

"ICLE & TechFreedom Policy Comments"

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Executive Summary

No one's against an open Internet. The notion that anyone can put up a virtual shingle—and that the good ideas will rise to the top—is a bedrock principle with broad support; it has made the Internet essential to modern life. Key to Internet openness is the freedom to innovate. A truly open Internet would preserve for all players the right to experiment with innovative content delivery methods and business models.

In the face of rapid technological advance, evolving consumer demand and Internet usage, demonstrated investment incentives and the dearth of demonstrated neutrality problems, the best approach would be to maintain the “**Hands off the Net**” approach that has otherwise prevailed for 20 years. That means a general presumption that innovative business models and other forms of “prioritization” are legal. The Internet doesn't need a host of new prescriptive rules and prior restraints on innovation. What it needs is humility about the limits of central planning: The FCC should take an error-cost approach, carefully and rigorously evaluating the tradeoffs from intervention, recognizing that the unintended consequences of over-inclusive rules may be far worse than the demonstrably successful status quo.

Our Comments offer several key points in the service of this evaluation:

The Internet has never been neutral. The FCC's own 2010 Open Internet Order implicitly recognized that fact: Acknowledging that top-down government control over the Internet would be unwise, the FCC carved out numerous exceptions to its rules.

The premises underlying the current NPRM don't justify the proposed rules. The NPRM asks 215 questions and “seeks comment” on approximately 147 issues, assertions, claims or proposals. Vanishingly few of those requests address some very fundamental issues:

What is the actual magnitude of the alleged harms to be prevented?

What are the costs of doing so?

What evidence exists that the proposed rules will actually prevent the alleged harms?

Why aren't antitrust regulations sufficient to accomplish the rules' objectives?

There must be a sound basis for establishing regulations – and even more so for changing long-established regulatory frameworks upon which massive investment decisions have been predicated. The rationale underlying the proposed rules lacks empirical support, and is premised on questionable assertions.

Restraints on prioritization are likely to thwart a range of welfare-increasing business models on the Internet. The FCC's own Open Internet Advisory Committee acknowledged that innovative business models, such as sponsored content that's exempted from a user's data cap, might actually help consumers. A presumption that such models are inherently harmful would chill further pricing innovations. And ISPs may be unable to direct data usage to its highest valued use, constantly worrying about running afoul of poorly justified and arguably unnecessary rules.

Restrictive net neutrality rules could themselves become the barrier the FCC was supposed to remove. Prohibiting ISPs and edge providers from trying out innovative business

models will undermine Section 706's objectives: to encourage the deployment of broadband and remove barriers to infrastructure investment. But business model restraints could arguably have the opposite effect, constraining development. More economic studies are needed to determine the likely effect of proposed net neutrality rules, lest the harm outweigh the benefits.

Startup content providers are at least as likely to benefit from a non-neutral net as to be hurt by it. Neutrality benefits established incumbents (which may be why big companies want it), with their various natural advantages. If new entrants can't opt in to prioritized service, they will have to spend more on advertising and other forms of promotion. Many a new company has foundered on the shoals of obscurity. Net neutrality just makes that more likely.

Flat-rate billing and zero-price interconnection remove powerful price signals. The sorts of practices that would be prohibited under the proposed rules would allow ISPs to ensure that users and content providers take account of the costs they impose on others. The idea that consumers and competition generally are better off when content providers face no incentive to take account of congestion externalities in their pricing (or when users have no incentive to take account of their own usage) runs counter to basic economic logic and is unsupported by the evidence. 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.

Among other things, this means that, particularly where there is congestion, the socially optimal solution is for broadband providers to encourage users to *prioritize*, not necessarily to maximize, their data usage. 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.

The FCC isn't really concerned with neutrality, but with competition. It is not the fact of non-neutrality, but rather that the decision rests with ISPs, that offends net neutrality advocates. Content-provider initiated non-neutrality faces no such animus from the FCC. The questions that must be answered—and that to date remain steadfastly unanswered—are whether ISPs really are exceptional, whether they really deserve to be singled out, whether consumers will really benefit, and whether the benefits of doing so will really outweigh the costs. Unless and until these questions are answered sufficiently to justify special rules, existing antitrust and consumer protection laws (of general applicability) are sufficient to regulate any possible competition problems.

The proposed rules lack empirical support and are premised on questionable assertions. At minimum, as "arbitrary and capricious" review also demands, agencies should justify their rules with empirical evidence sufficient to demonstrate that they will have the intended effects and that these represent the solution to a substantial problem in need of addressing. It is also incumbent upon regulators to consider, and rigorously account for, the "hydraulic effect" of regulation—the reality that underlying economic incentives will shift conduct to unregulated areas, often in unintended ways that undermine the purpose of regulation. Neither of these has been done.

Ultimately the best approach is a minimum quality standard. FCC Chief Economist Tim Brennan has proposed a minimum quality guarantee from ISPs, with any legal arrangements beyond that allowed. A minimum quality standard (without more) offers an *ex ante* rule that may be administrable at relatively low cost by the FCC, but that does not necessarily thwart pro-consumer network management and innovation. If the minimum requirement is set at a level that approximates what antitrust law would require—the avoidance of foreclosure sufficient to prevent edge providers from achieving minimum viable scale—it could be not only administrable, but also economically appropriate.

I. Introduction: The Importance of Permitting the Marketplace to Evolve

An open Internet, and the idea that companies can make special deals for faster access, are *not mutually exclusive*. Indeed, the very phrase “open Internet” implies such possibilities: If the Internet really is open, shouldn’t *all* companies, including network providers, be free to experiment with new technologies, business models and partnerships? Or, more precisely, should there not exist a strong presumption across the board that all companies should be able to experiment in building the still-unknown—and unknowable—Internet of the future?

The principle of experimentation was built in the structure of the Internet:

The Internet is an adaptable system because its experimental character provides it with a built-in learning function that enables engineers to make network and protocol design decisions empirically. It’s fair to say that its design is dictated more by a commitment to continual improvement than by obedience to hard and fast rules.³

At the same time, this principle of experimentation and adaptation that undergirds the *engineering* foundation on which the Internet was built must apply, as well, to the services and content built on top of it.⁴ For neutrality advocates to propose to freeze by regulation the evolution of network design for the sake of the applications that run on top of it is folly:

Fundamentally, network architects have used layering and end-to-end to ask questions about the assignment of functions in a network system, but in [neutrality advocates’] hands they become answers to such questions, a dogma that’s out of touch with the direction of leading-edge network engineering theory for the past 20 years and a threat to the Internet’s fundamental dynamism. The ability of the Internet to evolve and to adapt to the needs of new applications and new populations of users is central to its success. It’s unwise to declare it a finished system that has to conform to regulations born out of conjecture, speculation, and intellectual combat in its very early stage.⁵

Tim Wu recognized this essential problem in the earliest days of net neutrality policy’s development:

While structural restrictions like open access may serve other interests, as a remedy to promote the neutrality of the network they are potentially counterproductive. Proponents of open access have generally overlooked the fact that, to the extent an open access rule inhibits vertical relationships, it can help maintain the Internet’s

³ Richard Bennett, *Designed for Change: End-to-End Arguments, Internet Innovation, and the Net Neutrality Debate*, ITIF, 2 (2009), available at <http://www.itif.org/files/2009-designed-for-change.pdf>.

⁴ *Id.* at 30. (“In real networks, applications are affected by the ability of networks to move information between systems on the application’s behalf, but networks are also affected by the quantity of information that applications wish them to move. Applications are the source of nearly all the traffic that moves through a network...and are therefore primarily responsible for the effects seen by other applications. The most that network functions can do for applications is move delays around according to some predetermined policy.”).

⁵ *Id.* 28.

greatest deviation from network neutrality. That deviation is favoritism of data applications, as a class, over latency-sensitive applications involving voice or video.⁶

In December 2013, Chairman Wheeler said in a question and answer session at his *alma mater*, Ohio State University, “[w]e’re seeing the market evolve in such a way that there will be variations in pricing, there will be variations in service.” Chairman Wheeler went on to describe a potential “two-sided market” where Netflix is allowed to pay to ensure that its customer receives “the best possible transmission” of a movie: “We want to let those kinds of things evolve. We want to observe what happens from that, and we want to make decisions accordingly,” Wheeler said. “The marketplace is where these decisions ought to be made, and the functionality of a competitive marketplace dictates the degree of regulation.”⁷

After extensive public scrutiny, Wheeler walked his remarks back slightly. But we continue to hope that he still believes strongly in the power of the market to find the best solution—an instinct borne out of years of experience. Some criticized Wheeler’s support for a two-sided market and evolving business models, given that he had just expressed his support for an “open Internet.”

But there is no contradiction: An “open” Internet must be one that permits evolving business models, for the platform as well as the content.

II. The Internet Is Not Neutral, Nor Does the FCC Really Think It Is (or Should Be)

Chairman Wheeler’s instincts were rooted in FCC precedent. The Commission’s 2010 Open Internet Order (“OIO”), while problematic in many respects, implicitly acknowledged that a top-down model of government control over all Internet practices would be unwise. Starting from its basic premise that the Internet should be open, the OIO then carved out numerous exceptions.

Recognizing the inherent non-neutrality of the Internet, the OIO exempted a wide range of plainly discriminatory practices, implicitly acknowledging that each was good for the public interest, despite—or because of—its inconsistency with the principle of neutrality.

