *Fox* also, of course, requires us to consider reliance interests, regardless of what the Commission has said about them. Thus novel facts and reliance interests are plainly at issue. The Commission also argues that its policy change would be reasonable even if the facts had not changed. Order ¶ 360 n.993 ("[W]e clarify that, even assuming, *arguendo*, that the facts regarding how [broadband] is offered had not changed, in now applying the Act's definitions to these facts, we find that the provision of [broadband] is best understood as a telecommunications service, as discussed [elsewhere] . . . and disavow our prior interpretations to the extent they held otherwise."). In sum then, at a minimum, we must inquire whether the Commission gave reasonable attention to petitioners' claims of reliance interests, how much the asserted factual change amounts to, and finally whether the Commission has met the minimal burden of showing "that there are good reasons for the new policy." I address them in that order.

(a) *Reliance*. The Order deals with reliance interests summarily, noting, "As a factual matter, the regulatory status of broadband internet access service appears to have, at most, an indirect effect (along with many other factors) on investment." Order ¶ 360. The Commission's support for the conclusion is weak and its pronouncement superficial.

To the extent that the Commission's judgment relies on the presence of "many other factors," it relies on an irrelevance. The proposition that "many other factors" affect investment is a truism. In a complex economy there will be few phenomena that are entirely driven by a single variable. Investment in broadband obviously reflects such matters as market saturation, the cost of capital, obsolescence, technological innovation, and a host of macroeconomic variables. Put more generally, the presence of causal factors X and Y doesn't show the irrelevance of factor Z. The significance of these factors tells us little about how much the relatively permissive regime that has hitherto applied accounts for the current robust broadband infrastructure. At least in general terms, the Commission elsewhere seems to answer that the old regime accounts for much. In an introductory paragraph it commends "the 'light-touch' regulatory framework that has facilitated the tremendous investment and innovation on the Internet." Order ¶ 5.

For its factual support, the Commission essentially lists several anecdotes about what happened to stock prices and what corporate executives said about investment in response to Commission proposals for regulatory change. For example, the Order notes that, after the Commission proposed tougher rules, the stocks of telecommunications companies outperformed the broader market. Order ¶ 360. This might be interesting if the Commission had performed a sophisticated analysis trying to hold other factors constant. In the absence of such an analysis, the evidence shows only that the threat of regulation was not so onerous as to precipitate radical stock market losses. The Order also has a quotation from the Time Warner Cable COO saying, in response to an FCC announcement of possible Title II classification (accompanied by some vague Commission assurances), "So . . . *yes, we will continue to invest*." *Id.* n.986 (emphasis added by the Commission). Citation of this remark would be an apt response to a strawman argument that there would have been *no* investment in broadband if the new rules had always applied, but not to the argument that a significant portion of the current investment was made in reliance on the old regime. Further, it is reasonable to expect that corporate executives—with their incentives to enhance the firm's appearance as an attractive investment opportunity and thus to keep its cost of capital down—would take the most favorable view of a new policy consistent with their obligations to investors not to paint too rosy a picture.

A more important (and logically prior) question is why this evidence matters at all. I take *Fox*'s position on reliance interests to be addressed to both fairness and efficiency. If a regulatory switch will significantly undercut the productivity and value of past investments, made in reasonable reliance on the old regime, rudimentary fairness suggests that the agency should take that into account in evaluating a possible switch. And a pattern of capricious change would undermine any agency purpose of encouraging future investment on the basis of new rules. But the effect of past policy on past investment is quite different from future levels of investment. For example, the Environmental Protection Agency's new regulations on coal-fired power plants very well might spur investment in energy by making legacy coal-fired plants less feasible to operate, thus encouraging investment in renewable energy to replace them. But that tells us little about whether the prior regulations on coal-fired plants and their alternatives, adjusted in light of reasonably foreseeable change, had a material impact on prior energy investments.

The Commission also argues that "the regulatory history regarding the classification of broadband Internet access service would not provide a reasonable basis for assuming that the service would receive sustained treatment as an information service in any event." Order ¶ 360. In short, the Commission says that reliance was not reasonable. The statement misreads the history of the classification of broadband. In March 2002, the Commission classified cable broadband as an information service, see *In the Matter of Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities* (the "*Cable Modem Declaratory Ruling*"), 17 F.C.C. Rcd. 4798 (2002); soon after that Order was affirmed by the Supreme Court in *National Cable & Telecommunications Ass'n v. Brand X Internet Service*, 545 U.S. 967 (2005), the Commission reclassified the transmission component of DSL service as an information service as well. See *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities et al.* (the "*Wireline Broadband Classification Order*"), 20 F.C.C. Rcd. 14853 (2005). The Commission continued to hold that view until 2010, when in the 2010 Notice, Notice of Inquiry, *Framework for Broadband Internet Service*, 25 F.C.C. Rcd. 7866 (2010), it sought comment on reclassification (though rejecting it in the ultimate 2010 Order). I'm puzzled at the Commission's implicit claim, Order ¶ 360, that *judicial* uncertainly—dating back to the 9th Circuit's 2000 decision in *AT&T Corp. v. City of Portland*, 216 F.3d 871 (9th Cir. 2000), reading the statute to compel classification as a telecommunications service—

made it unreasonable for firms investing in provision of internet access to think that the Commission would persist in its longheld commitment. The Commission offered fierce resistance to the 9th Circuit decision, resistance that culminated in its success in *Brand X*. It seems odd, in this context, to discount firms' reliance on the Commission's own assiduously declared views.

According to data that Commission itself uses, Order ¶ 2, broadband providers invested $343 billion[1] during the five years after *Brand X*, from 2006 through 2010. This amounts to about $3,000 on average for every American household. U.S. Census Bureau, Quickfacts, https://www.census.gov/quickfacts/table/PST045215/00.[2] For the Commission to ignore these sums as investment in reliance on its rules is to say it will give reliance interests zero weight.

No one supposes that firms' past investment in reliance on a set of rules should give them immunity to regulatory change. But *Fox* requires an agency at least to make a serious assessment of such reliance. The Commission has failed to do so.

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[1] Broadband Investment – Historical Broadband Provider Capex, United States Telecom Association, available at https://www.ustelecom.org/broadband-industry-stats/investment/historical-broadband-provider-capex.

[2] This uses the average number of households between 2010 and 2014 (116 million), which gives an average of $2,951 per household. Between 2006 and 2010, there were fewer households, so the average is likely above $3,000 per household.

(b) *Changed facts*. The Commission identifies two changes, neither of which seems very radical or logically linked to the new regime. First, it argues that consumers now use broadband "to access third party content, applications and services." Order ¶¶ 330, 346-47. But that is nothing new. In the Order from well over a decade ago that *Brand X* affirmed, the Commission said that consumers "may obtain many functions from companies with whom the cable operator has not even a contractual relationship" instead of from their cable internet service provider. *Declaratory Ruling and Notice of Proposed Rulemaking*, 17 F.C.C. Rcd. 4798 ¶¶ 25, 38 & n.153 (2002) ("*Declaratory Ruling*").

Second, the Order points to the emphasis that providers put on the "speed and reliability of transmission separately from and over" other features. Order ¶¶ 330, 351. Again, there is nothing new about these statements from broadband providers, who have been advertising speed for decades. See Dissenting Statement of Commissioner Ajit Pai to Order ("Pai Dissent") at 357-58; Dissenting Statement of Commissioner Michael O'Rielly to Order at 391. As Justice Scalia put it in an undisputed segment of his *Brand X* dissent, broadband providers (like pizzerias) "advertise[] quick delivery" as an "advantage[] over competitors." 545 U.S. at 1007 n.1 (Scalia, J., dissenting).

At no point does the Commission seriously try to quantify these alleged changes in the role or speed of internet service providers. Even if there were changes in degree in these aspects of the internet, the Commission doesn't explain why an increase in consumer access to third-party content, or an increase in competition to offer high-speed service, would make application of Title II more appropriate as a policy matter now than it was at the time of the *Declaratory Ruling* at issue in *Brand X*.

I confess I do not understand the majority's view that the section of *Fox* on changed circumstances, quoted above, is not triggered so long as the agency's current view of the circumstances is sustainable. Maj. Op. 47. Whatever the soundness of such a view, it seems inapplicable where, as here, the agency explicitly invokes changed circumstances: "Changed factual circumstances cause us to revise our earlier classification of broadband Internet access service." Order ¶ 330.

(c) *New reasoning*. Perhaps recognizing the frailty of its claims of changed facts, the Commission tries to cover its bases by switching to the alternative approach set forth in *Fox*, a straightforward disavowal of its prior interpretation of the 1996 Act and related policy views. See, e.g., Order ¶ 360 n.993.

The Commission justifies its reclassification almost entirely in terms of arguments that provision of such services as DNS and caching, when provided by a broadband provider, do not turn the overall service into an "information service." Rather, those functions in its view fit within § 153(24)'s exception for telecommunications systems management. Order ¶ 365-81. Thus, the Commission set for itself a highly technical task of classification, concluding that broadband internet access could fit within the literal terms of the pertinent statutory sections. And it accomplished the task. That it could do so is hardly surprising in view of the broad leeway provided by *Brand X*, which gave it authority to reverse the policy judgment it had made in the decision there under review, the *Declaratory Ruling*.

But in doing so the Commission performed *Hamlet* without the Prince—a finding of market power or at least a consideration of competitive conditions. The *Declaratory Ruling* sustained in *Brand X* invoked serious economic propositions as the basis for its conclusion. For example, the *Brand X* majority noted that in reaching its initial classification decision the Commission had concluded that "broadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market." *Id.* ¶ 5, quoted by *Brand X*, 545 U.S. at 1001 (internal quotation marks omitted). But the Commission has now discovered, for reasons still obscure, that a "minimal regulatory environment," far from promoting investment and innovation, retards them, so that the Commission must replace that environment with a regime that is far from "minimal."

And when parties claimed that the *Declaratory Ruling* was inconsistent with the Commission's decision to subject facilities-based enhanced services providers to an obligation to offer their wires on a common-carrier basis to competing enhanced-services providers, *In re Amendment of Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry)*, 104 F.C.C. 2d 958, 964 ¶ 4 (1986), the *Brand X* Court responded by looking to the policy reasons that the Commission itself had invoked, reasons grounded in concern over monopoly. The Court said:

> In the *Computer II* rules, the Commission subjected facilities-based providers to common-carrier duties not because of the nature of the "offering" made by those carriers, but rather because of the concern that local telephone companies would abuse the monopoly power they possessed by virtue of the "bottleneck" local telephone facilities they owned. . . . The differential treatment of facilities-based carriers was therefore a function not of the definitions of "enhanced service" and "basic service," but instead of a choice by the Commission to regulate more stringently, in its discretion, certain entities that provided enhanced service.

545 U.S. at 996. Thus the Court recognized the Commission's practice of regarding risks of "abuse [of] monopoly power" as pivotal in *Computer II*. While the 1996 Act by no means conditions classification under Title II on a finding of market power, *Brand X* shows that the Court recognized the relevance of market power to the Commission's classification decisions. See *Declaratory Ruling* ¶ 47 (resting the classification decision in part on the desire to avoid "undermin[ing] the goal of the 1996 Act to open all telecommunications markets to competition").