What is most evident from the list of excepted practices in the OIO is the enormous breadth of the Internet’s inherent and pro-consumer non-neutrality. The Commission made exceptions in whole or in part for non-neutral practices in the following areas:⁸

⁶ Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. ON TELECOMM. & HIGH TECH. L. 141, 142 (2003)

⁷ Jacob Kastrenakes, New FCC chairman Tom Wheeler appears to have conflicting views on net neutrality, THE VERGE (Dec. 4, 2013), <http://www.theverge.com/2013/12/4/5174154/fcc-chairman-tom-wheeler-conflicting-net-neutrality-remarks>.

⁸ The following lists are quoted with editing marks omitted from Written Testimony of Larry Downes, *Hearing on “Ensuring Competition on the Internet: Net Neutrality & Antitrust”: Before the Subcomm. on Intellectual Property, Competition & the Internet, Comm. on the Judiciary*, 34-36 (Feb. 15, 2011) (with TechFreedom), available at http://judiciary.house.gov/_files/hearings/pdf/Downeso2152011.pdf.

1. Mobile broadband⁹
2. Virtual Private Networks¹⁰
3. Specialized Services, Including VoIP¹¹
4. Interconnection and Peering¹²
5. Content Delivery Networks & Co-Located Servers¹³
6. Internet Backbones Services¹⁴
7. Hosting and Data Storage Services¹⁵
8. Multichannel Video Programming Services¹⁶
9. Coffee Shops, Bookstores & Airlines¹⁷
10. App stores¹⁸
11. Edited Services¹⁹
12. “Objectionable” Material²⁰

In addition, the Order re-defined certain terms to limit the businesses and the scope of activities subject to the Order:

13. **Expanded definition of permissible discrimination for wireline providers.**²¹ The FCC rejected a strict nondiscrimination rule for wireline providers and adopted instead a rule prohibiting only “unreasonable” discrimination.
14. **Limited definition of “broadband Internet access service.”**²² The FCC limited its definition of “broadband Internet access service” to encompass only providers of “mass market retail service” providing “the capability to transmit data to and receive data from all or substantially all Internet endpoints.” That left out devices and services like the Amazon Kindle, game consoles, cars, TVs and home appliances that offer some form of web access incidental to their main purpose.
15. **Expanded network management exception.**²³ The FCC broadened its definition of “reasonable network management” to include any practice that is “appropriate and tailored to achieving a legitimate network management purpose.”

⁹ FCC, *Preserving the Open Internet Broadband Industry Practices*, Report and Order, GN Docket No. 09-191, ¶ 8 (Dec. 23, 2010), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf [hereinafter “OIO”].

¹⁰ *Id.* ¶ 47

¹¹ *Id.* ¶ 112-14.

¹² *Id.* ¶ 67 n. 209.

¹³ *Id.* ¶ 76 n. 235.

¹⁴ *Id.* ¶ 47.

¹⁵ OIO, *supra* note 9, ¶ 47

¹⁶ *Id.*

¹⁷ *Id.* ¶ 52.

¹⁸ *Id.* ¶ 102.

¹⁹ *Id.* ¶ 89 & ¶ 143.

²⁰ *Id.* ¶ 89 n. 279.

²¹ OIO, *supra* note 9, app. A § 8.7.

²² *Id.* app. A § 8.11(a).

²³ *Id.* app. A § 8.11(d) & ¶ 82.

16. **Flexibility over paid prioritization.**²⁴ The FCC hedged on whether paid prioritization of some content would necessarily violate the unreasonable discrimination rule, and explicitly rejected the argument that CDNs constitute illegal prioritization.

Many of these same exceptions are proposed to be continued in the NPRM.²⁵ But the exceptions highlight the frailty of the “neutrality” concept embodied in the proposed rules. For example, VPNs are not specialized services, and they are not “cable,” of course, facilitate the transmission of bits over the public Internet just like an ISP. And yet the Commission has recognized that, while they precisely emulate the underlying broadband services at issue in the NPRM, VPNs should not be restricted by the same rules. Presumably the benefits to businesses, for example, from being able to freely manage access to and by their employees, including by blocking or prioritizing certain content, outweighs the costs.

Particularly as the IP transition continues and both the functionality and the design of broadband networks evolve, everything would become a “net neutrality violation” if not for these exceptions. In essence, these exceptions acknowledge a basic truth: The Internet can’t really be “equal” if we want it to evolve and if we want it to continue to work.

Furthermore, as we discuss below, ISPs are not unique in their ability to behave non-neutrally. Rather, every step of the process from creating Internet content to delivering it to consumers’ devices exhibits some non-neutrality, imposing varying costs and potentially impeding innovation, investment and diversity. The Internet, like the rest of the world, is inherently non-neutral.

Similarly, content is not unique in its ability to generate (or create welfare from) innovation.

Despite the fact that applications are ultimately in charge of any network, layering theorists placed ever-greater regulatory burdens on “lower” functional layers and attributed “innovativeness” exclusively to applications. The relationship between innovation and service is actually much more interconnected than this simplistic analysis suggests.²⁶

The *Verizon* court’s “triple cushion shot” rationale (more/better content begets user demand which begets infrastructure investment to accommodate it) for imposing special constraints on network providers is a rejection of this reality. For it to operate sensibly as a rational justification for net neutrality rules it must do more than simply assert the banal truth that content can create value and that networks can be made more valuable as a result, when, at the same time, precisely the reverse causal relationship is also true.

²⁴ *Id.* ¶¶ 76-77

²⁵ See generally, Notice of Proposed Rulemaking, *In the Matter of Protecting and Promoting the Open Internet*, FCC 14-61, § III.B (May 15, 2014), available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0515/FCC-14-61A1.pdf [hereinafter “NPRM”].

²⁶ Bennett, *supra* note 3, at 30.

III. The Premises Underlying the NPRM Fail to Justify the Enactment of the Proposed Rules

The Open Internet Order Remand Notice of Proposed Rulemaking (“NPRM”) asks approximately 215 questions and “seeks comment” on approximately 147 issues, assertions, claims or proposals. Of those questions and requests for comment, vanishingly few address the fundamental issues that should be resolved before any version of the proposals contemplated by the NPRM is passed:

1. What is the actual magnitude of the alleged harms to be prevented, and what are the costs of doing so?
2. What are the counterarguments, the sources of the possible costs from the proposed rules?
3. What evidence supports the assertion that the proposed rules will actually prevent the alleged harms and/or create greater problems elsewhere?
4. Why are broadband networks different than other possible impediments to openness that they merit special regulation?
5. Why are less-intrusive regulations (like antitrust) insufficient to accomplish the rules’ objectives?

Instead, in the NPRM “[w]e start with a fundamental question: What is the right public policy to ensure that the Internet remains open?” Although this framing seems consistent with that of the 2005 Internet Policy Statement,²⁷ the differences between the two are fundamental to understanding where the current NPRM is misdirected and where sound policy-making principles require it to go. “Openness” is, of course, an ambiguous and contested term. Its meaning must be determined by the approach taken to promote it, and the principles and policy goals that underlie it.

The Internet Policy Statement asserts general principles (not specific, *ex ante* rules and prohibitions) that essentially define openness as basic access for consumers, unfettered by restraints on (or exceptions for) specific practices, pricing requirements, or other contractual or organizational arrangements governing the scope or extent of access beyond the minimum. Most importantly, other than the blanket provision (also contemplated by the NPRM) for “reasonable network management,” the Statement adopts only one substantial, normative principle to govern the extent of openness: “*competition* among network providers, application and service providers, and content providers.”²⁸

²⁷ Internet Policy Order, *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review-Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00-185, CC Docket Nos. 02-33, 01-33, 98-10, 95-20, CS Docket No. 02-52, ¶ 4 (2005).

²⁸ *Id.* Because the Statement is a statement of principles and not specific rules (like the NPRM), it is inherently less proscriptive, of course. The key, however, is that it refrains from asserting that the appropriate *extent* of openness should be defined by anything other than a limited and effects-based principle of competition. In

The NPRM, by contrast, explicitly rejects effects-based competition analysis as its guiding principle, and, instead, offers specific structural requirements and prohibitions that collectively assert principles of openness that are much narrower. Unfortunately, this move from the effects-based principle of competition to *ex ante* structural (and behavioral) preferences is not accompanied by the necessary evidence, economic theory or analytical framework to support it.

The NPRM takes the D.C. Circuit's *Verizon* decision as its starting point, and thus begins with the claim that "[t]he D.C. Circuit found that the Commission's assessment of broadband providers' incentives and economic ability to threaten Internet openness was not just supported by the record but also grounded in 'common sense and economic reality.'"²⁹ But the court did not perform any meaningful analysis of the rationale for the 2010 Open Internet Order. Instead, it merely said that the FCC had crossed an extremely low bar of judicial deference to supposed agency expertise. As the D.C. Circuit said in 2012 in upholding the FCC's rejection of a forbearance petition filed by Qwest:

Our task here is a "narrow" one. We are not a "panel of referees on a professional economics journal," but a "panel of generalist judges obliged to defer to a reasonable judgment by an agency acting pursuant to congressionally delegated authority."³⁰

And as we note in our companion comments focusing on the legal issues raised by the NPRM ("TechFreedom-ICLE Legal Comments"), the court may have erred in deciding that the OIO reached even the minimal threshold required for deference.³¹ (We also believe the court erred in concluding that Section 706 was an independent grant of authority at all.)

In the first place, the NPRM's (and the court's) purported economic and evidentiary basis for the asserted threat is extremely weak. And, at the same time, both reject basic competition principles as the appropriate touchstone for defining the proper extent of the proposed rules. The NPRM claims that

the court agreed that the Commission need not engage in a market power analysis to justify its rules, explaining that broadband providers' ability to block or disadvantage edge providers depended on 'end users not being fully responsive to the

doing so, the Statement implicitly recognizes (and explicitly allows for policy to reflect) the inherent tradeoffs in preserving openness. The NPRM, by contrast, proposes a range of principles that are far more deontological, implying the desirability of the proposed rules, regardless of their actual consequences.