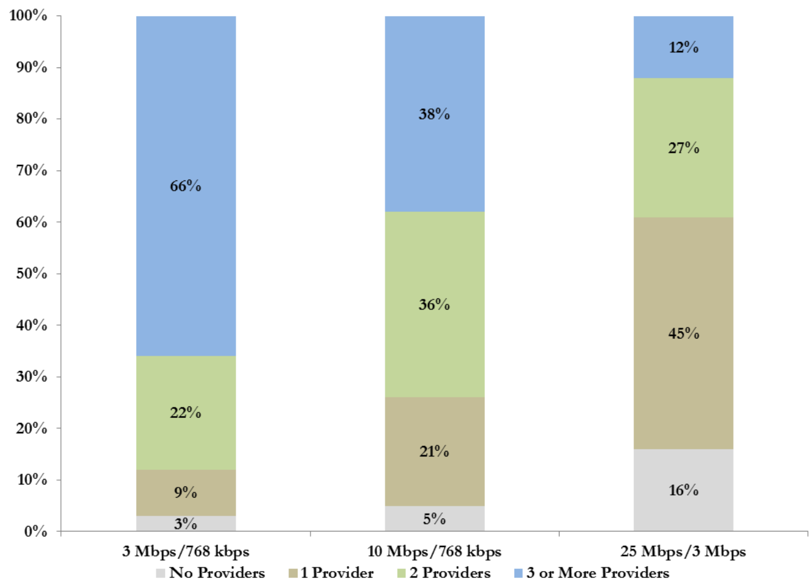
Of course the Court's citation of these instances of Commission reliance on the economic and social values associated with competition are just examples brought to our attention by *Brand X*. In addressing activities on the periphery of highly monopolized telephone service, the Commission has for nearly four decades made the presence or prospect of competition the touchstone for refusal to apply Title II. The *Computer II* decision, for example, says of the *Computer I* decision, "A major issue was whether communications common carriers should be permitted to market data processing services, and if so, what safeguards should be imposed to insure that the carriers would not engage in anti-competitive or discriminatory practices." *In re Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, 77 F.C.C. 2d 384, 389-90 ¶ 15 (1980) ("*Computer II*"). In the *Computer II* decision, it is hard to go more than a page or so without encountering discussion of competition. The decision concludes that, "In view of all of the foregoing evidence of an effective competitive situation, we see no need to assert regulatory authority over data processing services." *Id*. at 433, ¶ 127. The competitiveness of the market was in large part what the inquiry was *about*. See Jonathan E. Nuechterlein & Philip J. Weiser, *Digital Crossroads* 190-91

(2d ed. 2013) (explaining link of *Computer II*'s unbundling rules to FCC's concern over monopoly).

Yet in the present Order the Commission contradicted its prior strategy and explicitly declined to offer any market power analysis: "[T]hese rules do not address, and are not designed to deal with, the acquisition or maintenance of market power or its abuse, real or potential." Order ¶ 11 n.12. In fact, as we'll see, many of the Commission's policy arguments assert what sound like claims of market power, but without going through any of the fact-gathering or analysis needed to sustain such claims.

The Order made no finding on market power; in order to do so it would have to answer a number of basic questions. Most notably, as shown in Figure 1 below, there are a fairly large number of competitors in most markets, with 74% of American households having access to at least two fixed providers giving speeds greater than 10 Mbps and 88% with at least two fixed providers giving access to service at 3 Mbps. *In re Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable & Timely Fashion, & Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 30 F.C.C. Rcd. 1375 ¶ 83 (2015) ("*2015 Broadband Report*"). Furthermore, 93% of Americans have access to three or more mobile broadband providers—access which at least at the margin must operate in competition with suppliers of fixed broadband. *In re Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993: Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Seventeenth Report*, 29 F.C.C. Rcd. 15311 ¶ 51, Chart III.A.2 (2014).

Figure 1: American Households' Access to
Fixed Broadband Providers



Source: *2015 Broadband Report*, Chart 2.

The Commission emphasizes how few people have access to 25 Mbps, but that criterion is not grounded in any economic analysis. For example, Netflix—a service that demands high speeds—recommends only 5 Mbps for its high-definition quality service and 3 Mbps for its standard definition quality. Netflix, *Internet Connection Speed Recommendations*, https://help.netflix.com/en/node/306. A likely explanation for why there has not been more rollout of higher speeds is that many people are reluctant to pay the extra price for it. Indeed, the *2015 Broadband Report* indicates that fewer than 30% of customers for whom 25 Mbps broadband is available actually order it. *2015 Broadband Report* ¶ 41 (including Table 3 and Chart 1).

That many markets feature few providers offering service at 25 Mbps or above is hardly surprising. In a competitive world of rapidly improving technology, it's unreasonable to expect that all firms will simultaneously launch the breakthrough services everywhere, especially in a context in which more than 70% of the potential customers decline to use the latest, priciest service.

The Commission established the 25 Mbps standard in its *2015 Broadband Report* ¶ 45. Its explanations seem superficial at best. For example, it relies on the marketing materials of broadband providers touting the availability and benefits of speeds at or greater than 25 Mbps. *Id.* ¶ 28. Perhaps the authors of the Order have never had the experience of a salesperson trying to sell something more expensive than the buyer inquired about—and, not coincidentally, more lucrative for the salesperson. The Commission also justifies the standard by arguing that 10 Mbps would be insufficient to "participate in an online class, download files, and stream a movie at the same time" and to "[v]iew 2 [high-definition] videos." *Id.* ¶ 39. This is like setting a standard for cars that requires space for seven passengers. The data seem to suggest that many American families are unwilling to pay the extra to be sure that all members can have continuous, simultaneous, separate access to high-speed connectivity (perhaps some of them read? engage in conversation?). The fact that the Commission strains so much to justify its arbitrary criterion shows how out of line with reality such a criterion is. The weakness of the Commission's reasoning suggests that its main purpose in setting the "standard" may simply be to make it appear that millions of Americans are at the mercy of only one supplier, or at best two, for critically needed access to the modern world. All without bothering to conduct an economic analysis!

Of course, if the Commission had assessed market power, it would have needed to define the relevant market, to understand the extent to which providers of different speeds and different services compete with each other. When defining markets for purposes of assessing competition, the Department of Justice and Federal Trade Commission use the "small but significant and non-transitory increase in price" ("SSNIP") test. The test tries to determine whether a market actor can benefit from a hypothetical increase in price, indicating market power. U.S. Department of Justice and the Federal Trade Commission, *Horizontal Merger Guidelines* 9 (2010) ("*Horizontal Merger Guidelines*"). But the Commission did not conduct such a test, and we cannot say how it would come out.

Because broadband competition is geographically specific, simple market share data at a national level are of limited value. But firms that provide service to large numbers of consumers, albeit not everywhere, seem likely to rank as potential competitors quite broadly. With these limits in mind, we can look at U.S. subscriber numbers for each of the firms in the market, Leichtman Research, *About 645,000 Add Broadband in the Third Quarter of 2015*, http://www.leichtmanresearch.com/press/111715release.html, and construct a Herfindahl–Hirschman Index, which in fact is 1,445 points. This level is in the Department of Justice's Range for "Unconcentrated Markets"—that is, markets where no firm has market power. *Horizontal Merger Guidelines* at 18-19. I report below the data used to construct the index. In fact, this number is biased upward (and thus biased toward finding market power), since the data for several smaller companies are grouped as if for only one, making it seem as if there is more concentration than there in fact is.

Similarly, the Commission scoffs at what it regards as low turnover in customers' use of mobile service providers, but the rate of turnover actually looks quite substantial. The Commission points to average monthly churn rates of 1.56% in mobile broadband across four leading providers. Order ¶ 98 n.211. Assuming that a single person does not switch more than once in a year, that rate of churn means that 18.72% of customers switch providers each year, suggesting quite robust competition. Interestingly, the Commission is especially hard on declines in churn rate, *id.*, which in the absence of increased concentration or some new obstacle to switching might well suggest increased consumer satisfaction.

To bolster its switching data claims, the Commission points to documents in which parties to the rulemaking make conclusory assertions purportedly showing that 27 percent of mobile broadband consumers do not switch though "dissatisfied" with their current carriers. Order ¶ 98. Without a plausible measure of "dissatisfaction" (none is offered), the number is meaningless.

Table 1: Fixed Broadband Subscribers by Provider

	Subscribers	
	Number	Percent
Cable Companies		
Comcast	22,868,000	25.55%
Time Warner Cable	13,016,000	14.54%
Charter	5,441,000	6.08%
Cablevision	2,784,000	3.11%
Suddenlink	1,202,400	1.34%
Mediacom	1,067,000	1.19%
WOW (WideOpenWest)	712,300	0.80%
Cable ONE	496,865	0.56%
Other Major Private Cable Companies	6,675,000	7.46%
Total Cable	54,262,565	60.62%
Telephone Companies		
AT&T	15,832,000	17.69%
Verizon	9,223,000	10.30%
CenturyLink	6,071,000	6.78%
Frontier	2,415,500	2.70%
Windstream	1,109,600	1.24%
FairPoint	313,982	0.35%
Cincinnati Bell	281,300	0.31%
Total Telephone	35,246,382	39.38%
Total Broadband	89,508,947	100.00%

Source: Leichtman Research.

Even though never making any finding on market power, the Commission seems almost always to speak of fixed and mobile broadband separately. Of course to a degree the statute requires this. But if the Commission were the least bit serious about the market dysfunction that might provide support for its actions, it would consider competition between the two. The frequent articles in the conventional press about fixed broadband customers' "cutting the cord" in favor of complete reliance on mobile suggests it would be an interesting inquiry.

None of the above is intended to suggest that the Commission could not have made a sustainable finding that every firm in every relevant market has market power. My aim is simply to make two points: (1) that such a degree of market power cannot be assumed, as the Commission itself seems to acknowledge in its disclaimer of interest in market power, Order ¶ 11 n.12; and (2) that the Commission's reliance on consumers' "high switching costs," *id.* ¶ 81 (discussed below in part II), which is an implicit assertion that the providers have market power, poses an empirical question that is susceptible of resolution and is in tension with the Commission's assertion that it is not addressing "market power or its abuse, real or potential."

In a move evidently aimed at circumventing the whole market power issue (despite Title II's origin as a program for monopoly regulation), the Commission rests on its "virtuous cycle" theory, to wit the fact that "innovations at the edges of the network enhance consumer demand, leading to expanded investments in broadband infrastructure that, in turn, spark new innovations at the edge." Order ¶ 7. The Commission clearly expects the policy adopted here to cause increases in broadband investment.

I see no problem with the general idea. Indeed, it seems to me it captures an important truth about any sector of the economy. Though the subsectors may compete over rents, the prosperity of each subsector depends on the prosperity of the others—at least it does so unless some wholly disruptive technology replaces one of the subsectors. American wheat producers, American railroads, steamship lines, and wheat consumers around the globe participate in a virtuous cycle; medical device inventors, hospitals, doctors, and patients participate in a virtuous cycle. Innovation, to be sure, is especially robust in the information technology and application sectors, but a mutual relationship between subsectors pervades the economy.

There is an economic classification issue that the Commission does not really tackle: whether broadband internet access is like transportation or is a platform in a two-sided market, i.e., a business aiming to "facilitate interactions between members of . . . two distinct customer groups," David S. Evans & Richard Schmalensee, *The Industrial Organization of Markets with Two-Sided Platforms*, 3 COMPETITION POLICY INTERNATIONAL 151, 152 (2007), which in this case would be edge providers and users. (Two-sided markets are barely discussed at all, with the only mentions of any sort in the Order at ¶¶ 151 n.363, 338 & n.890, 339 n.897.) Although the Commission seems at one point to characterize broadband internet access as a two-sided market, see *id.* ¶ 338, it nowhere develops any particular consequences from that classification or taps into the vast scholarly treatment of the subject. The answer to the question may well shed light on the reasonableness of the regulations, but in view of the Commission's non-reliance on the distinction we need not go there.

I do not understand the Commission to claim that its new rules will have a *direct positive* effect on investment in broadband. The positive effect is expected from the way in which, in the Commission's eyes, the new rules encourage demand for and supply of content, which it believes will indirectly spur demand for and investment in broadband access.