²⁹ NPRM, *supra* note 25, ¶ 43 (quoting *Verizon v. FCC*, 740 F.3d 623, 644 (D.C. Cir. 2014)).

³⁰ *Qwest Corp. v. FCC*, 689 F. 3d 1214 (10th Cir. 2012) (citations omitted).

³¹ Legal Comments of TechFreedom and the International Center for Law and Economics [hereinafter "Tech-Freedom-ICLE Legal Comments"], available at http://www.laweconcenter.org/images/articles/TF-ICLE_NN_Legal_Comments.pdf.

imposition of such restrictions,' not on 'the sort of market concentration that would enable them to impose substantial price increases on end users.'"³²

But this dramatically misstates the determinants of market power and its implications for harmful conduct. "Market concentration" is not the *sine qua non* of market power; rather, market power depends, as well, on switching costs, demand elasticity, the extent of collusion, the ease of entry, and buyer and supplier power, among other things. And what is market power but the ability to impose restrictions on users with impunity? Moreover, efficiency (and other desirable outcomes) are not necessarily inversely related to either market power or market concentration, particularly in broadband markets.³³ Likewise, an expansion of vertical contracts (e.g., prioritization agreements between ISPs and edge providers) is not generally harmful. As Tim Wu noted in 2003:

To the extent open access regulation prevents broadband operators from architectural cooperation with ISPs for the purpose of providing QoS dependent applications, it could hurt the cause of network neutrality. By threatening the vertical relationship required for certain application types, it could maintain ISP's discrimination in favor of data applications. More broadly, this argument shows that the concept of network neutrality cannot be taken as counsel against all vertical integration.³⁴

And as FTC Commissioner Joshua Wright noted recently:

What the theoretical literature and empirical evidence demonstrates...is that vertical contracts, including those captured by the Neutrality Order, are not always anti-competitive and in most cases are procompetitive. This is a critical observation for answering the question: "what kind of regulatory regime and legal rules governing this behavior will best serve consumers?"³⁵

It is important to point out that, in several places, the NPRM does seek comment on the adoption of certain competition principles to guide its enforcement with respect to its "commercially reasonable" rule. Thus, for example, the NPRM asks:

³² NPRM, *supra* note 25, ¶ 43.

³³ Ex Parte Submission of the United States Department of Justice, In re Economic Issues in Broadband Competition, GN Docket No. 09-51, at 11 (Jan. 4, 2010), available at <http://www.justice.gov/atr/public/comments/253393.pdf>. ("We do not find it especially helpful to define some abstract notion of whether or not broadband markets are "competitive." Such a dichotomy makes little sense in the presence of large economies of scale, which preclude having many small suppliers and thus often lead to oligopolistic market structures.")

³⁴ Wu, *supra* note 6, at 150.

³⁵ Joshua D. Wright, *Broadband Policy & Consumer Welfare: The Case for an Antitrust Approach to Net Neutrality Issues*, Remarks of Joshua D. Wright, Commissioner, Federal Trade Commission at the Information Economy Project's Conference on US Broadband Markets, 12 (2013), available at http://www.ftc.gov/sites/default/files/documents/public_statements/broadband-policy-consumer-welfare-case-antitrust-approach-net-neutrality-issues/130423wright_nn_posting_final.pdf [hereinafter, "Wright, NN Speech"].

How can the Commission ensure that parties are acting in a commercially reasonable manner without foreclosing the creation of pro-competitive opportunities through certain forms of price discrimination or exclusivity agreements?... Should the Commission adopt a rebuttable presumption that broadband provider conduct that forecloses rivals (of the provider or its affiliates) from the competing marketplace is commercially unreasonable?³⁶

Such questions are commendable, and this sort of approach would, appropriately, not ban prioritization or other vertical arrangements outright, as many neutrality advocates propose.³⁷

At the same time, however, the framing of such questions in the context of “rebuttable presumptions,” the suggested adoption of a “consumer choice” standard,³⁸ the stated “understand[ing]” that a competition inquiry would “extend beyond an application of antitrust principles,”³⁹ and the NPRM’s proposed “catch-all” rule,⁴⁰ combine to demonstrate an unsupported antipathy to a host of practices, and the Commission’s willingness and intention to deviate from well-defined competition principles.

The NPRM (and the *Verizon* court), meanwhile, proclaim that there is ample evidence of *actual* violations, although the evidence is remarkably meager given the incomprehensibly enormous amount of data flowing over ISPs’ networks and the plethora of relationships governing the availability of content over the Internet.⁴¹

Seemingly recognizing this absence of evidence, the purported basis for claiming that the threat to the Internet is “not merely a hypothetical concern”⁴² is principally the claimed incentives that broadband providers “*may* have” and the effects that “*could*” result.⁴³ None of this should be sufficient to establish the predicates necessary to adopt net neutrality rules, and, even more, none of these is rigorously connected to the specific proposed rules.

³⁶ NPRM, *supra* note 25, ¶ 128.

³⁷ Contrary to the some assertions, a prohibition on prioritization is not consistent with the *Verizon* court’s dicta regarding a permissible no-blocking rule. Rather, the availability of prioritization is precisely what distinguishes a permissible rule from common carriage in this context. See TechFreedom-ICLE Legal Comments, *supra* note 31, § III.A.

³⁸ NPRM, *supra* note 25, ¶¶ 129-30. The “consumer choice” standard is roundly rejected in antitrust law. See, e.g., *Brantley, et al. v. NBC Universal, Inc., et al.*, 675 F.3d 1192 (9th Cir. 2012) (noting that a reduction in consumer choice “do[es] not state a Section 1 claim.”).

³⁹ *Id.* ¶ 124.

⁴⁰ *Id.* ¶ 123.

⁴¹ See, e.g., Larry Downes, *Unscrambling the FCC’s Net Neutrality Order: Preserving the Open Internet—But Which One?*, 20 COMM.LAW CONSPECTUS 83, 115 (2011) (“[I]n the world of regulatory efficiency, focusing this much attention on just four incidents of potential or “alleged” market failures is a remarkable achievement indeed. Even assuming that these actors harbored the worst possible motives, these incidents do not amount to a pattern of any kind of behavior. In reality, however, most of these purported instances have little or nothing to do with the kinds of potential “incentives” that motivated the rulemaking.”).

⁴² NPRM, *supra* note 25, ¶ 5.

⁴³ *Id.* ¶¶ 6-8 (emphasis added).

Far preferable is an error-cost approach that minimizes the sum of the risk of error from over-enforcement and under-enforcement (or, in the case of rulemaking, over-inclusive and under-inclusive rules), understanding that it will rarely be fully apparent in advance which is more likely.⁴⁴ Perhaps the most significant implication of this approach is a recommendation against *ex ante*, proscriptive rules.

High tech industries, including those that make up the Internet ecosystem, have several characteristics—including high rates of investment and R&D, large fixed costs, product differentiation, network effects, multi-sidedness and strong complementarities—which tend to make economic analysis of particular business practices highly fact dependent: The effects of a particular practice are intrinsically dependent on the circumstances of the market at issue. Moreover, because market circumstances in the IT sector are constantly evolving, even conduct that is harmful at one point may, a few years or even months later, be efficiency-enhancing and pro-competitive.

The upshot of these economic realities is that *ex ante* regulation of vertical conduct—i.e., blanket prohibitions on certain types of business practices—necessarily will yield a high incidence of Type II error: The well-intentioned but counterproductive prohibition of conduct that is actually welfare-enhancing. Accordingly, such regulations—including the Open Internet Order—are very likely to generate greater costs than benefits.⁴⁵

A. There Must Be a Sound Basis for Establishing or Changing Regulations

Beyond the required legal basis for establishing or changing regulations, good governance demands a well-established policy basis for regulatory action. Typically this means that

Federal agencies should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling public need, such as material failures of private markets to protect or improve the health and safety of the public, the environment, or the well-being of the American people.⁴⁶

In execution, among other things, cost-benefit analysis of regulations should consider and explain:

1. The rationale underlying the rules, avoiding regulation where problems and/or solutions are trivial;
2. The substitute risks introduced by regulation; and
3. The rationale for regulation *failing* demonstration that benefits exceed costs.⁴⁷

⁴⁴ See Geoffrey A. Manne & Joshua D. Wright, *Innovation and the Limits of Antitrust*, 6 J. COMP. L. & ECON. 153, 158-63 (2010).

⁴⁵ Jeffrey Eisenach, *et al.*, Economists Letter to the Chairman, *In the Matter of Broadband Industry Practices*, WC Docket No. 07-52 (Dec. 11, 2013), available at <http://apps.fcc.gov/ecfs/document/view?id=7520961472>.

⁴⁶ Exec. Order No. 128,666, 58 Fed. Reg. 51735 (Oct. 4, 1993).

⁴⁷ See generally Robert W. Hahn & Cass R. Sunstein, *A New Executive Order for Improving Federal Regulation*:

At minimum, as arbitrary and capricious review also demands,⁴⁸ agencies should justify their rules with empirical evidence sufficient to demonstrate that they will have the intended effects and that these represent the solution to a substantial problem in need of addressing. In the policy context, this is an inherently economic exercise.