The direct effect, of which the Commission doesn't really speak, seems unequivocally negative, as petitioner United States Telecom Association ("USTA") argues. USTA Pet'rs' Br. 4 ("Individually and collectively, these rules will undermine future investment by large and small broadband providers, to the detriment of consumers."); see also *id*. 54. Besides imposing the usual costs of regulatory compliance, the Order increases uncertainty in policy, which both reason and the most recent rigorous econometric evidence suggest reduce investment. Scott R. Baker, Nicholas Bloom & Steven J. Davis, *Measuring Economic Policy Uncertainty*, 131 QUARTERLY JOURNAL OF ECONOMICS (forthcoming 2016). (Though the paper is focused on economy-wide policy uncertainty and effects, it is hard to see why the linkage shown would not apply in an industry-specific setting.) In fact, the Order itself acknowledges that vague rules threaten to "stymie" innovation, Order ¶ 138, but then proceeds to adopt vague rules.

Here, a major source of uncertainty is the Internet Conduct Standard, which forbids broadband providers to "unreasonably interfere with or unreasonably disadvantage" consumer access to internet content. 47 C.F.R. § 8.11. All of these terms—"unreasonably," "interfere," and "disadvantage"—are vague ones that increase uncertainty for regulated parties. Indeed, the FCC itself is uncertain what the policy means, as indicated by the FCC Chairman's admission that even he "do[esn't] really know" what conduct is proscribed. February 26, 2015 Press Conference, *available at* http://goo.gl/oiPX2M (165:30-166:54). The Commission does announce a "nonexhaustive list" of seven factors to be used in assessing providers' practices, including "end-user control," "consumer protection," "effect on innovation," and "free expression." Order ¶¶ 138-45. But these factors themselves are vague and unhelpful at resolving the uncertainty.

The Commission made an effort to palliate the negative effect of its "standards" by establishing a procedure for obtaining advisory opinions. Order ¶¶ 229-39. It delegated authority to issue such opinions to its Enforcement Bureau, perhaps thereby telegraphing its general mindset on how broadly it intends its prohibitions to be read. But the Bureau has complete discretion on whether to provide an answer at all. Order ¶ 231. Further, any advice given will not provide a basis for longterm commitments of resources: the Bureau is free to change its mind at will, and as the opinions will be issued only at the staff level, the Commission reserves its freedom to act contrary to the staff's conclusions at any time. Order ¶ 235. I do not understand this to mean that the Commission will seek penalties against parties acting in reliance on an opinion while it is still in effect, but parties in receipt of a favorable opinion are on notice that they may be forced to shut down a program the minute the Bureau reverses itself or the Commission countermands the Bureau.

Besides affording rather fragile assurance, the advisory process promises to be slow. "[S]taff will have the discretion to ask parties requesting opinions, as well as other parties that may have information relevant to the request or that may be impacted by the proposed conduct, for additional information." *Id.* ¶ 233. Given these possible information requests from various parties, including adverse ones, it is unsurprising that the Commission is unwilling to give any timeliness commitment, explicitly "declin[ing] to establish any firm deadlines to rule on [requests for advisory opinions] or issue response letters." *Id*. ¶ 234.

The palliative effect of these procedures may be considerable for the very large service providers. They are surely accustomed to having their lawyers suit up, research all the angles, participate in proceedings after notice has been given to all potentially adversely affected parties, and receive, after an indefinite stretch, a green light or a red one. For the smaller fry, the internet service provider firms whose growth is likely to depend on innovative business models (precisely the sort that seem likely to run afoul of the Commission's broad prescriptions; see part II.B), the slow and costly advisory procedure will provide only a mild antidote to those prescriptions' negative effect. This of course fits the general pattern of regulation's being more burdensome for small firms than for large, as larger firms can spread regulation's fixed costs over more units of output. See Nicole V. Crain & W. Mark Crain, *The Impact of Regulatory Costs on Small Firms* 7 (2010). And in evaluating the impact on investment in broadband, which the Commission assures us the Order will stimulate, quality is surely relevant as well as quantity.

Further, given the breadth and vagueness of the standards, many of the acts for which firms are driven to seek advice will likely be rather picayune. As head of the Civil Aeronautics Board in its what proved to be its waning days, Alfred Kahn got a call in the middle of the night from an airline trying to find out whether its application to transport sheep from Virginia to England had been approved. "The matter was urgent, because the sheep were in heat!" Susan E. Dudley, *Alfred Kahn, 1917-2010, Remembering the Father of Airline Deregulation*, 34 REGULATION 8, 10 (2011). The internet we know wasn't built by firms requesting bureaucratic approval for every move.

Furthermore, 47 U.S.C. § 207, which applies to broadband providers once they are subject to Title II, increases uncertainty yet more. Section 207 allows "[a]ny person claiming to be damaged by any common carrier . . . [to] either make complaint to the Commission . . . , or . . . bring suit for the recovery of the damages for which such common carrier may be liable under the provisions of this chapter." In other words, reclassification exposes broadband providers to the direct claims of supposedly injured parties, further increasing uncertainty and risk. In short, the Order's probable direct effect on investment in broadband seems unambiguously negative.

As to the hoped-for indirect effect, the idea that it will be positive depends on the supposition that these new rules (the specific and the general) will cure some material problem, will avert some threat that either is now burdening the internet or could reasonably be expected to do so absent the Commission's intervention. Why, precisely, the observer wants to know, has the Commission repudiated the policy judgment it made in 2002, that "broadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market"? *Declaratory Ruling* ¶ 5. The answer evidently turns on the Commission's conclusion that broadband providers have indulged (or will indulge) in behavior that threatens the internet's "virtuous cycle." Indeed, the majority points to the need to reclassify broadband so that the Commission could promulgate the rules as the Commission's "'good reason' for [its] change in position," Maj. Op. 43, and indeed its only reason. But the record contains multiple reasons for thinking that the Commission's new rules will retard rather than enhance the "virtuous cycle," and the Commission's failure to answer those objections renders its decision arbitrary and capricious. I now turn to those arguments, first in the context of 47 U.S.C. §§ 201, 202 (part II.A) and then in the context of § 706 of the 1996 Act (part II.B).

II

Having reclassified broadband service under Title II, the Commission has relied on two specific provisions to sustain its actions: § 201(b) of the Communications Act, 47 U.S.C. § 201(b), and § 706 of the Telecommunications Act of 1996, 47 U.S.C. § 1302. The petitioners contend that neither provides adequate support for the Commission's actions. Furthermore, as just mentioned, the Commission's arguments here bear directly on the reasonableness of the reclassification decision itself.

A

Petitioners Alamo Broadband Inc. and Daniel Berninger ("Alamo-Berninger") argue that even if Title II could properly be applied to broadband service, that Title gives the Commission no authority to prohibit reasonable rate distinctions. Alamo-Berninger Br. 17-19. Berninger is a would-be edge provider working on new technology that he believes could provide much enhanced telephone service—but *only* if he could be assured that "latency, jitter, and packet loss in the transmission of a communication will [not] threaten voice quality and destroy the value proposition of a high-definition service." Declaration of Daniel Berninger, October 13, 2015, at 2. He is ready to pay for the assurance of high-quality service, and asserts that the Commission's ban on paid prioritization will obstruct successful commercial development of his innovation. Berninger appears to be exactly the sort of small, innovative edge provider that the Commission claims its Order is designed to assist. In the words of Shel Silverstein's children's song, "Some kind of help is the kind of help we all can do without."

For our purposes, of course, the question is whether, as the Alamo-Berninger brief argues, the section of the statute invoked by the Commission under Title II, namely § 201(b), authorizes the ban, or, more precisely, whether the Commission has offered any reasonable interpretation of § 201(b) that would encompass the ban.

A number of points by way of background: First, nothing in the Order suggests that the paid prioritization ban allows any exception for rate distinctions based on differing costs of transmission, time-sensitivity of the material transmitted, or congestion levels at the time of transmission, all variables historically understood to justify distinctions in rates. Alfred E. Kahn, *The Economics of Regulation* (1988), at 63 (different costs), 63-64 (different elasticities of demand, as would be reflected in time sensitivity), 88-94 (congestion). The Alamo-Berninger brief cites the FCC chairman's observation in Congress, "There is nothing in Title II that prohibits paid prioritization," Hearing before the Subcommittee on Communications and Technology of the United States House of Representatives Committee on Energy and Commerce, and Technology of the United States House Commission," Video at 44:56 (May 20, 2014), available at http://go.usa.gov/3aUmY, but that need not detain us. More important, general principles of public utility rate regulation have always allowed reasonable rate distinctions, with many factors determining reasonableness. Kahn, *The Economics of Regulation*, at 63 (noting that, "from the very beginning, regulated companies have been permitted to discriminate in the economic sense, charging different rates for various services"). But the ban adopted by the Commission prohibits rate differentials for priority handling regardless of factors that would render them reasonable under the above understandings. Although the Order provides for the possibility of waiver, it cautions, "An applicant seeking waiver relief under this rule faces a high bar. We anticipate granting such relief only in exceptional cases." Order ¶ 132.

Second, in a case discussing the terms "unjust" and "unreasonable" as used in § 201(b) and in its fraternal twin § 202(a), we said that those words "open[] a rather large area for the free play of agency discretion." *Orloff v. FCC*, 352 F.3d 415, 420 (D.C. Cir. 2003); see also *Global Crossing Telecomms., Inc. v. Metrophones Telecomms., Inc.*, 550 U.S. 45 (2007) (recognizing the Commission's broad authority to define "unreasonable practice[s]" under § 201(b)). But "large" is not infinite.

Third, in the order under review in *Orloff* the Commission focused on § 202 but mentioned § 201. We summarized it as holding that "if a practice is just and reasonable under § 202, it must also be just and reasonable under § 201." *Orloff*, 352 F.3d at 418 (citing *Orloff v. Vodafone AirTouch Licenses LLC d/b/a Verizon Wireless*, 17 F.C.C. Rcd. 8987, 8999 (2002) ("Defendants . . . offer[] the same defenses to the section 201(b) claim as they do to the section 202(a) claim. We reject Orloff's section 201(b) claim. As noted, section 201(b) declares unlawful only 'unjust or unreasonable' common-carrier practices. For the reasons discussed [regarding section 202(a)], we find Defendants' concessions practices to be reasonable.")).

Fourth, the Commission (at least for the moment) allows ISPs to provide *consumers* differing levels of service at differing prices. As it says in its brief, "The *Order* does not regulate rates—for example, broadband providers can (and some do) reasonably charge consumers more for faster service or more data." Commission Br. 133. The statement is true (for now) vis-à-vis rates to consumers. But the ban on paid prioritization obviously regulates rates—the rates paid by edge providers; it insists that the *incremental rate* for assured or enhanced quality of service must be zero. Although I cannot claim that the parties' exposition of the technology is clear to me, it seems evident that the factors affecting quality of delivery to a consumer include not only whatever service characteristics go into promised (and delivered) speed at the consumer end but also circumstances along the route. "Paid peering" (discussed below) would be unintelligible if it were otherwise.

With these background points in mind, I turn to the Commission's treatments of "unjust" and "unreasonable" under §§ 201 and 202. Its principal discussions of the concept have occurred in the context of § 202(a), which bars "any unjust or unreasonable discrimination in charges, practices. . . ," etc. Section § 201(b), relied on by the Commission here, is very similar but does not include the word "discrimination." § 201(b) ("All charges, practices, classifications, and regulations for and in connection with such communication service, shall be just and reasonable, and any such charge, practice, classification, or regulation that is unjust or unreasonable is declared to be unlawful . . . .") The Order's language explaining its view of § 201(b) doesn't mention this difference, so evidently the Commission's interpretation doesn't rely on it.

The Commission's decisions under § 202 have plainly recognized the permissibility of reasonable rate differences. In *In re Dev. of Operational, Tech. & Spectrum Requirements for Meeting Fed., State & Local Pub. Safety Agency Commc'n Requirements Through the Year 2010*, 15 F.C.C. Rcd. 16720 (2000), for example, the Commission issued an order declaring that premium charges for prioritized emergency mobile services were not unjust and unreasonable. In full accord with the usual understanding of rate regulation, the

Commission said, "Section 202 . . . does not prevent carriers from treating users differently; it bars only *unjust* or *unreasonable* discrimination. Carriers may differentiate among users so long as there is a valid reason for doing so." *Id*. at 16730-31(emphasis in original)). It reasoned that, "in emergency situations, non-[emergency] customers simply are not 'similarly situated' with [emergency] personnel" because "the ability of [the latter] to communicate without delays during emergencies is essential." *Id*. at 16731. Even when the Commission engages in full-scale rate regulation (which it purports to eschew in the Order), it explicitly recognizes that reasonable price differentials are appropriate where the services in question are unlike. See, e.g., *In re AT&T Communications Revisions to Tariff F.C.C. No. 12*, 6 F.C.C. Rcd. 7039 ¶ 8 (1991).

Tellingly, in its prioritized emergency mobile services decision the Commission did not see fit to discuss § 201 at all. The principle underlying the Commission's understanding of § 202 was a broad one—that allowance of differential rates based on "valid reasons" advances the public interest. Whatever explains the lack of any reference to § 201, the Commission's recognition that differential rates were not inherently unjust or unreasonable under § 202 requires, as a minimum of coherent reasoning, that it offer some explanation why the same words in § 201 should preclude such differentials. See *Orloff v. Vodafone AirTouch Licenses LLC d/b/a Verizon Wireless*, 17 F.C.C. Rcd. 8987, 8999 (finding reasonableness and justness under § 202 to be sufficient for finding the same under § 201). Of course this is no more than a recognition of the principle, prevailing throughout the era of federal regulation of natural monopolies, that it is just and reasonable that customers receiving extra speed or reliability should pay extra for it. A classic and pervasive example is the differential in natural gas transmission between firm and interruptible service. See, e.g., *Fort Pierce Utilities Auth. of*

City of Fort Pierce v. FERC, 730 F.2d 778, 785-86 (D.C. Cir. 1984).

I note that the ban here is simply on *differences* in rates, an issue normally addressed under statutory language barring discrimination. So it is at least anomalous that the Commission here relies on § 201(b), which says nothing about discrimination, rather than § 202(a), which does. The only reason I can discern is that the Commission's interpretation of § 202 was more clearly established, and obviously didn't ban reasonable discriminations. Accordingly, the Commission jumped over to § 201(b), about which it had said relatively little.

In the passage where the Order claims support from § 201(b), the Commission appears to acknowledge that it has never interpreted that section to support a sweeping ban on quality-of-service premiums, but, speaking of its anti-discrimination decisions (evidently under both §§ 201(b) and 202(a)), it says that "none of those precedents involved practices that the Commission has twice found threaten to create barriers to broadband development that should be removed under section 706." Order ¶ 292. This is an odd form of statutory interpretation. Finessing any effort to fit the agency action within the statutory *language*, it only claims that the banned practice threatens broadband deployment. Maybe the theory works, but it can do so only by a sturdy showing of how the banned conduct posed a "threat." As we'll see, the Commission has made no such showing, let alone a sturdy one.

Indeed, I can find no indication—and the Commission presents none—that any of the agencies regulating natural monopolies, such as the Interstate Commerce Commission, Federal Energy Regulatory Commission, or Federal Communications Commission—has ever attempted to use its mandate to assure that rates are "just and reasonable"[3] to invalidate a rate distinction that was not unreasonably discriminatory. To uproot over a century of interpretation—and with so little explanation—is truly extraordinary.

In its interpretation of § 201 the Commission rests its claim of a "threat" to the "virtuous cycle" theory mentioned above: "innovations at the edges of the network enhance consumer demand, leading to expanded investments in broadband infrastructure that, in turn, spark new innovations at the edge," Order ¶ 7, and the cycle repeats on and on.

The key question is what underlies the Commission's idea that a ban on paid prioritization will lead to more content, giving the cycle extra spin (or, equivalently, reducing the drag caused by paid prioritization). Order ¶ 7. In what way will an across-the-board ban on paid prioritization increase edge provider content (and thus consumer demand)? Or, putting it in terms of a "threat," how does paid prioritization threaten the flourishing of the edge provider community (and thus consumer demand, and thus broadband deployment)?

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[3] See, e.g., Interstate Commerce Act of 1887, 24 Stat. 379, § 1 ("All charges made for any service rendered or to be rendered in the transportation of passengers or property as aforesaid, or in connection therewith, or for the receiving, delivering, storage, or handling of such property, shall be reasonable and just; and every unjust and unreasonable charge for such service is prohibited and declared to be unlawful."); Federal Power Act, 16 U.S.C. § 824d ("All rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges shall be just and reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful.")

In fact, as we'll see, the Commission's hypothesis that paid prioritization has deleterious effects seems not to rest on any evidence or analysis. Further, the Order fails to address critiques and alternatives.

I look first to the support offered by the Commission for its claim. The Order asserts that "[t]he Commission's conclusion [that allowance of paid prioritization would disadvantage certain types of edge providers] is supported by a well-established body of economic literature, including Commission staff working papers." Order ¶ 126. This claim is, to put it simply, false. The Commission points to four economics articles, none of which supports the conclusion that all distinctions in rates, even when based on differentials in service, will reduce the aggregate welfare afforded by a set of economic transactions.[4] Indeed, the Commission plainly didn't look at the articles. None of them even addresses price distinctions calibrated to variations in quality of service; rather they are devoted to the sort of price differences addressed by the Robinson-Patman Act, 15 U.S.C. § 13, targeting sellers who sell the *same good* of the *same quality* at different prices. Three say that in some circumstances rules against price differentials *can* be beneficial (to repeat, the articles speak of rules against differentials *not* related to

[4] Michael L. Katz, *Price Discrimination and Monopolistic Competition*, 52 ECONOMETRICA 1453, 1453-71 (1984) ("*Price Discrimination*"); Michael L. Katz, *Non-Uniform Pricing, Output and Welfare under Monopoly*, 50 REV. ECON. STUD. 37, 37-56 (1983) ("*Output and Welfare*"); Michael L. Katz, *The Welfare Effects of Third-Degree Price Discrimination in Intermediate Good Markets*, 77 AM. ECON. REV. 154, 154-167 (1987); Yoshihiro Yoshida, *Third Degree Price Discrimination in Input Markets: Output and Welfare*, 90 AM. ECON. REV. 240, 240-246 (2000) ("*Third Degree Price Discrimination*").

quality of service), not that they *are* beneficial.[5] The fourth paper, still within the sphere of non-quality-related price distinctions, is still worse for the Commission, concluding that "a flat ban" on price discrimination (even assuming no differential in cost and quality, unlike the Commission rule) "could have adverse welfare consequences," and that "the analysis does not reveal whether there is any implementable form of regulation that would be welfare-improving." Katz, *The Welfare Effects*, at 165.

It is probably no coincidence that the author of three of these articles, Michael Katz, a former chief economist at the Commission, filed a declaration in this proceeding opposing the type of regulation adopted in the Order as overly broad, especially given that the behavior banned was at most responsible for only hypothetical harms. Protecting and Promoting Consumer Benefits Derived from the internet: Declaration of Michael L. Katz, July 15, 2014 ("Katz Declaration"), at 2-3. I will discuss his critique and the alternatives he offers shortly.

The Order also points to two old Commission reports that it claims support its argument. Order ¶ 126 n.297. They do not. One, Jay M. Atkinson & Christopher C. Barnekov, *A Competitively Neutral Approach to Network Interconnection*, OPP Working Paper Series, No. 34, at 15 (2000), deals with network interconnection pricing and advocates a "bill and

[5] Katz, *Price Discrimination*, at 1454 ("uniform pricing is more efficient than price discrimination when the number of uninformed consumers is small"); Katz, *Output and Welfare*, at 37 ("there may be scope for improving market performance through regulation" of price discrimination); Yoshida, *Third Degree Price Discrimination*, at 244 ("[i]n general, we cannot expect" the condition required for regulation to improve welfare to be true).

keep" system ("under which carriers split equally those costs that are solely incremental to interconnection, and recover all remaining costs from their own customers," according to the report, *id*. at ii). Unlike the articles cited, it does address variations in quality of service, but only to argue that the ability of one provider to lower its quality doesn't undermine the case for "bill and keep" because the quality-lowering provider will bear "the main impact itself." *Id*. at 20. This is an interesting proposition, but, assuming its truth, it doesn't connect in any obvious way to a flat ban on paid prioritization; if the Commission knows a way to make that connection, it hasn't revealed it.

The second, Gerald W. Brock, *Telephone Pricing to Promote Universal Service and Economic Freedom*, OPP Working Paper Series, No. 18 (1986), is an interesting consideration of the possible welfare losses that may follow from pricing that collects a high proportion of fixed costs from usage fees. As with the Atkinson & Barnekov paper, its connection to paid prioritization is unclear, and the Commission's opinion writers have made no effort even to identify a connection, much less explain it. In discussing a possible anti-discrimination rule, the paper posits one under which a firm may adopt "any combination of two-part tariffs, volume discounts, and so forth but is required to offer the same set of prices to all customers." *Id*. at 44. Although it isn't clear that the paper gives an endorsement to such a rule, such an endorsement would not support the Commission's ban on quality-of-service based differentials.

I apologize for taking the reader through this parade of irrelevancies. But it is on these that the Commission has staked its claim to analytical support for the idea that paid prioritization poses a serious risk to broadband deployment.

The Commission does point to episodes supposedly supporting its view that paid prioritization constitutes a significant threat. Order ¶ 69, 79 n.123. It is, however, merely pointing to a handful of episodes among the large number of transactions conducted by many broadband providers. Furthermore, neither in this Order nor in the 2010 Broadband Order, 25 F.C.C. Rcd. at 17915-26, ¶¶ 20-37, cited by this Order as support, Order ¶ 79 n.123, does the Commission sift through the evidence to show that any episode impaired the ability of the internet to maximize consumer satisfaction and the flourishing of edge providers in the aggregate, as opposed to harm to a particular edge provider. Nor does it show whether, if there was harm, a far narrower rule would not have handled the problem. (For example, if a broadband provider throttled an edge provider's content at the same time as the broadband provider provided similar content, then—assuming no justification—grounds for action against such behavior could be discerned. Compare § 616(a)(3) of the Communications Act, 47 U.S.C. § 536(a)(3).) In his dissent to the Order, Commissioner Pai, using terms perhaps feistier than would suit a court, summarized it as follows:

> The evidence of these continuing threats? There is none; it's all anecdote, hypothesis, and hysteria. A small ISP in North Carolina allegedly blocked VoIP calls a decade ago. Comcast capped BitTorrent traffic to ease upload congestion eight years ago. Apple introduced FaceTime over Wi-Fi first, cellular networks later. Examples this picayune and stale aren't enough to tell a coherent story about net neutrality. The bogeyman never had it so easy.

Pai Dissent at 333. And Judge Silberman's observations about the episodes marshalled to support the precursor order vacated in *Verizon* seem as applicable today as then:

> That the Commission was able to locate only four potential examples of such conduct is, frankly, astonishing. In such a large industry where, as Verizon notes, billions of connections are formed between users and edge providers each year, one would think there should be ample examples of just about any type of conduct.

Verizon, 740 F.3d at 664-65 (Judge Silberman, dissenting from the decision's dicta).

The short of it is that the Commission has nowhere explained why price distinctions based on quality of service would tend to impede the flourishing of the internet, or, conversely, why the status quo ante would not provide a maximum opportunity for the flourishing of edge providers as a group—or small innovative edge providers as a subgroup.

It gets worse. Having set forth the notion that paid prioritization poses a threat to broadband deployment—so much so as to justify jettisoning its historic interpretation of §§ 201(b), 202(a), and resting that notion on conclusory assertions of parties and irrelevant scholarly material—the Commission then fails to respond to criticisms and alternatives proposed in the record, in clear violation of the demands of *State Farm*, 463 U.S. at 43, 51.