As we have suggested, the evidentiary basis for the proposed rules, even if they have passed the minimal scrutiny performed by the D.C. Circuit, is weak, lacking in empirical support and premised on questionable assertions regarding the extent of the problem to be addressed.⁴⁹

In addition, and of particular importance to the regulation of rapidly-evolving markets like broadband, it is incumbent upon regulators to consider and rigorously account for the problems and/or risks that regulation itself may introduce. This “hydraulic effect” of regulation—the reality that underlying economic incentives will shift conduct to unregulated areas, often in ways that undermine the purpose of regulation—is often inevitable.⁵⁰ This reality makes it considerably more difficult for regulators to design regulations that do more good than harm. That’s one reason that cost-benefit analysis has been required of agency actions for two decades⁵¹— and also why President Obama has encouraged even independent agencies like the FCC to carefully evaluate the costs and benefits of their regulations).⁵²

In essence, neutrality gives a qualified property right to network capacity to content providers. It attempts to minimize the central management function from networks, and prohibits price from acting as a rationing device. Just as with radio payola,⁵³ something else will almost certainly arise in its stead: direct payments between content providers, mergers,

Deeper and Wider Cost-Benefit Analysis, 150 PENN. L. REV. 1489 (2002).

⁴⁸ The FCC must “articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.” *Motor Vehicle Mfrs. Ass’n, Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

⁴⁹ See also Dissenting Statement of Commissioner Ajit Pai, *In the Matter of Protecting and Promoting the Open Internet*, FCC 14-61 (May 15, 2014), available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0515/FCC-14-61A1.pdf (“So what is the way forward? Here’s one suggestion.... [W]e should ask ten distinguished economists from across the country to study the impact of our proposed regulations and alternative approaches on the Internet ecosystem.... But we should not limit ourselves to economic studies. We should also engage computer scientists, technologists, and other technical experts to tell us how they see the Internet’s infrastructure and consumers’ online experience evolving.”).

⁵⁰ See Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 ALA. L. REV. 473 (2007).

⁵¹ Exec. Order No. 128,666, *supra* note 46 (“In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating.”).

⁵² See Exec. Order No. 13,579, 76 Fed. Reg. 41587 (July 14, 2011). See also Barack Obama, “Executive Order 13579—Regulation and Independent Regulatory Agencies,” THE WHITE HOUSE (July 11, 2011), <http://www.whitehouse.gov/the-press-office/2011/07/11/executive-order-regulation-and-independent-regulatory-agencies>.

⁵³ See *infra* notes 83-86, and accompanying text.

contracts, etc. These may or may not be better, but they undermine the intentions of efforts to mandate neutrality.

IV. The Importance of Nonlinear Pricing and Business Models, and the Tradeoffs Inherent in the Neutrality Premise

Not only does the NPRM insufficiently justify its assertions about the benefits of neutrality, and its proposed rules about how best to promote it, there is also good reason to believe that its proposed restraints on discrimination (now called “prioritization” under the new commercial reasonableness rule) will thwart a range of pro-consumer business models on the Internet.

The FCC’s Open Internet Advisory Committee (“OIAC”), which the Commission tasked to help it flesh out a rather bare net neutrality framework, understood the tradeoffs inherent in such restrictions on vertical agreements, accepted that two-sided markets were inevitable, and took a nuanced view about whether discriminatory business models could help consumers:

Broad use of two-sided pricing is not (yet) common in the U.S. mobile broadband market.... On the one hand, “toll-free” data may facilitate end-users’ ability to access mobile content at a reasonable cost from those providers willing to subsidize the cost of delivering the data. Enabling content providers to pay for data delivery offers users an incentive to access the sponsored content. In the short run, this is beneficial for consumers of that content, particularly for budget conscious users on smaller data plans. On the other hand, sponsored delivery potentially works against the goals of openness because (i) increasing the costs for content providers may reduce innovation and (ii) smaller, upstart content providers cannot easily amortize the “chargeback” costs through advertising revenue or subscription fees. Entrenching the largest content providers that have the means to strike deals for sponsored data with carriers puts new entrants at a disadvantage.⁵⁴

Similarly, the OIO noted:

Some commenters suggest that open Internet protections would prohibit broadband providers from offering their subscribers different tiers of service or from charging their subscribers based on bandwidth consumed. We are, of course, always concerned about anti-consumer or anticompetitive practices, and we remain so here. However, prohibiting tiered or usage-based pricing and requiring all subscribers to pay the same amount for broadband service, regardless of the performance or usage of the service, would force lighter end users of the network to sub-

⁵⁴ Open Internet Advisory Committee 2013 Annual Report, p. 58, *available at* <http://transition.fcc.gov/cgb/oiac/oiac-2013-annual-report.pdf> [hereinafter “OIAC Report”]. The OIAC continued: “This is clearly an area of ongoing debate.... [T]here is a great deal of experimentation in mobile business models, which is enabling innovation and value to customers and others in the ecosystem. Some business models raise concerns about carriers restricting the way consumers use their mobile devices and about long-term impacts on application and content innovation.”

sidize heavier end users. It would also foreclose practices that may appropriately align incentives to encourage efficient use of networks. The framework we adopt today does not prevent broadband providers from asking subscribers who use the network less to pay less, and subscribers who use the network more to pay more.

Among other things, and as the OIAC Report illustrates in several places, constraining discrimination limits the permissible scope of “reasonable network management” in ways that almost necessarily create the need for *more*, not less, network management, increase the risk of congestion, and introduce the likelihood of conflict with the rules themselves. For example, the OIAC Report notes that:

For mobile providers, applications that (unwittingly) consume excessive bandwidth and signaling resources cause congestion for other users in the short term, and require a larger investment in network capacity in the long term. In addition, applications that waste network bandwidth or battery lifetime limit the value of a mobile broadband service to end users, particularly if users are subject to usage caps or usage-based billing. As a result, without greater transparency to increase user awareness of an application’s efficiency—and usage-based pricing models to incent them to choose the most efficient applications—providers could see a limited return on the substantial investment required to expand network capacity, and still face the risk of a new mobile application swamping the available resources.⁵⁵

But the extent of the incentive to limit use of such applications (as in the AT&T/FaceTime dispute, also discussed at length in the OIAC Report)⁵⁶ is a function in part of the inability of mobile ISPs (and consumers and content providers, for that matter) to otherwise direct data consumption to its highest-valued use.⁵⁷

With most current 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, 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-

⁵⁵ OIAC Report, *supra* note 54, at 59.

⁵⁶ *See id.* at 39-46.

⁵⁷ While for the most part such inability is self-imposed (that is, wireless providers themselves choose to employ subscription, rather than per-use or nonlinear pricing), many so-called consumer advocates argue vociferously against such pricing models and contend that they would violate net neutrality principles. For an example of one company that has developed the tools to enable a range of such pricing models, see Syntonic Wireless, <http://www.syntonicwireless.com/compelling-market-opportunities/>. For an example of the sort of critical response such innovations have engendered, see Steve Kovach, *AT&T’s Latest Move Should Have Net Neutrality Advocates Freaking Out*, BUSINESS INSIDER (Jul. 11, 2014), <http://www.businessinsider.com/att-sponsored-data-2014-7>.

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.

Some critics have argued that

Bandwidth caps made it impossible to do all the important stuff 4G LTE supposedly lets you do. T-Mobile provides evidence that users with capped or throttled broadband use 20x-30x less broadband than users with uncapped broadband. T-Mobile has also said that 37% of subscribers don't use streaming media because they fear going over their bandwidth caps.⁵⁸

But this criticism is misplaced. Maximal use (or over-use) of broadband *per se* is not the correct policy aim. Rather, the aim should be the *optimal* use of broadband, which maximizes the value of the Internet for consumers and creates the strongest incentives for network providers to innovate and invest. And to the extent that unlimited use/flat rate billing *are* optimal, they are optimal only with uncongested networks with full penetration.⁵⁹ Moreover, mandated flat-rate billing would ultimately deter new network competition and result in higher prices (and thus lower penetration) for low-volume consumers.⁶⁰

Among other things, this means that, particularly where there is congestion, the socially optimal solution is for broadband providers to encourage users to *prioritize*, not necessarily to maximize, their data usage.

Thus, the objection to innovative broadband business models like T-Mobile's unRadio⁶¹ and other sponsored data schemes, undermines not only optimal policymaking, but also the critics' own stated aim to promote "the value of mobile broadband to consumers."⁶² Because such schemes offer a means to both a) limit data usage and relieve congestion, whether there are caps or not; and b) still permit users to operate without whatever limits caps would place on their usage in a much more useful way, allowing them to pick and choose which types of data or even content providers are most important to them, such

⁵⁸ Harold Feld, *T-Mobile Data Roaming Petition Proves Wireless Data Caps Are About Market Power*, PUBLIC KNOWLEDGE (Jul. 11, 2014), <https://www.publicknowledge.org/news-blog/blogs/t-mobile-data-roaming-petition-proves-wireless-data-caps-are-about-market-power-and-that-they-seri>.

⁵⁹ See, e.g., Daniel A. Lyons, *Internet Policy's Next Frontier: Usage-Based Broadband Pricing*, 66 FED. COMM'NS L. J. 1 (2013).

⁶⁰ See, e.g., Scott Wallsten & James L. Riso, *Residential and Business Broadband Prices Part 1: An Empirical Analysis of Metering and Other Price Determinants*, TECHNOLOGY POLICY INSTITUTE (Nov. 2010), available at <http://techpolicyinstitute.org/files/residential%20and%20business%20broadband%20prices%20opt1.pdf>. <http://techpolicyinstitute.org/files/residential%20and%20business%20broadband%20prices%20opt1.pdf>. See also, *Id.*?

⁶¹ See Michael Weinberg, *T-Mobile Uses Data Caps to Manipulate Competition Online, Undermine Net Neutrality*, PUBLIC KNOWLEDGE (Jun. 19, 2014), <https://www.publicknowledge.org/news-blog/blogs/t-mobile-uses-data-caps-to-manipulate-competition-online-undermine-net-neut>.

⁶² Feld, *supra* note 58.

arrangements facilitate the optimal use of scarce data, enable network management practices that alleviate congestion overall, and allow ISPs to reduce the risk from infrastructure investment by speeding up the rate at which they realize returns. Collectively these create an enormous impetus for broadband investment.

The idea that consumers and competition generally are better off when content providers face no incentive to take account of congestion externalities in their pricing (or when users have no incentive to take account of their own usage) runs counter to basic economic logic and is unsupported by the evidence. In fact, contrary to such claims, usage-based pricing, congestion pricing and sponsored content, among other nonlinear pricing models, would, in many circumstances, further incentivize networks to *expand* capacity (not create artificial scarcity).⁶³

To be sure, under other conditions such arrangements could create some incentive for networks to create “artificial scarcity.”⁶⁴ But if this is the justification for regulation, it should be more clearly established through economic analysis. Further, such regulation should narrowly focus on this risk and avoid constraining efficient investment, usage and innovation incentives when the risk is not present.

Significantly, restraints on ISP pricing freedom may deter the construction of faster networks and result in lower consumer welfare. As the DOJ’s Chief Economist, Aviv Nevo, explains in a recent paper,

Our results suggest that usage-based pricing is an effective means to remove low-value traffic from the Internet, while improving overall welfare. Consumers adopt higher speeds, on average, which lowers waiting costs. Yet overall usage falls slightly. The effect on subscriber welfare depends on the alternative considered. If we hold the set of plans, and their prices, constant, then usage-based pricing is a transfer of surplus from consumers to ISPs. However, if we let the ISP set price to maximize revenues, then consumers are better off.⁶⁵

The authors further note that overall (and ISP) welfare could be increased further with \$100/month flat-rate pricing on a Gigabit network. But, as the authors note, “[f]rom the ISP’s perspective, the capital costs of such investment would be recovered in approximately 150...months. Similarly, this estimate is a lower bound on the actual time required.”⁶⁶

While such cost recovery is feasible, it assumes no significant changes in technology, regu-

⁶³ See generally, Robert D. Willig, *Pareto Superior Nonlinear Outlay Schedules*, 11 BELL J. ECON. 56 (1978).

⁶⁴ See Nicholas Economides, *Why Imposing New Tolls on Third-Party Content and Applications Threatens Innovation and will not Improve Broadband Providers’ Investment* (NYU Center for Law, Economics & Organization Working Paper No. 10-32, July 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1627347.

⁶⁵ Aviv Nevo, *et al.*, *Usage-Based Pricing and Demand for Residential Broadband* 38 (Working Paper, Sept. 12, 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2330426.

⁶⁶ *Id.* at 37.

lation or demand that would alter the calculation, relatively high population density, and, most importantly, the ability to charge relatively high rates, leading to decreased penetration. And the authors further note that the *optimal* fixed fee for Gigabit service (assuming conditions like those facing Google Fiber in Kansas City) is almost \$200/month. While

[t]his revenue-maximizing price is in the middle of the range of prices currently offered for Gigabit service in the US..., due to restrictions on rates from local municipalities, an ISP may have a difficult time charging this rate.⁶⁷

The bottom line is that regulatory restrictions on pricing serve generally to lower welfare and broadband investment incentives. The FCC should avoid adopting such restrictions, particularly without the evidence or economic analysis sufficient to justify them.

V. Pro-Consumer Business Models Would Be Deterred or Foreclosed

The essential problem with the approach contemplated by the NPRM (and similarly the OIO) is that it, ironically, prioritizes the *status quo*, deterring not only new network access models but also novel business and pricing models at all levels of the Internet.⁶⁸

While, as noted, limits to Internet “openness” can arise at any number of points along the “value chain” from content creation to consumption, so too can innovation and investment occur at any number of points—and do at least as much to spur broadband infrastructure investment (the goal ordered by Congress in Section 706, and claimed by the Commission as its source of legal authority):

The diverse array of wireless innovation happening globally illuminates the difficulties inherent in attempts to impose net neutrality principles on the wireless broadband industry. Broadband access is merely one part of a much broader Internet ecosystem, an ecosystem that also includes equipment manufacturers, content and application providers, operating-system programmers, network operators and engineers, and others. The Commission’s myopic focus on one narrow set of relationships in that ecosystem retards innovation and limits the ability of Americans to share in the global revolution currently taking place for mobile services.⁶⁹

The particularly ironic aspect of the narrow focus on network access, and the commensurate threat to all manner of innovative practices under the rubric of net neutrality, is that these innovations have frequently been introduced by both new entrants and incumbent firms facing rigorous competition—settings in which antitrust rules would not apply and in

⁶⁷ *Id.* at 38.

⁶⁸ See, e.g., Larry Downes, *Unscrambling the FCC’s Net Neutrality Order: Preserving the Open Internet—But Which One?*, 20 COMMLAW CONSPECTUS 83, 115 (2011) (“As the exceptions piled up, the majority should have realized the futility of making rules for an ecosystem very much in transition. Instead, they remain fixated on maintaining an Open Internet even though they now had ample evidence that neutrality is a virtue more honored in the breach.”); Christopher S. Yoo, *Beyond Network Neutrality*, 19 HARV. J.L & TECH. 1 (2005).

⁶⁹ Daniel A. Lyons, *Innovations in Mobile Broadband Pricing* 3-4 (Mercatus Center Working Paper No. 14-08, March 2014), available at http://mercatus.org/sites/default/files/Lyons_BroadbandPricing_v1.pdf.

which consumers are manifestly benefitted from such efforts.

Professor Daniel Lyons points to then-fledgling MetroPCS's effort to gain market share in 2011 by offering a limited data plan with subsidized, unlimited access to content from YouTube and a few other content providers.⁷⁰ The plan was excoriated by net neutrality proponents. But,

[A]s Professor Tom Hazlett notes, [MetroPCS's] customers were mostly price-sensitive cord-cutters who had little use for the bells and whistles of larger carrier plans, especially at higher price points. MetroPCS's plan was poised to bring wireless data to this market segment. But instead it found itself facing the threat of agency action because its plan did not match the Federal Communications Commission's preconceived notion of what the wireless broadband experience should be.⁷¹

MetroPCS ultimately abandoned this innovative business model, whose very non-neutrality could have promoted broadband adoption, especially among those on the other side of the "digital divide."

It isn't hard to imagine myriad business models that could be prohibited under a pure net neutrality framework. In addition to the ever-emerging models that already exist, consider the following hypothetical ones:

1. Comcast offers a lower-priced option for each faster tier of access to consumers, as long as they don't watch Netflix content more than a certain amount of time.⁷²
2. Comcast imposes tighter tier limits (perhaps based only on consumption of Netflix content or video content generally) and offers time-of-day data/speed exceptions, where a user gets, say, 3 Mbps during the day but up to 100 Mbps in the middle of the night (with the actual boost a function of the magnitude of the difference in usage on the user's node between night and day).
3. Comcast offers the nighttime speed boost in conjunction with an offer to Netflix to subsidize colocation and lower- or no-settlement transit as long as no more than, say, 30% of Netflix traffic occurs during peak times.

Each of these examples would probably violate the proposed rules, and would, at mini-

⁷⁰ *Id.* at 4 (citing Ryan Kim, *MetroPCS LTE Plans to Charge More for VoIP & Streaming*, GIGAOM (Jan. 4, 2011), <http://gigaom.com/2011/01/04/metropcs-lte-plans-charge-more-for-skype-and-streaming/>).

⁷¹ *Id.* at 5 (citing Thomas W. Hazlett, *FCC, Net Neutrality Rules, and Efficiency*, FINANCIAL TIMES (Mar. 29, 2011), <http://www.ft.com/intl/cms/s/0/f75fd638-5990-11e0-baa8-00144feab49a.html#axzz2gFHqNfa>).

⁷² As this example shows, contrary to assertions of many net neutrality proponents, Internet "fast lanes" need not benefit incumbent content to the detriment of new entrants. In fact, contrary to their assertions, it is the largest bandwidth hogs that ISPs are concerned about. The most obvious response is not to subsidize demand for such bandwidth hogs, but to offer subsidies to enable subscribers to obtain faster service at lower price if doing so will *not* lead to even more congestion. This benefits new entrants, not established providers. Note also that net neutrality advocates would surely characterize a scheme like this as "artificial scarcity." But this example points out the failings of such claims. In this case "artificial scarcity" enables certain users to access higher-speed service at lower cost.

mum, likely lead to a Complaint and a possible FCC enforcement action with a substantial risk that it would not constitute “reasonable network management.” That risk might well deter broadband companies from experimenting with such business models in the first place. Indeed, that risk is essentially why the D.C. Circuit struck down the FCC’s 2010 non-discrimination rule as amounting to *de facto* common carriage.⁷³

But at the same time, none of these examples is inherently harmful to consumers or to content providers. In fact each is, indeed, arguably a sensible and beneficial form of network management and/or price discrimination.

For example, an obvious consequence of the third hypothetical (or perhaps the impetus for it) would be Netflix offering its own innovative device or service in conjunction with the arrangement to pre-cache content at night, thus converting some user consumption from streaming to downloading (thus facilitating the relief of peak congestion). Such an arrangement would be impossible without Netflix’s cooperation, which it has little or no incentive to offer *unless* it faces congestion-related costs. Thus, non-neutrality in this instance would serve to improve both the overall network as well as the delivery of Netflix’s content.