I start with comments in the record explaining the problems that the ban on paid prioritization could cause in the broadband market. The comments suggest that by effectively banning pricing structures that could benefit some people substantially, but impose minimal (and seemingly quite justifiable) costs on others, the ban on paid prioritization could replace the virtuous cycle with a vicious cycle, in which regulatory overreach reduces the number and quality of services available, reducing demand for broadband, and in turn reducing the content and services available owing to the reduced number of users. Investment would suffer as the number of users declines (or fails to grow as it otherwise would have).

For example, the joint comment by the International Center for Law & Economics and TechFreedom paints a picture in which innovation and investment could be substantially harmed by the ban on paid prioritization:

> With most current [internet service] pricing models, consumers have little incentive or ability (beyond the binary choice between consuming or not consuming) to prioritize their use of data based on their preferences. In other words, the marginal cost to consumers of consuming high-value, low-bit data (like VoIP [transmitting voice over the internet], for example) is the same as the cost of consuming low-value, high-bit data (like backup services, for example), assuming neither use exceeds the user's allotted throughput. And in both cases, with all-you-can-eat pricing, consumers face a marginal cost of $0 (at least until they reach a cap). The result is that consumers will tend to over-consume lower-value data and under-consume higher-value data, and, correspondingly, content developers will over-invest in the former and under-invest in the latter. The ultimate result—the predictable consequence of mandated neutrality rules—is a net reduction in the overall value of content both available and consumed, and network under-investment.

Comments of International Center for Law & Economics and TechFreedom at 17 (July 17, 2014).

In other words, paid prioritization would encourage ISP innovations such as providing special speed for voice transmission (for which timeliness and freedom from latency and jitter—delays or variations in delay in delivery of packets—are very important), at little or no cost to services where timeliness (especially timeliness measured in milliseconds) is relatively unimportant. Similarly, pricing for extra speed would incentivize edge providers to innovate in technologies that enable their material to travel faster (or reduce latency or jitter) even in the absence of improved ISP technology. To be sure, usage caps (which are permissible for now under the Order) provide some incentive for edge providers to invest in innovations enabling faster transit without extra Mbps and thus enable their customers to enjoy more service at less risk of exceeding the caps. But the usage caps are a blunt instrument, as their burden is felt by all consumers, whereas the sort of pricing increment forbidden by the Commission would be focused (de facto) on the edge providers for whom speed and other quality-of-service features are especially important. Thus paid prioritization would yield finely tuned incentives for innovation exactly where it is needed to relieve network congestion. These innovations could improve the experience for users, driving demand and therefore investment. The Order nowhere responds to this contention.

At oral argument it was suggested that with paid prioritization the speed of the high rollers comes at the expense of others. This is true and not true. Consider ways that the United States government applies paid prioritization in two monopolies that it runs, Amtrak and the U.S. Postal Service. Both offer especially fast service at a premium. If the resources devoted to providing extra speed for the premium passengers and mail were spread evenly among all passengers and mail, the now slower moving passengers and mail could travel a bit faster. But the revenues available would be diminished for want of the premium charges, and in any event it is hard to see how coach passengers or senders of ordinary mail are injured by the availability of speedier, costlier service.

Of course one can imagine priority pricing that could harm consumers. The record contains a declaration recognizing the possibility and opposing the Commission's solution. It is by the author of three of the very economics papers that the Commission says support its position, Michael Katz, who was a chief economist of the Commission under President Clinton. Pointing to the risk of distorting competition and harming customers through banning pricing strategies and "full use of network management techniques," Katz urged disallowing conduct "only in response to specific instances of identified harm, rather than imposing sweeping prohibitions that throw out the good with the bad." Katz Declaration at 2-3.

Perhaps the Commission has answers to this. But despite going out of its way to rely on papers by Katz that were irrelevant, the Commission never deigned to reflect on the concerns he expressed about harm to innovation and consumer welfare.

Furthermore, in its single-minded focus on innovation at the "edge" (and only some kinds of innovation at that), the Commission ignored arguments that the process of providing broadband service is itself one where innovation, not only in technology but in pricing strategies and business models, can contribute to maximization of the internet's value to all users. A comment of Professor Justin Hurwitz makes the point:

> Current research suggests that traditional, best-effort, non-prioritized routing may yield substantially inefficient use of the network resource. It may well

> turn out to be the case that efficient routing of data like streaming video requires router-based prioritization. It may even turn out that efficient routing of streaming video data is necessarily harmful to other data—it may not be possible to implement a single network architecture that efficiently handles data with differentiated characteristics. If this is the case, then it may certainly be "commercially reasonable" that streaming video providers pay a premium for the efficient handling of their data, in order to compensate for the negative externalities that those uses impose upon other users and uses.

Comments of Justin (Gus) Hurwitz at 17 (July 18, 2014). (Professor Hurwitz may have been mistakenly operating on the belief that the Commission would allow for "commercially reasonable" practices. The Commission ultimately rejected a ban on "commercially unreasonable" practices, Order ¶ 150, but created no defense of commercial reasonableness for any of its bans. The Commission did create an exception for "reasonable network management" for rules other than the ban on paid prioritization. Order ¶ 217.)

Generalizing the point made by Professor Hurwitz: Unless there is capacity for all packets to go at the same speed and for that speed to be optimal for the packets for which speed is most important, there must be either (1) prioritization or (2) identical speed for all traffic. If all go at the same speed, then service is below optimal for the packets for which speed is important. If there is unpaid prioritization, and it is made available to the senders of packets for which prioritization is important, then (1) those senders get a free ride on costs charged in part to other packet senders and (2) those senders have less incentive to improve their packets' technological capacity to use less transmission capacity.

Allowance of paid prioritization eliminates those two defects of unpaid prioritization.

One prominent critic of the ban on paid prioritization—Timothy Brennan, the Commission's chief economist at the time the Order was initially in production, who has called the rules "an economics-free zone"[6]—offered an alternative that addressed these concerns. His argument goes as follows. If some potential content providers might refrain from entry for fear that poor service might stifle advantageous interactions with other sites (thus thwarting the virtuous cycle), that fear could be assuaged by requiring that ISPs meet minimum quality standards. Brennan writes that

> a minimum quality standard does not preclude above-minimum quality services and pricing schemes that could improve incentives to improve broadband networks and facilitate innovation in the development and marketing of audio and video content. Moreover, a minimum quality standard should reduce the costs of and impediments to congestion management necessary under net neutrality.

Comments of International Center for Law & Economics and TechFreedom at 48; see also *id*. at 47. This is a proposal based on the notion that consumers value the things prevented by the Order, but it offers an alternative that solves a (perhaps hypothetical) problem at which the Order is aimed (relieving content providers of the fear discussed above and thus ensuring the virtuous cycle), without such significant costs as

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[6] See http://www.wsj.com/articles/economics-free-obamanet-1454282427.

those the commentators discussed. The Order offers no response.

Notice that the drag on innovation to which these commentators allude has a clear adverse effect on the virtuous cycle invoked by the Commission. To be sure, as a general matter investment at the edge provider and the ISP level will be mutually reinforcing, but sound incentives for innovation at both levels will provide more benefit enhancements to consumers per dollar invested.

I've already noted with bemusement the Commission's utter disregard of arguments by two of its former chief economists, Michael Katz and Tim Brennan, that were submitted into the record. Lest the point be understated, I should also mention that the views of yet a third, Thomas W. Hazlett, also appear in several submissions. CenturyLink points to Thomas W. Hazlett and Dennis L. Weisman, *Market Power in U.S. Broadband Industries*, 38 REVIEW OF INDUSTRIAL ORGANIZATION 151 (2011), for the proposition that there is no evidence that broadband providers are earning supra-normal rates of return. This may be another clue why the Commission steers clear of any claim of market power.

And the Comments of Daniel Lyons (July 29, 2014), *Net Neutrality and Nondiscrimination Norms in Telecommunications*, 1029 ARIZ. L. REV. 1029 ("Lyons Comments") at 1070, cite Thomas W. Hazlett & Joshua D. Wright, *The Law and Economics of Network Neutrality*, 45 IND. L. REV. 767, 798 (2012), for the argument that there is much to be learned from antitrust law, which treats vertical arrangements on a rule-of-reason basis. To the argument that antitrust enforcement is costly, time-consuming and unpredictable, Hazlett and Wright acknowledge the point but argue that it has been responsible for some of the genuine triumphs in the telecommunications industry, such as the break-up of AT&T. The Lyons submission finds confirmation in the Department of Justice's Ex Parte Submission in the 2010 proceeding, arguing that "antitrust is up to the task of protecting consumers from vertical contracts that threaten competition."[7]

The silent treatment given to three of its former chief economists seems an apt sign of the Commission's thinking as it pursued its forced march through economic rationality.

The Commission does invoke justifications other than the "virtuous cycle" to support its Order. For example, it asserts that "[t]he record . . . overwhelmingly supports the proposition that the Internet's openness is critical to its ability to serve as a platform for speech and civic engagement," for which it cites comments from three organizations. Order ¶ 77 & n.118. The Order makes no attempt, however, to explain how these particular rules, and the language of § 201, relate to these goals. A raw assertion that the internet's openness promotes free speech, while in a general sense surely true (at least on some assumptions about the meaning of "openness"), is not enough reasoning to support a ban on paid prioritization.

Further, having eschewed any claim that it found the ISPs to possess market power, Order ¶ 11 n.12 ("[T]hese rules do not address, and are not designed to deal with, the acquisition or maintenance of market power or its abuse, real or

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[7] Lyons Comments at 1070 (quoting Thomas W. Hazlett & Joshua D. Wright, *The Law and Economics of Network Neutrality*, 45 IND. L. REV. 767, 803 (2012)). See also *In re Economic Issues in Broadband Competition: A National Broadband Plan for Our Future, Ex Parte Submission of the United States Department of Justice*, 2010 WL 45550 (2010).

potential"), the Commission invokes a kind of "market-power-lite." The argument fundamentally is that ISPs occupy a "gatekeeper" role and may use that role to block content whose flow might injure them: They might *want* to do this in order to prioritize their content over that of other content providers (or perhaps other purposes inconsistent with efficient use of the net). And they might *be able* to do this because impediments to customers' switching will enable them to restrict others' content without incurring a penalty in the form of customer cancellations. Order ¶¶ 79-82.

The Commission's reliance on market-power-lite is puzzling in a number of ways. First, the Commission's primary fact—the existence of switching costs—begs the question of why the Commission did not look at other forms of evidence for market power. See Horizontal Merger Guidelines, 11 (saying that "the costs and delays of switching products" are taken into account in implementing the hypothetical monopolist test). If the Commission relies on one possible source of market power, one wonders why it would not seek data that would pull together the full range of sources, including market concentration. It may be that the Department of Justice's submission in the Notice of Inquiry that ultimately led to the Order, see *In re A National Broadband Plan for Our Future*, 24 F.C.C. Rcd. 4342 (2009), reviewing some of the data but reaching no conclusion, led the Commission to believe that a serious inquiry would come up empty. *In re Economic Issues in Broadband Competition: A National Broadband Plan for Our Future, Ex Parte Submission of the United States Department of Justice*, 2010 WL 45550 (2010).

Second, even a valid finding of market power would not be much of a step towards validating a ban on paid prioritization or linking it to § 201. Eight years before the Order, the Federal Trade Commission ordered a staff study and published the results. *Broadband Connectivity Competition Policy*, Federal Trade Commission (2007), *available at* https://www.ftc.gov/sites/default/files/documents/reports/broadband-connectivity-competition-policy/v070000report.pdf. As with DOJ later, the report was non-committal on the issue of market power but reviewed (1) ISP incentives to discriminate and not to discriminate under conditions of market power, *id*. at 72-75, and (2) varieties of paid prioritization, assessing their risks and benefits, *id*. at 83-97. Instead of a nuanced assessment building on the FTC staff paper (or for that matter contradicting it), the Commission adopted a flat prohibition, paying no attention to circumstances under which specific varieties of paid prioritization would (again, assuming market power) adversely or favorably affect the value of the internet to all users. In the absence of such an evaluation, the Order's scathing terms about paid prioritization, used as a justification for the otherwise unexplained switch in interpretation of § 201(b), fall flat. Order ¶ 292.