One of the remarkable things about these examples is their similarity with unbundling of video content. Those who have argued that the FCC (or Congress) should force MVPDs to offer programming on an a la carte basis insist that users should be able to choose which content sources (channels in the case of linear video programming) they want to consume, without bearing the costs of accessing the full range of content. Yet these same organizations and scholars effectively insist that access to all Internet content be made available to all consumers (whether they want it or not) equally, with no opportunity for unbundled pricing. Since they also oppose metered usage, this effectively means forcing all users to bear the costs of access to programming sources they do not want – just like MVPD programming bundles.⁷⁴

The question is, why should MVPD video content and Internet content be treated differently? What, if anything, justifies a unique and uniquely interventionist regulatory regime governing the broadband link in the various vertical and horizontal chains?

When looking at the economics of complex and interconnected system goods, there seems to be very little room to differentiate between ISPs and gateway players located at higher layers. In both cases, players have an incentive to secure a

⁷³ Verizon v. FCC, 740 F.3d at 657 (“The Commission has provided no basis for concluding that in permitting ‘reasonable’ network management, and in prohibiting merely ‘unreasonable’ discrimination, the Order’s standard of ‘reasonableness’ might be more permissive than the quintessential common carrier standard.”).

⁷⁴ See, e.g., Written Testimony of Geoffrey A. Manne, “The Future of Video Marketplace Competition,” *Hearing on “The Satellite Television Law: Repeal, Reauthorize or Revise,” Before: Subcomm. on Comm’n. & Tech., Energy & Commerce. Comm. 53-57* (Jun. 12, 2013), available at <http://docs.house.gov/meetings/IF/IF16/20130612/100960/HHRG-113-IF16-Wstate-ManneG-20130612-U1.pdf#page=53>.

share of the value created by the system by engaging in some form of differential pricing or price discrimination from their supply side, and in preferential agreements on the demand side.⁷⁵

Moreover, to the extent that there is justification for this “broadband exceptionalism,” is it based on anything other than the extent of competition? It is difficult to rationalize the difference between acceptable versions of non-neutrality and those contemplated by the NPRM on a basis *other* than the degree of competition—but doing so leads inexorably to the kind of market power test advocated by Judge Silberman in his *Verizon* dissent (and rejected by the FCC in the NPRM)⁷⁶ as the appropriate basis for grounding a narrower form of net neutrality⁷⁷—and to an antitrust conception of the issue, undermining the claimed rationales for *ex ante*, *per se* net neutrality rules.

It seems that it is not the *fact* of non-neutrality, but rather that the decision rests with ISPs, that offends net neutrality advocates. One reason we know this is that *content-provider-initiated* non-neutrality is not generally viewed as a problem (and wouldn’t be actionable under the proposed rules).

Consider, for example, the following: What if Netflix were to offer to subsidize its users’ purchase of higher-speed Internet. Say, for every tier of speed above 3 Mbps purchased up to 50 Mbps, Netflix will send a check to the user for 30% of the upgraded broadband subscription price. As written this would not be a problem under the proposed rules, although the end result would be exactly what most critics most fear—payments by content providers to access a so-called “fast lane.”

Consider now elaborations on that simple hypothetical: Nor would it be problematic, it would seem, if Netflix cut out the middleman and sent its checks directly to the ISP. So what if instead of sending individual checks for individual accounts, Netflix just bought upgrades on behalf of its users who opt in to the program? Now the user pays Netflix more for a “super platinum package”—a regular Netflix subscription plus an amount equal to 30% of the average increased subscription cost to get users from 3 Mbps to 50 Mbps—say, \$30/month. Netflix, meanwhile, buys in “bulk” 50 Mbps service for the opt-in customers. Presumably the same result.

Moreover, unless and until interconnection agreements are brought under the purview of net neutrality, Netflix could also purchase interconnection or collocated server on its part, if

⁷⁵ Andrea Renda, *Neutrality and Diversity in the Internet Ecosystem* 32-33 (Working Paper, Aug. 19, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1680446.

⁷⁶ NPRM, *supra* note 25, at ¶ 49. To its credit, the NPRM does “seek comment on whether the Commission should engage in a market power analysis with respect to broadband providers and, if so, how we should go about that analysis.” *Id.* But it does so only in the context of a recognition that “market power “*may inform an understanding* of a broadband provider’s behavior...and its incentives...” *Id.* (emphasis added).

⁷⁷ *Verizon v. FCC*, 740 F.3d at 655 (Silberman, J., dissenting) (“[T]he Commission’s failure to conduct a market power analysis is fatal to its attempt to regulate, because it means that there is inadequate evidence to support the lynchpin of the Commission’s economic theory.”).

doing so would facilitate delivering the higher speed package at lower price.

In the most “extreme” version of this hypothetical, then, Netflix pays the ISP directly for faster service, either or both over the last mile and/or at interconnection.

If these options would be acceptable under the proposed rules, it remains for the Commission to defend its rule banning precisely these or similar arrangements where the only difference is that it is the ISP offering to facilitate the arrangement rather than Netflix doing so directly by contract with its subscribers. One can imagine any number of equally non-neutral arrangements, which are both beneficial for consumers and not obviously prohibited under the proposed rules, precisely because the relevant discrimination is effected by content providers and not ISPs.

VI. ISP Neutrality Would Aggrandize Content Platforms, But Content Can Be Non-Neutral, Too

Consider this 2006 statement from the Future of Music Coalition:

For musicians, net neutrality means they should have the unfettered ability to make their work available to potential fans without undue interference from corporate gatekeepers. Similarly, music fans should have the ability to access this music via a range of legitimate business models. Net neutrality also ensures the continued innovation that has spurred the growth of the indie sector, the transition to a legitimate digital economy and, more widely, consumer adaptation [sic: adoption?] of broadband services.⁷⁸

In this case, the only “corporate gatekeepers” that are potentially stymied by net neutrality are ISPs. But that means that other “gatekeepers,” like music streaming services, music search services and digital music retailers, for example, become even more powerful. Instead of ensuring “unfettered ability” for musicians to make their work available, net neutrality may have the opposite effect.

Absent subsidized prioritization consumers must, at the margin, limit their consumption of content or limit its quality by consuming lower-bit versions or purchasing only slower broadband access. Moreover, the prohibition on affiliated content prioritization and ISP-based promotion of content removes a mechanism for reducing search and marketing costs, even as consumers face stronger incentives to discriminate in the content they consume. In such a world, other mechanisms for promotion, placement, marketing and advertising become correspondingly more important and more expensive—and more significant sources of non-neutrality.

And, of course, the non-ISP platforms can themselves engage in other forms of prioritiza-

⁷⁸ Jenny Toomey & Michael Bracy, *Indie-rock revolution, fueled by net neutrality*, FUTURE OF MUSIC COALITION (Jun. 13, 2006), available at <https://futureofmusic.org/article/article/op-ed-indie-rock-revolution-fueled-net-neutrality>.

tion that replicate the “fast and slow lanes” of ISP prioritization—for example, by offering some music only at lower bit rates, offering their own fast/slow lanes to labels/artists, or, like Netflix, offering their own original or exclusive content—protected by contract, IP laws and the like and limited only by the market and antitrust rules.

Again, there *might* be a key difference between these alleged “gatekeepers” and broadband providers, but if there is, it lies in switching costs and market power, not some inherent distinction between the “edge” and “core” or various “layers” of the Internet.

The key point is that the structure of the FCC’s statutes and the authority at issue here are focused on communications networks as potential barriers to access and innovation. But viewed logically (rather than through the jaded eye of a 20-year old (or 80-year old) statute), they are not by any means the only possible sources of friction between content and its potential consumers.

Again the questions that must be answered—and that to date remain steadfastly unanswered—are whether ISPs are really exceptional, whether they really deserve to be singled out, whether consumers will really benefit, and whether the benefits of doing so will really outweigh the costs.

These questions aren’t rhetorical; we simply don’t know whether the resulting non-ISP-based discrimination would necessarily be better or worse. But we *can* say that it follows logically from net neutrality regulation and that it can undermine net neutrality proponents’ stated aims.

It is also important to note that mandating some sort of neutrality for content platforms to match ISP neutrality, if doing so were even legally permissible, would be the worst possible outcome.⁷⁹ Doing so would simply compound the constraints on innovation, push discrimination further down the line and raise numerous, additional legal and Constitutional problems.

Proponents of net neutrality generally assert some version of this claim, made by Etsy’s director of public policy:

The Internet is built on the principle of openness. For the price of an Internet connection, anyone can spread new ideas or start a business — even spark a new industry.⁸⁰

It is possible (but not actually established) that broadband “openness” is a necessary condition for edge innovation, but it is by no means sufficient. In many ways, in fact, it is content aggregators (think Netflix, Etsy, Google, Kickstarter) that probably exert the greatest influ-

⁷⁹ It is thus noteworthy that the FCC’s interpretation of its authority, particularly under Section 706, while currently limited to ISPs, is not *necessarily* so limited. TechFreedom-ICLE Legal Comments, *supra* note 31, § V.

⁸⁰ Althea Erickson, *Join Etsy in Fighting for an Open Internet*, ETSY BLOG (Jul. 8, 2014), <https://blog.etsy.com/news/2014/join-etsy-in-fighting-for-an-open-internet/>.

ence over access. While these companies sometimes come under fire themselves (wrongly, in our view), it is an important question whether they are made more or less powerful if ISPs are constrained, and what effect that will have on true neutrality.

In fact, of course, all these companies, including ISPs, have the ability to mediate access, but are limited by the market dynamics that constrain them, including from interactions with each other.

An entrepreneur needs *both* an edge provider and an ISP to reach consumers. And that reality both presents an opportunity and a complication. The opportunity is for increased bargaining power to “the little guy” through aggregation. Bob Loblaw’s Law Blog may seem to be at the mercy of its Internet provider, standing on its own. But if it uses WordPress’s platform it doesn’t actually stand on its own. The same is true for independent artists plying their music or videos on the web. It isn’t Adele vs. Comcast; it’s YouTube vs. Comcast. That’s a very different situation, and one in which YouTube is by no means clearly at a disadvantage.

The complication is that, if by virtue of net neutrality rules Comcast is made weaker, YouTube is made stronger. As the recent royalty dispute between YouTube and some independent artists demonstrates, YouTube is far from powerless in its relationships with the content providers that *it* aggregates.⁸¹ If Comcast is hamstrung in its dealings with YouTube, it is not only the relationship between YouTube and Comcast that is affected, but also the relationship between YouTube and its content sources.

Powerful companies play off one another to gain temporarily unique positions, which they can and often do lose thanks to nimbler competitors as well as commercial partners. The dynamics of these relationships are much more complicated than a simplistic “ISP as gatekeeper” view of the world contemplates.

There is no reason to expect that this conflict will lessen, and instead there are arguments that suggest it will intensify. Should something like net neutrality prevail, the conflict would likely move to a different level. That level might become search neutrality.... Or, to take another currently popular concept, if “cloud computing” does become as significant as its enthusiasts claims, it could lead to dominance of a single service provider. The effective monopoly of that dominant player could then become perceived as far more insidious than any of the “walled gardens” or “intelligent networks” that telcos would like to build.

* * *

[A] net neutral communications infrastructure could be viable economically. But such an infrastructure might enable even more extreme forms of price discrimina-

⁸¹ See Ellen Huet, *Why YouTube’s Indie Music Brawl Isn’t Not As Dire As It Sounds*, Forbes.com (Jun. 18, 2014), available at <http://www.forbes.com/sites/ellenhuet/2014/06/18/youtube-indie-music-streaming/>.

tion by players such as Google, and might then lead to new controversies and new forms of regulation.⁸²

The irony is that by thwarting business models built on discrimination at the ISP level, the proposed rule may effectively mandate higher advertising spending and application-based “prioritization.”

Consider this scenario: The Open Internet Rules are passed and they effectively prohibit prioritization. Perhaps sponsored data is swept in, along with subsidized music services, subsidized Wi-Fi and the like. Content struggling to find an audience and foreclosed from these avenues will have to resort to paid promotions of some sort. On the Internet, that tends to mean search advertising—or promotion on a content platform. The connection between net neutrality and search neutrality is not simply the catchy name. Rather, absent various forms of prioritization at the network level, prioritization in search and elsewhere becomes commensurately more important.

VII. The Benefits of Rationing in the Face of Scarcity

Whether arising from network congestion, search costs, or the fundamental limits of time and attention, scarcity, and thus the need for rationing (which implies prioritization) is a fact of life on the Internet (as everywhere else). Far from detracting from the Internet’s value, including its value to the full range of content providers, prioritization increases it.

As the Nobel Laureate economist Ronald Coase pointed out, banning paid prioritization for radio airplay (i.e., payola) actually benefits large record labels, not small artists.⁸³ The problem with payola (if there is one) is that it facilitates broadcasters taking all of the record industry’s profits by institutionalizing the practice of paying for access to the most scarce resource—airtime. The problem with efforts to ban payola, however, is that doing so doesn’t alter the underlying dynamics: Airtime is still a scarce resource, and artists and record labels still have divergent marketing and distribution incentives from radio stations. The reality of payola is that every time it is “stopped” by legal enforcement or regulation, it nevertheless reappears—just like insider trading.⁸⁴ And if payola isn’t the means for reconciling the disconnect and rationing scarcity, it will inevitably be something else.

The analogy to payola is appropriate, but not for the reason most net neutrality critics believe.⁸⁵ While the specific implementation of the system of payola in U.S. radio may have

⁸² Andrew Odlyzko, *Network Neutrality, Search Neutrality, and the Never-ending Conflict between Efficiency and Fairness in Markets*, 8 REV. NETWORK ECON. 40, 41, 43 (2009).

⁸³ See Ronald H. Coase, *Payola in Radio and Television Broadcasting*, 22 J.L. & ECON. 269 (1979), available at <http://old.ccer.edu.cn/download/7874-3.pdf>.

⁸⁴ See Stephen M. Bainbridge, *Manne on Insider Trading* (UCLA School of Law, Law-Econ Research Paper No. 08-04), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1096259.

⁸⁵ See, e.g., Free Press, *FCC Proposal for a Payola Internet Would End Net Neutrality* (Apr. 25, 2014), <http://www.freepress.net/press-release/106177/fcc-proposal-payola-internet-would-end-net-neutrality>.

been problematic in many ways, the fact of scarcity and the enduring need for marketing and promotion means that the dollars formerly spent on payola will be spent somewhere else—most likely advertising.⁸⁶ On the radio, ironically enough, this means more ads taking up airtime, creating more scarcity and less music of any kind. While the specific mix of actual songs played may be different, there is no reason to believe it is in any way “better” or even more diverse without payola, and every reason to believe that there will simply be less of it.

Retail store slotting contracts provide another helpful analogy:

Retailer supply of shelf space can therefore be thought of as creating incremental or “promotional” sales that would not occur without the promotion. The promotional shelf space provided by retailers induces these incremental sales by increasing the willingness of “marginal consumers” to pay for a product that they would not purchase absent the promotion. The generation of these promotional sales may occur by more prominently displaying a known brand, for example, in eye-level shelf space or a special display, or by providing shelf space for an unknown or new product.⁸⁷

Like with prioritization on the Internet, an intuitive fear about such arrangements is that they will be used by established content providers to hamstring their rivals:

The primary competitive concern with slotting arrangements is the claim that they may be used by manufacturers to foreclose or otherwise disadvantage rivals, raising the costs of entry and consequently increasing prices. It is now well established in both economics and antitrust law that the possibility of this type of anticompetitive effect depends on whether a dominant manufacturer can control a sufficient amount of distribution so that rivals are effectively prevented from reaching minimum efficient scale.⁸⁸

The problem with this argument (in the case of slotting contracts, as well as broadband prioritization) is that

slotting fees are a payment that must be borne by all manufacturers. Competition for shelf space that leads to slotting may raise the cost of obtaining retail distribution, but it does so for everyone.... However, competition between incumbents and entrants for retail distribution generally occurs on a level playing field in the sense that all manufacturers can openly compete for shelf space and it is the manufacturer willing to pay the most for a particular space that obtains it.⁸⁹

⁸⁶ See GABRIEL ROSSMAN, *CLIMBING THE CHARTS: WHAT RADIO AIRPLAY TELLS US ABOUT THE DIFFUSION OF INNOVATION* (2012).

⁸⁷ Joshua D. Wright, *Slotting Contracts and Consumer Welfare*, 74 *ANTITRUST L. J.* 439, 448 (2007). See also Benjamin Klein & Joshua D. Wright, *The Economics of Slotting Contracts*, 50 *J. L. & ECON.* 421 (2007).

⁸⁸ Klein & Wright, *supra* note 87, at 422.

⁸⁹ *Id.* at 423-24.

For many net neutrality proponents this is enough to condemn the practice, even though it is not enough to make it actionable under antitrust laws. But with a minimum service guarantee (and, *a fortiori*, a no-blocking standard) on the Internet, the difference between priority and non-priority may be fairly small (or even irrelevant for many types of content) and not worth paying much for. Moreover, the larger the competitor, the more priority will cost, thus making it correspondingly less attractive to large incumbents. Meanwhile, on the Internet (accessed over fixed lines, at least), there is a much weaker incentive for content providers to pay for priority because scarcity is only a limiting issue at some times and places.

VIII. It's All about Competition, Not (the FCC's) View of Section 706 or Title II

As this discussion shows, the reality is that, for all the claims to the contrary, net neutrality is fundamentally about competition. As Howard Shelanski put it:

Which side of the debate one credits will therefore depend, at least in part, on one's view of how competitive the market is and will be.⁹⁰

And, at the same time, there is little evidence that broadband markets exhibit much anti-competitive behavior, nor any reason to expect that they should:

But there is no evidence that sufficiently shows that vertical contracts in broadband markets should be treated differently or that they are more likely to be anticompetitive than procompetitive. Indeed, the handful of anecdotal examples of foreclosure by broadband providers over the course of nearly a decade, even when the cases are viewed in a light most favorable to net neutrality proponents, evinces the pervasively procompetitive nature of vertical contracts. In the FCC Net Neutrality order, the FCC responded to the need to cite an economic analysis demonstrating vertical foreclosure in broadband with a single study—and it was not concerning broadband services, but cable video. And, it should be further noted, this one paper merely suggested that anticompetitive vertical integration might occur, but could not document it in the data examined.⁹¹

If there is a policy case to be made for regulation, it rests on the kind of economic analysis that the Commission has thus far stubbornly resisted.⁹² Indeed, the legal viability of the

⁹⁰ Howard A. Shelanski, *Network Neutrality: Regulating With More Questions Than Answers*, 6 J. TELECOMM & HIGH TECH. L. 23 (2007).

⁹¹ Wright, NN Speech, *supra* note 35, at 10-11.

⁹² It should also be noted that, even if antitrust's consumer welfare framework is insufficient to capture fully all of the concerns put forth by neutrality proponents, that does not mean that net neutrality rules like the ones proposed in the NPRM are necessarily preferable. "While the affirmative case for antitrust over net neutrality on consumer welfare grounds is clear, the fact that antitrust might not 'work' in all cases does not default to the position that net neutrality is the superior approach. The critical question is not which approach captures all of the potentially anticompetitive arrangements, but rather which approach best enhances consumer welfare. I am quite confident that if the antitrust regime, after 121 years of trying and developing institutional capacity and expertise in its application, has trouble applying the 'rule of reason' in the context of

FCC's regulations may also depend on such analysis because the Commission either needs to explain its reasons for re-interpreting what is a telecommunications service (before "re-classifying" broadband under Title II)⁹³ or, if Section 706 could reasonably be interpreted as an independent grant of authority, to show that the FCC's regulations under Section 706 actually, on net, promote broadband deployment.