Finally, the Commission's argument that paid prioritization would be used largely by "well-heeled incumbents," Order ¶ 126 n.286, not only is ungrounded factually (so far as appears) but contradicts the Commission's decision (and the reasoning behind its decision) not to apply its paid prioritization ban to types of paid prioritization that use caching technology.[8]

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[8] Since I would conclude that the Commission acted arbitrarily and capriciously in its reclassification decision regardless of whether DNS and caching fit the telecommunications management exception, 47 U.S.C. § 153(24), I will not address that.

Caching is the storage of frequently accessed data in a location closer to some users of the data. The provider of the caching service (in some contexts called a content delivery network) thus increases the speed at which the end user can access the data. Order ¶ 372 & n.1052. In effect, then, it prioritizes the content in question. It is provided sometimes by ISPs (sometimes at the expense of edge providers) and sometimes by third parties. *Id.*

For example, Netflix has entered agreements with several large broadband providers to obtain direct access to their content delivery networks, i.e., cached storage on their networks. See Order ¶¶ 198-205, 200 n.504 (noting that Netflix has entered into direct arrangements with Comcast, Verizon, Time Warner Cable, and AT&T); see also http://www.bloomberg.com/bw/articles/2014-02-24/netflixs-deal-with-comcast-isnt-about-net-neutrality-except-that-it-is. Contracts under which caching is supplied by broadband providers or by third parties are often called paid peering arrangements. Regardless of the name, they involve expenses incurred directly or indirectly by an edge provider, using a caching technology to store content closer to end users, so as to assure accelerated transmission of its content via a broadband provider.

Although the Commission acknowledges that caching agreements raise many of the same issues as other types of paid prioritization, it expressly declines to adopt regulations governing them, opting instead to hear disputes related to such arrangements under §§ 201 & 202 and to "continue to monitor" the situation. Order ¶ 205. The Order defines paid prioritization as "the management of a broadband provider's network to directly or indirectly favor some traffic over other traffic, including through use of techniques such as traffic shaping, prioritization, resource reservation, or other forms of preferential traffic management, either (a) in exchange for consideration (monetary or otherwise) from a third party, or (b) to benefit an affiliated entity." Order ¶ 18. If caching is a form of preferential traffic management—and I cannot see why it is not—then paid access to broadband providers' caching facilities violates the paid prioritization ban, or at any rate would do so but for the Commission's decision in ¶ 205 that it will evaluate such arrangements on a case-by-case basis rather than condemn them root-and-branch.

Curiously, although the Commission seems to be absolutely confident in its policy view on paid prioritization, it recognizes that it actually lacks experience with the subject. One objector argued that the Commission could not apply § 201(b) to paid prioritization because "no broadband providers have entered into such arrangements or even have plans to do so." Order ¶ 291 n.748 (quoting NCTA Comments at 29). Instead of contradicting the premise, the Commission responded by noting that at oral argument in *Verizon* a provider had said that but for the Commission's 2010 rules it would be pursuing such arrangements. *Id.* So all the claims about the harm threatened by paid prioritization are at best projections. We saw earlier the irrelevance of the studies on which the Commission relied to make those projections. As to caching, with which it has plenty of familiarity, the Commission uses the temperate wait-and-see approach. See Order ¶ 203.

The Commission never seriously tries to reconcile its hesitancy here with its claims that harms arising from paid prioritization are so extreme as to call for an abandonment of its longtime precedents interpreting §§ 202(a) and 201(b). See Order ¶ 292.

The Commission does note that the disputes over caching "are primarily between sophisticated entities." Order ¶ 205. But as it never says how that affects matters, we remain in the dark on the distinction. Indeed, the size and sophistication of the entities involved might exacerbate concerns that ISPs are likely to create a fast lane for large edge providers.

The Commission also notes that deep packet inspection—along with other similar types of network traffic management that rely on packet characteristics—is the technical means underlying the paid prioritization that it condemns. With that technology, it says, an ISP can examine the content of packets of data as they go by and prioritize some over others. See Order ¶ 85. If the Commission believes that this technical factor plays a role in justifying different treatment, it fails to explain why. Insofar as it suggests that packet inspection might be abused, *id*., it never explains why rules against such abuse would not fit its historic understanding of unreasonable or unjust discrimination (and that of the historic price regulatory systems).

The oddity of the Commission's view is nicely captured in its treatment of a pro-competition argument submitted by ADTRAN opposing the ban on paid prioritization. ADTRAN argued that the ban (1) would hobble competition by disabling some edge providers from securing the prioritization that others obtain via Content Delivery Networks ("CDNs") (the premise is that some edge providers, perhaps because of relatively low volume, do not have access to CDNs; the Commission does not contest the premise), ADTRAN Comment at 7, J.A. 275, and (2) would "cement the advantages enjoyed by the largest edge providers that presently obtain the functional equivalent of priority access by constructing their own extensive networks that interconnect directly with the ISPs." Order ¶ 128 (quoting ADTRAN Reply Comments at 18 (September 15, 2014)). The

Commission never answers the first objection (except insofar as it is entangled with the second). As to the second it says only that it does "not seek to disrupt the legitimate benefits that may accrue to edge providers that have invested in enhancing the delivery of their services to end users." Order ¶ 128. That answer seems to confirm ADTRAN's complaint: the Commission's split policy will "cement the advantages" secured by those who invested in interconnecting networks. Oddly, the Commission supports the ban on paid prioritization as tending to prevent "the bifurcat[ion] of the Internet into a 'fast' lane for those willing and able to pay and a 'slow' lane for everybody else," and as protecting "'user-generated video and independent filmmakers' that lack the resources of major film studios to pay priority rates." Order ¶ 126; see also *id.* n.286 (quoting a commenter's concern over advantages going to "well-heeled incumbents"). In short, then, the Commission is against slow lanes and fast lanes, and against advantages for the established or well-heeled—except when it isn't.

The Commission's favored treatment of paid peering (wait-and-see) over paid prioritization (banned) brings to mind the Commission's practice of sheltering the historic AT&T monopoly from competition. See Nuechterlein & Weiser, 11-12, 40. Contrary to the conventional notion that only regulatees enjoy the benefits of unreasoned agency favor, the Order here suggests a different selection of beneficiaries: dominant edge providers such as Netflix and Google. See Order ¶ 197 n.492.

Another question posed by the Order but never answered is the Commission's idea that if superior services are priced, their usage will track the size and resources of the firms using them. One would expect, instead, that firms would pay extra for extra speed and quality to the extent that those transit enhancements increased the value of goods and services to the end user. Firms do not ship medical supplies by air rather than rail or truck because the firms are rich and powerful (though doubtless some are). They use air freight where doing so enhances the effectiveness of their service enough to justify the extra cost. This obvious point explains why Berninger is a petitioner here.

The Commission's disparate treatment of two types of prioritization that appear economically indistinguishable suggests either that it is ambivalent about the ban itself or that it has not considered the economics of the various relevant classes of transactions. Or perhaps the Commission is drawn to its present stance because it enables it to revel in populist rhetorical flourishes without a serious risk of disrupting the net.

Whatever the explanation, the Order fails to offer a reasoned basis for its view that paid prioritization is "unjust or unreasonable" within the meaning of § 201, or a reasoned explanation for why paid prioritization is problematic, or answers to commenters' critiques and alternatives. I note that all these objections would be fully applicable even as applied to ISPs with market power.

It is true that the Commission has asserted the conclusion that the supposed beneficent effect of its new rules on edge providers as a class will (pursuant to its virtuous cycle theory) enhance demand for internet services and thus demand for broadband access services. See Order ¶ 410.[9] The

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[9] The Commission also makes several other claims about the impact of the Order on investment. See Order ¶ 412 (on the expected growth in Internet traffic driving investment); Order ¶ 414 (claiming a lack of the impact of Title II regulation in other circumstances); Order ¶ 416 (on indications from a major infrastructure provider that it would continue investing under Title

Commission's predictions are due considerable deference, but when its decision shows no sign that it has examined serious countervailing contentions, that decision is arbitrary and capricious.

Accordingly, its promulgation of the rules under § 201 is, absent a better explanation, not in accordance with law. 5 U.S.C. § 706(2)(A) & (C).

B

Alamo-Berninger raise two objections to the Commission's reliance on § 706 of the 1996 Act, 47 U.S.C. § 1302, as support for its new rules, especially the bans on paid prioritization, blocking and throttling (i.e., the statutory theory offered by the Commission as an alternative to its reliance on § 201). First, Alamo-Berninger develop a comprehensive claim that § 706 grants the Commission no power to issue rules. Alamo-Berninger Br. 9-16. On its face the argument seems quite compelling, see also Pai Dissent, at 370-75, but I agree with the majority that the *Verizon* court's ruling on that issue was not mere dictum, but was necessary to the court's upholding of the transparency rules. Maj. Op. 95.

Second, Alamo-Berninger raise, albeit in rather conclusory form, the argument that "the purpose of section 706 is to move away from exactly the kind of common-carrier duties imposed by this *Order*. Thus . . . the rules [adopted in the Order] frustrate the purpose of the statute and are therefore unlawful." Alamo-Berninger Br. 15.

II). None of these addresses the incremental effects of the specific rules that the Commission adopted.

On this issue, the passages of *Verizon* giving § 706 a broad reading—"virtually unlimited power to regulate the Internet," as Judge Silberman observed in dissent, 740 F.3d at 662—and endorsing the Commission's applications of its "virtuous cycle" theory, were dicta, as Alamo-Berninger argue. Alamo-Berninger Br. 16. With the narrow exception of the transparency rules, the *Verizon* court *struck down* the rules at issue on the ground that they imposed common-carrier duties on the broadband carriers, impermissibly so in light of 47 U.S.C. §§ 153(51) (providing that a telecommunications carrier can be treated "as a common carrier under this [Act] only to the extent that it is engaged in providing telecommunications services") & 332(c)(2) (similar limitation as to persons engaged in providing "a private mobile service"). 740 F.3d at 650. The sole rules *not* struck down were the transparency rules. Although Judge Silberman would have upheld them on the basis of 47 U.S.C. § 257, see 740 F.3d at 668 n.9, they are equally sustainable as ancillary to a narrow reading of § 706, confining it, as Judge Silberman would have, to remedying problems derived from market power. See *id*. at 664-67. Of course, on no understanding could *Verizon* provide direct support for the Commission's ban on paid prioritization, as that was not before the court.

Although the Alamo-Berninger argument here is conclusory, the briefing that led to the *Verizon* dicta was extensive, Brief for Appellant Verizon at 28, 31, *Verizon*, 740 F.3d; Reply Brief for Appellant Verizon at 14, *Verizon*, 740 F.3d, so concern for the Commission's opportunity to reply is no basis for disregarding the issue. The Commission's reliance on § 706 poses questions of both statutory interpretation and arbitrary and capricious rulemaking. Further, paralleling the inadequacies in the Commission's reliance on § 201(b), the reasonableness of the regulations under § 706 is important not only on its own but also for its relevance to the reasonableness of reclassification under Title II.

There is an irony in the Commission's coupling of its decision to subject broadband to Title II and its reliance on § 706. As the Alamo-Berninger brief argues, § 706 points away from the Commission's classification of broadband under Title II and its Order. Alamo-Berninger Br. 15. Title II is legacy legislation from the era of monopoly telephone service. It has no inherent provision for evolution to a competitive market. It fits cases where all hope (of competitive markets) is lost. Section 706, by contrast, as part of the 1996 Act and by its terms, seeks to facilitate a shift from regulated monopoly to competition. Indeed, the Telecommunications Act of 1996 begins by describing itself as

> [a]n Act [t]o promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.

Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56. Two central paradoxes of the majority's position are how an Act intended to "reduce regulation" is used instead to increase regulation and how an Act intended to "promote competition" is used at all in a context in which the Commission specifically forswears any findings of a lack of competition.

On top of the generally deregulatory pattern of the 1996 Act, a reading of § 706 as a mandate for virtually unlimited regulation collides with the simultaneously enacted 47 U.S.C. § 230. That section is directed mainly at making sure that internet service providers and others performing similar functions are not liable for offensive materials that users may encounter. But it also broadly states that it "is the policy of the United States . . . to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation." *Id.* § 230(b)(2). The Commission's use of § 706 to impose a complex array of regulation on all internet service provision seems a distinctly bad fit with that declared policy.

Furthermore, consider the specific measures that § 706 encourages:

> The Commission and each State commission with regulatory jurisdiction over telecommunications services shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans . . . by utilizing, in a manner consistent with the public interest, convenience, and necessity, *price cap regulation*, *regulatory forbearance*, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.

Section 706(a), 47 U.S.C. § 1302(a) (emphasis added).

The two steps expressly favored are both deregulatory. Forbearance is obvious; it presupposes statutory authority to impose some burden on the regulated firms, coupled with authority to relieve them from that burden—and encourages the Commission to give relief.

Price cap regulation needs more explanation. It is normally seen as a device for at least softening the deadening effects of conventional cost-based rate regulation in natural monopolies. Such regulation dulls incentives by telling the regulated firm that if it makes some advance cutting its costs of service, the regulator will promptly step in and snatch away any profits above its normal allowed rate of return. Of course there will be a "regulatory lag" between the innovation and the regulator's clutching hand, but the regulatory process overall limits the incentive to innovate to a fraction of what it would be under competitive conditions. See *National Rural Telecom Association v. FCC*, 988 F.2d 174, 177-78 (D.C. Cir. 1993). Price cap regulation, by contrast, looks to general trends in the cost inputs for providers, typically building in (if trends support it) an assumption of steadily improving efficiency. Firms benefit from their innovation except to the extent that their successes may bring down average costs across the industry. *Id.*; for some details of application, see *United States Telephone Association v. FCC*, 188 F.3d 521 (D.C. Cir. 1999). So it is easy to see how a shift to price cap regulation might be a suitable transition move for a still uncompetitive industry. Allowing the firms such benefits would invite "advance[s]" in telecommunications capability and would "remove barriers to infrastructure investment," which § 706 posits as the goals of agency actions thereunder.

Section 706's broad language points in the same direction as the two examples. It speaks of removing "barriers to infrastructure investment." Writing in 1996, before the Commission developed its virtuous cycle theory, the drafters most likely had in mind the well-known barriers erected by conventional natural monopoly regulation—not only the bad incentive effects of cost-based rate regulation but also hurdles such as agency veto power over new entry into markets.

Section 706 also speaks of measures "that promote competition." But here the Commission saddles the broadband industry with common-carrier obligation, which is normally seen as a *substitute* for competition—as I mentioned earlier, for markets where all hope is lost. Where a shipper or passenger faces only one carrier, it makes some sense to require that carrier to accept all comers, subject to reasonable rules of eligibility. This is true even for historic innkeeper duties, which seem to presuppose a desperate traveler reaching an isolated inn in the dead of night.

In part II.A I reviewed the distortions likely to flow from the Commission's ban on paid prioritization, but here, considering the Commission's reliance on a statute that seems the antithesis of common-carrier legislation, we should consider the way the common-carrier mandate may thwart competition and thus contradict the purposes of § 706.

In ordinary markets a firm can enter the field (or expand its position) by preferential cooperation with one or more vertically related firms. Antitrust law clearly recognizes this avenue to enhanced competition. See XI Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 1811a2 (2006). For example, in *Sewell Plastics v. Coca-Cola*, 720 F. Supp. 1196 (W.D.N.C. 1989), *aff'd per curiam*, 1990-2 Trade Cas. ¶ 69,165, 912 F.2d 463 (4th Cir. 1990) (unpublished), the court considered under § 1 of the Sherman Act an arrangement among Coca-Cola bottlers to buy at least 80% of their plastic bottles from a new entrant—a joint venture of the bottlers themselves. The object was to circumvent the steadily rising prices charged by plaintiff Sewall Plastics, the largest supplier of plastic bottles in the country; the joint venturers saw the agreement as necessary to assure a steady market for their bottle-making operation and thus justify the investment, which Sewall could readily have undercut by dropping its prices. The court found the agreement pro-competitive because it enabled the new entry, which in turn lowered prices—just as ordinary economic understanding would predict. Speaking of requirements contracts but in terms that seem to match other exclusive vertical arrangements in workably competitive markets more generally, the Supreme Court has said that they are "of particular advantage to a newcomer to the field to whom it is important to know what capital expenditures are justified." *Standard Oil Co. of California v. United States*, 337 U.S. 293, 306-07 (1949). Hovenkamp makes the extension explicitly, seeing such cases as examples of "the procompetitive use of exclusive dealing to facilitate market entry where it might not otherwise occur at all." Hovenkamp ¶ 1811a2, at 153.

The Commission's common-carrier mandate, however, especially as implemented by the Order's Internet Conduct Standard, poses serious obstacles to comparable efforts by ISPs. It prohibits internet providers from "unreasonably interfer[ing] with or disadvantag[ing] . . . (1) end users' ability to select, access, and use . . . the lawful Internet content, applications, services, or devices of their choice, or (2) edge providers' ability to make lawful content, applications, services, or devices available to end users," Order ¶ 136, and is coupled with a multi-factor test, Order ¶¶ 138-145. Although the Commission for the moment purports to keep an open mind as to a variant of such preferential arrangements ("structured data plans"), Order ¶ 152, the Order at minimum casts a shadow over such arrangements.

Of course the Commission is not an antitrust enforcement agency. But consider exclusive deals of this sort in relation to its virtuous cycle theory. Special deals facilitating new entry among ISPs (or expansion of existing small firms) would enable investment and growth in broadband, which the Commission says is its goal (linked, of course, to the flourishing of edge providers). Yet the Commission says, without analytical support, that the new rules, generally requiring all broadband providers to follow a single business model, are just the ticket for broadband growth and investment. This seems antithetical to § 706, not to mention the post-DARPA decades in which innovative individuals and firms spontaneously developed the internet, creating new businesses and entirely new types of competition. This model of spontaneous creation is, interestingly, the very model of the internet sketched out in compelling terms by the FCC's current General Counsel before he assumed that post. See Jonathan Sallet, *The Creation of Value: The Broadband Value Circle and Evolving Market Structures* (2011).

In light of this textual analysis of § 706 and its relation to common carriage, and of Judge Silberman's arguments in *Verizon*, see especially 740 F.3d at 662, and considering the rules' antithetical relation to the goals set forth in § 706, I believe that a threshold to application of § 706 is either (1) a finding that the regulated firms possess market power or (2) at least a regulatory history treating the firms as possessing market power (classically as natural monopolies). Under this reading of § 706, then, the Commission's refusal to take a position on market power wholly undercuts its application of § 706.

I must now consider the role of § 706 even if we were to assume the view taken by the *Verizon* majority in dicta. Here all the problems I discussed as to paid prioritization in part II.A come into play, with the record full of highly plausible arguments—never so much as acknowledged by the Commission—as to the distortions that a ban on paid prioritization would generate (especially if made relatively coherent by removing the Commission's puzzling exception for caching and other paid peering). The Order fails to give any reasoned support for the notion that the ban on paid prioritization (or the affiliated and ancillary bans on blocking and throttling) would spin the virtuous cycle along and thereby promote investment. It does not respond to arguments that the ban on paid prioritization would result in increased network congestion, less innovation, less investment, and worse service, nor explain why alternatives offered in the rulemaking would not address the supposed problems with less collateral damage.

In short, the Commission has not taken the initial step of showing that its reading of § 706 as a virtually limitless mandate to make the internet "better" is a reasonable reading to which we owe deference. *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 218 & n.4 (2009). Without such an interpretation, the Commission's rules cannot be sustained under § 706, even without regard to the reasoning gaps that were a primary subject of part II.A.

III

Full Service Network challenges the Commission's decision to forbear from applying a host of Title II's provisions, most particularly 47 U.S.C. §§ 251-52, on the ground (among others) that forbearance, in the absence of a showing of competition between local exchange carriers (see 47 U.S.C. §§ 153(32), 153(54)), is arbitrary, capricious, and contrary to law. I agree to this extent: The Commission's forbearance decision highlights the dodgy character of the Commission's refusal, in choosing to reclassify broadband under Title II, to take any position on the question whether the affected firms have market power. The upshot is to leave the Commission in a state of hopeless self-contradiction.

In part II I noted that one reason for the Commission's evasion of the market-power question may well have been its intuition that the question might (unlike its handwaving about the virtuous cycle) be susceptible of a clear answer and that that answer would be fatal to its expansive mission. The issue raised by Full Service exposes another flaw in the Commission's non-decision. While a finding that the broadband market was generally competitive would, under Commission precedent, amply justify its forbearance decisions, here again the Commission refuses to take that position. Doing so would obviously undermine its decision to reclassify broadband under Title II. Strategic ambiguity best fits its policy dispositions. But strategic ambiguity on key propositions underlying its regulatory choices is just a polite name for arbitrary and capricious decisionmaking.

* * *

Full Service points out that in *justifying* application of Title II the Commission broadly repudiated its 2005 reliance on the emergence of "competitive and potentially competitive providers and offerings," see Order ¶ 330 n.864, saying instead that "the predictive judgments on which the Commission relied in the *Cable Modem Declaratory Ruling* anticipating vibrant intermodal competition for fixed broadband cannot be reconciled with current marketplace realities." Order ¶ 330; in support of this reading of the *Cable Modem Declaratory Ruling*, the Order cites the *Wireline Broadband Classification Order*, 20 F.C.C. Rcd. 14853 ¶ 50 (2005). Order ¶ 330 n.864; FSN Br. 18. Besides invoking the Commission's conclusory repudiation of its former view, Full Service stresses § 251's pro-competitive purposes, points to data accumulated by the Commission that it contends show widespread lack of competition among local distribution facilities, and argues that the state of competition is highly relevant to the Commission's exercise of forbearance under 47 U.S.C. § 160, at least with respect to provisions aimed at stimulating competition. FSN Br. 15, 18-20; 47 U.S.C. § 160(b) (requiring Commission to consider whether forbearance "will promote competitive market conditions"); cf. Maj. Op. 93-94. Moreover, Full Service specifically ties its argument to the statutory requirements, noting that, in 47 U.S.C. § 160(b), "Congress directed that the FCC evaluate the effect of forbearance on competition," FSN Br. 15, and that unbundling requirements were intended to promote competition, *id.* at 20. Full Service dedicates a subsection to this argument in its brief, *id.* at 18-20, concluding that Congress's intent to promote competition, together with evidence of a lack of competition nationwide, means that "47 U.S.C. § 160 surely requires more to support forbearance than an assertion by the F.C.C. that 'other authorities' are adequate and the public interest will be better served by enhancing the agency's discretion." Full Service pursued the same angle in oral argument, asserting that "you can't say that waiving Section 251 is about anything but competition, that's the whole purpose of that section." Oral Arg. Tr. 142.

47 U.S.C. § 251 requires local exchange carriers to provide competitors with various advantages, mostly notably "access to network elements on an unbundled basis." 47 U.S.C. § 251(c)(3); cf. Order ¶ 417 (referring to such access as "last-mile unbundling"). Full Service seeks such access to broadband providers' facilities (governed by the procedures set out in § 252 for negotiating these agreements), asserting that such access is necessary to its ability to compete in local markets for broadband internet. FSN Br. 13; see *U.S. Telecom Ass'n v. FCC*, 359 F.3d 554, 561 (D.C. Cir. 2004) ("The [1996 Act] sought to foster a competitive market in telecommunications. To enable new firms to enter the field despite the advantages of the incumbent local exchange carriers ("ILECS"), the Act gave the Federal Communications Commission broad powers to require ILECs to make 'network elements' available to other telecommunications carriers.").

As we shall see, the Commission's reasoning in the Order resembles that of the Environmental Protection Agency in *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014) ("*UARG*"). There the Agency interpreted certain permitting requirements under the Clean Air Act to apply to greenhouse gases, but acknowledged that applying the thresholds that Congress specified in the relevant sections would regulate too many firms and create unacceptable costs. The agency therefore relied on its power to interpret ambiguous statutory terms to "tailor" the requirements, increasing the permitting thresholds from 100 or 250 tons to 100,000 tons (i.e., three orders of magnitude). *Id.* at 2444-45. The Court held that the agency's combined choice—construing an ambiguous statutory provision to apply while dramatically reducing its substantive application—was unreasonable. In so holding, it "reaffirm[ed] the core administrative-law principle that an agency may not rewrite clear statutory terms to suit its own sense of how the statute should operate." *Id.* at 2446.

The Commission violates that core principle here, where it seeks to apply Title II to broadband internet providers while forbearing from the vast majority of Title II's statutory requirements. As did EPA in *UARG*, though perhaps with less candor, the Commission recognizes that the statutory provisions naturally flowing from reclassification of broadband under Title II do not fit the issues posed by broadband access service. "This is Title II tailored for the 21st Century. Unlike the application of Title II to incumbent wireline companies in the 20th Century, a swath of utility-style provisions (including tariffing) will *not* be applied. . . . In fact, Title II has never been applied in such a focused way." Order ¶ 38.

Although the 1996 Act requires the Commission to forbear from application of any of the provisions of Title 47's Chapter 5 when the conditions of 47 U.S.C. § 160(a) are met, Pub. L. 104-104, Title IV, § 401 (Feb. 8, 1996), the Commission's massive forbearance, without findings that the forbearance is justified by competitive conditions, demonstrates its unwillingness to apply the statutory scheme. Even if the Commission's forbearance itself were reasonable standing alone, that forbearance, *paired with the reclassification decision*, was arbitrary and capricious. Or, to note the reverse implication, the massive, insufficiently justified forbearance infects the decision to apply (or purport to apply) Title II. The logical inconsistency is fatal to both. (The Commission offers no opposition to USTA's contention that reclassification and forbearance are intertwined and therefore stand or fall together. USTA Intervenor Br. 21.)

While the statute explicitly envisions forbearance, it does so only under enumerated conditions. To forbear, the Commission must determine that enforcement of a provision is not necessary to ensure just, reasonable, and nondiscriminatory charges and practices or to protect consumers, 47 U.S.C. § 160(a)(1)-(2), and that forbearance "is consistent with the public interest," *id.* § 160(a)(3). In making these determinations, "the Commission shall consider whether forbearance from enforcing the provision or regulation will promote competitive market conditions, including the extent to which such forbearance will enhance competition among providers of telecommunications services." *Id.* § 160(b). These conditions are broadly framed, but the emphasis on consumer protection, competition, and reasonable, nondiscriminatory rates is plainly intended to implement the 1996 Act's policy goal of promoting competition in a context that had historically been dominated by firms with market power, while assuring that consumers are protected.

The Commission relied in part on the idea that enforcement of unbundling rules would unduly deter investment, specifically that such enforcement would collide with its "duty to encourage advanced services deployment." Order ¶ 514. But, perhaps recognizing that this concern would apply universally to compulsory unbundling, the Commission also confronted claims that broadband providers often have local market power. But it responded to these claims not with factual refutation but with an assertion that "persuasive evidence of competition" is unnecessary as a predicate to forbearance. Order ¶ 439. This assertion is in line with the Commission's view that, "although there is some amount of competition for broadband Internet access service, it is limited in key respects." Order ¶ 444. The language is sufficiently vague to cover any state of competition between outright monopoly and perfect competition.

The Commission claimed that its current forbearance matches its past practice, offering a list of orders in which it forbore while giving competition little or no consideration. *Id*. ¶ 439 n.1305 (listing cases). But the cited orders do not vindicate the Commission. They fall into three groups: (1) orders forbearing from provisions not directly involving economic issues at all, such as reporting requirements, (2) orders of clear economic import but with no evident relationship to competition, and (3) orders evidently related to competition where the Commission analyzed competition intensely.

The first group is easily addressed. The Commission's grant of forbearance from seemingly noneconomic requirements is irrelevant to the arbitrariness of its forbearance from a provision aimed precisely at fostering competition.

The second set of orders posed economic concerns but no evident link to competition. In *In re Iowa Telecommunications Services, Inc.*, 17 F.C.C. Rcd. 24319 ¶¶ 17-18 (2002), the Commission granted forbearance to replace one set of rates with a different set of rates based on forward-looking cost estimates that it believed better reflected the petitioner's operating costs; no finding of competition was necessary to guide that replacement. In *In re Petition for Forbearance from Application of the Communications Act of 1934, As Amended, to Previously Authorized Servs.*, 12 F.C.C. Rcd. 8408 (1997), the Commission forbore from § 203(c), allowing the petitioner to refund excess charges to consumers. As the Commission pointed out in that brief order, forbearance served consumers and the public interest, since consumers would receive the refund. *Id.* ¶ 10.

The Commission's use of the third group suggests that its opinion-writing staff was asleep at the switch. The group comprises three rulings, *In re Implementation of Sections 3(n) & 332 of the Communications Act*, 9 F.C.C. Rcd. 1411 (1994),[10] *In re Petition of Qwest Corp. for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Omaha Metro. Statistical Area*, 20 F.C.C. Rcd. 19415 (2005), and *In re Petition of Qwest Corp. for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metro. Statistical Area*, 25 F.C.C. Rcd. 8622 (2010). Yet in each decision the Commission conducted a detailed analysis of the state of competition. See 9 F.C.C. Rcd. 1411 ¶¶ 135-54 (considering numbers of competitors, falling price trends, etc., and concluding that "all CMRS service providers, other than cellular service licensees, currently lack market power," *id.* at ¶ 137, and, after an extensive recounting of factors, making a cautious finding that it could not find cellular "fully competitive," *id.* at ¶ 154); 20 F.C.C. Rcd. 19415 ¶¶ 28-38 (analyzing market shares, supply and demand elasticity, and firm cost, size and resources to assess competition); 25 F.C.C. Rcd. 8622 ¶¶ 41-91 (assessing whether incumbent firm had market power by careful consideration of market definition,

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[10] This order was later quashed by another order, *In re Petition of Arizona Corp. Comm'n, to Extend State Authority Over Rate and Entry Regulation of All Commercial Mobile Radio Services & In re Implementation of Sections 3(N) & 332 of the Communications Act*, 10 F.C.C. Rcd. 7824 (1995). Unsurprisingly, that order also contains a detailed market analysis. See, e.g., *id.* at ¶¶ 42-68.

factors affecting competition, assessment of the effects of SSNIPs).

I am in no position to assess the quality of these analyses, but the entire batch of decisions cited in Order ¶ 439 n.1305 provides no support for the idea (indeed, undermines the idea) that the Commission has an established practice of neglecting market power in deciding whether to forbear from a provision such as § 251. (I discuss below an interesting exception, the order reviewed in *EarthLink v. FCC*, 462 F.3d 1 (D.C. Cir. 2006).)

Given the Commission's assertions elsewhere that competition is limited, and its lack of economic analysis on either the forbearance issue or the Title II classification, the combined decisions to reclassify and forbear—and to assume sufficient competition as well as a lack of it—are arbitrary and capricious. The Commission acts like a bicyclist who rides now on the sidewalk, now the street, as personal convenience dictates.

The inaptness of the Order's ¶ 439 n.1305 citations of its prior decisions is confirmed by forbearance decisions that have reached this court. In *U.S. Telecom*, 359 F.3d at 578-83, for example, we considered the Commission's decision to forbear from unbundling requirements for the high-frequency portion of copper and hybrid loops for broadband (but not from unbundling requirements for the narrowband portion of hybrid loops). In reviewing that forbearance decision, which was far narrower than the forbearance before us today, we gave detailed consideration to the Commission's analysis of the likely effects of more limited unbundling on both investment and competition. We concluded that this forbearance was not arbitrary and capricious partly because the Commission had offered "very strong record evidence" of "robust intermodal competition from cable [broadband] providers," who maintained a market share of about 60%. *Id.* at 582. Both we and the Commission took for granted that findings of competition were central to any such forbearance decision. The Commission justified its forbearance in terms of competition: "A primary benefit of unbundling hybrid loops—that is, to spur competitive deployment of broadband services to the mass market—appears to be obviated by the existence of a broadband service competitor with a leading position in the marketplace." *In re Review of the Section 251 Unbundling Obligations of Incumbent Local Exch. Carriers*, 18 F.C.C. Rcd. 16978 ¶ 292 (2003). Now, when forbearing from unbundling requirements far more broadly, the Commission asserts that no findings of competition are necessary. Rather than justifying its change in position, it denies having made any change.

It is unnecessary, in concluding that the Commission has failed to meet its *State Farm* obligation to reconcile its reclassification and forbearance decisions, to resolve whether the Commission has adequately considered competition for purposes of 47 U.S.C. § 160(b). See Order ¶¶ 501-02. The Commission's difficulty, in its mentions of competition, lies in its attempts to have it both ways. It asserts that there is too little competition to maintain the classification of broadband as an information service (remember, that is the sole function of its discussion of switching costs), but (implicitly) that there is enough competition for broad forbearance to be appropriate. This sweet spot, assuming the statute allows the Commission to find it, is never defined.

In responding to Full Service's narrow claim—that the Commission was required to do a competition analysis market by market—the Commission relies on our decision in *EarthLink v. F.C.C.*, 462 F.3d 1, 8 (D.C. Cir. 2006), where indeed we rejected a claim that forbearance from unbundling under 47 U.S.C. § 271 required such an analysis. On that narrow issue, *EarthLink* fully supports the Commission.

But there are considerable ironies in the Commission's supporting its Order here by pointing to *Earthlink* and the order reviewed there. The current Order manifests a double repudiation of the one under review in *EarthLink*: first, it now rejects its former interpretation of § 706, and second, it reflects the Commission's complete abandonment of its views on the force of intermodal competition.

In the *Earthlink* order, the Commission invoked § 706 for the proposition that *relieving* local distribution companies from regulation would encourage investment, and thus would let competition bloom, sufficiently to offset any loss to competition from refusing to order unbundling. Now, of course, the Commission invokes § 706 for the idea that *saddling* such firms with regulation will encourage investment.

And in the *Earthlink* order the Commission relied on its now repudiated idea that intermodal competition would play a big role in assuring adequate competition. See 462 F.3d at 7, citing *Petition for Forbearance of the Verizon Telephone Companies Pursuant to 47 U.S.C. § 160(c)*, 19 F.C.C. Rcd. 21,496 ¶¶ 21-23. Now, without undertaking the inconvenience of a market power analysis, the Commission has rendered its confidence in intermodal competition "inoperative" (to borrow a phrase from the Watergate proceedings) for purposes of reclassification, but (perhaps) not for unbundling.

In sum, the Commission chose to regulate under a Title designed to temper the effects of market power by close agency supervision of firm conduct, but forbore from provisions aimed at constraining market power by compelling firms to share their facilities, all with no effort to perform a market power analysis. The Order's combined reclassification-forbearance decision is arbitrary and capricious.

* * *

The ultimate irony of the Commission's unreasoned patchwork is that, refusing to inquire into competitive conditions, it shunts broadband service onto the legal track suited to natural monopolies. Because that track provides little economic space for new firms seeking market entry or relatively small firms seeking expansion through innovations in business models or in technology, the Commission's decision has a decent chance of bringing about the conditions under which some (but by no means all) of its actions could be grounded—the prevalence of incurable monopoly.

I would vacate the Order.