But that showing can't be made simply by pointing out that ISPs *might* have *some* incentive to thwart vertical competitors. And even if they do have that incentive, and even if they act on it, broadband deployment won't be promoted, on balance, if the rules put in place to stop it enable harmful conduct to magnify elsewhere. Far from reducing costs for edge innovators and even further from promoting the utopian ideal of "innovation without permission,"⁹⁴ the rules may actually disadvantage new edge providers against incumbents. Moreover, these new dynamics might energize even more-harmful behavior elsewhere.

But there is a bigger concern, as well. The principle of openness espoused by the NPRM, although nominally limited to ISPs, contains no logical limit. Thus it will be difficult for the Commission to reject efforts by complainants and policy advocates to expand the reach of the NPRM's logic to an ever-expanding range of companies and relationships, bringing a wider range of pro-consumer practices under scrutiny and threat.⁹⁵

This is a problem for the proposed rules under either of the Commission's suggested legal bases for regulation. As explained in detail in our legal comments, the FCC cannot simply "reclassify" broadband under Title II but would have to re-interpret key definitions in the act to subject broadband to Title II, which would be difficult to do without implicating more than just broadband.⁹⁶ To the extent that other services might be subject to Title II, the FCC would face pressure to extend neutrality-style regulation to those services.

Under Section 706, meanwhile, the problem would be much worse, since the FCC has claimed that this provision allows the Commission to regulate *any* form of "communications" in *any* way, provided that the Commission does not violate some other provision of the Act and that the Commission can assert (however tenuously) that the regulation would somehow promote broadband adoption, deployment or competition.

vertical contracts by broadband providers, then it is difficult to imagine another approach doing any better." Wright, NN Speech, *supra* note 35, at 16-17.

⁹³ TechFreedom-ICLE Legal Comments, *supra* note 31, § III.B .

⁹⁴ Tom Wheeler, *Tom Wheeler on the Future of Communications*, WALL STREET J. (Jul. 7, 2014), <http://online.wsj.com/articles/tom-wheeler-on-the-future-of-communications-1404763215>.

⁹⁵ See, e.g., Berin Szoka & Adam Thierer, *Net Neutrality, Slippery Slopes & High-Tech Mutually Assured Destruction*, PFF PROGRESS SNAPSHOT 5.11 (2009), at 2, available at <http://www.pff.org/issues-pubs/ps/2009/pdf/ps5.11-net-neutrality-MAD-policy.pdf>. ("The promise made yesterday by the FCC—to only apply neutrality principles to the infrastructure layer of the Net—is hollow and will ultimately prove unenforceable. The reality is that regulation *always* spreads. The march of regulation can sometimes be glacial, but it is, sadly, almost inevitable: Regulatory regimes grow but almost never contract.").

⁹⁶ TechFreedom-ICLE Legal Comments, *supra* note 31, § III.B.

In either case, what begins as broadband regulation could well extend to interconnection, transit and other forms of Internet “infrastructure”—as well as edge services themselves. Importantly, this choice is not an either/or. If the Commission does “reclassify” broadband, it could still claim the authority it has asserted under Section 706, because the two are not mutually exclusive.⁹⁷

What edge services might be affected by the spread of neutrality regulations? The NPRM already mentions Sponsored Data, which is a platform for innovative content mobile offerings.⁹⁸ But consider, as well, Opera’s Web Pass,⁹⁹ T-Mobile’s unRadio,¹⁰⁰ ESPN’s subsidized data proposal,¹⁰¹ Twitter Access,¹⁰² to say nothing of CDNs, collocation and paid peering. All of these are non-neutral. All (or almost all) have already sparked vociferous objections from regulatory advocates. And all accomplish exactly what the NPRM claims to be aimed at stopping, which FTC Commissioner Wright summarized as follows:

The fundamental failing of the Net Neutrality Order is that it creates a categorical prohibition against vertical contracts without acknowledging the vast economic literature and empirical evidence that support the view that such vertical arrangements are usually procompetitive.¹⁰³

In the face of all this, the NPRM simply asserts that “[t]oday, there are no legally enforceable rules by which the Commission can stop broadband providers from limiting Internet openness.”¹⁰⁴ But the NPRM fails adequately to defend the need for such rules in the abstract, or to defend the asserted connection between the need for such rules in general and the specific rules it proposes.

Instead, the NPRM assumes the conclusion it claims to prove—that “openness” requires a specific vision of the Internet rather than leaving open the possibility for new business models or unforeseen technological paths. Thus, for example, where the NPRM questions whether usage-based pricing is commensurate with an “open” Internet, it should rather

⁹⁷ As we explain our Legal Comments, however, we believe that the Commission will eventually lose on Section 706 because the section is not ambiguous, or, if it is, the Commission’s re-interpretation of it is unreasonable. Section 706 is, as the Commission itself believed until 2010, a Congressional command to use grants of authority in the Act for a specific purpose, not an independent grant of authority. TechFreedom-ICLE Legal Comments, *supra* note 31, § V.

⁹⁸ NPRM, *supra* note 25, ¶ 37.

⁹⁹ See Opera Web Pass (last accessed Jul. 15, 2014), <http://www.operasoftware.com/products/web-pass>.

¹⁰⁰ See T-Mobile, *T-Mobile is Setting Music Free* (last accessed Jul. 15, 2014), <http://www.t-mobile.com/offer/free-music-streaming.html>.

¹⁰¹ See Amol Sharma, Spencer E. Ante, & Anton Troianovski, *ESPN Eyes Subsidizing Wireless-Data Plans*, WALL STREET J. (May 9, 2013), <http://online.wsj.com/news/articles/SB10001424127887324059704578473400083982568>.

¹⁰² See Mark Bergen, *The Secret Sauce For Twitter’s Global Growth Strategy: Subsidized Data*, AD AGE (Jul. 7, 2014), <http://adage.com/article/digital/twitter-facebook-rate-telecom-deals-abroad/293741/>.

¹⁰³ Wright, NN Speech, *supra* note 35, at 8.

¹⁰⁴ NPRM, *supra* note 25, at ¶ 2.

question whether the “openness” of an Internet that enables usage-based pricing, as well as any other possible pricing mechanism, is better or worse than the “openness” of an Internet that would emerge following the prohibition of such pricing mechanisms. The fact of the matter is that, depending on background conditions, either usage-based pricing or flat-rate pricing could be discriminatory. For example, where usage is heterogeneous, flat rate pricing forces low-volume users to subsidize higher-volume users; “equal” treatment leads to unequal results.

Simply put, discrimination has obvious benefits, and sometimes apparent discrimination isn’t discriminatory at all. The existence of exceptions in the OIO and the adoption in the NPRM of a scope of rules commensurate with the OIO reflects this realization.¹⁰⁵ Why is it not arbitrary and capricious for the agency to assert that some discrimination is actionable and other forms are not, without evidence, reliance on effects or other clear delineation between the two?

The NPRM’s reliance on the *Verizon* court’s upholding of its authority to regulate broadband under Section 706 does not serve to insulate the FCC’s arbitrary determination of what this definition includes. The *Verizon* court may have determined that the Commission met the low bar of justification required for judicial deference, but other courts need not be so generous. In other contexts—like an as-applied challenge, for example, or a review of a forbearance decision under the arbitrary and capricious standard—the outcome may be quite different. Meanwhile, of course, to the extent that the FCC decides to adopt a scope *beyond* that set out in the OIO, the court’s holding *a fortiori* offers no protection for such a conclusion.

A. The Purported Economic Rationale for the Proposed Net Neutrality Rules Is Insufficient

The “triple bank shot” rationale underlying the OIO and restated in the NPRM is that the rules would increase the value of content, thus increasing the demand for broadband, thus increasing incentives for broadband investment.

But this theory contains an inherent contradiction: Increasing demand for broadband also increases the likelihood of congestion, unless and until increased investment is able to alleviate it. Apparently in recognition of this fact, both the FCC’s 2010 OIO and the current NPRM would allow exceptions for “reasonable network management,” and impose less restrictive rules on mobile broadband, given that it is far more likely to suffer from congestion than fixed broadband.

But these marginal accommodations still fail to grapple with the obvious tradeoff: blocking and discrimination are inherently useful in managing congestion. And, to the extent that blocking and discrimination increase the value of particular content, it is not *a priori* neces-

¹⁰⁵ NPRM, *supra* note 25, at Section III.B.

sarily the case that an increased value for some content is outweighed by the corollary decreased value for other content.

In other words, the same triple bank shot rationale that the FCC used to justify its authority under Section 706 to limit blocking and discrimination could just as easily be used to justify its authority under Section 706 to *permit* blocking and discrimination. Even under the broad deference accorded to regulatory agencies in making predictive judgments, the FCC's decision to limit, rather than permit, discrimination is arbitrary.

Moreover, different industry structures and relationships are appropriate for different stages of industry development or different conditions. Thus, prioritization and discrimination may be particularly desirable when a new entrant or nascent business is expanding demand or when rapid technological change erodes competitive advantages quickly, and may be less so when the optimal outcome is lower prices or when new entry is especially difficult. Similarly, if conditions are such that a high rate of return is required to finance risky investment and/or expand demand, then prices may be "high," industry structure may be concentrated, and risk-reducing vertical arrangements more common.

IX. What is the Problem with "Fast Lanes"? There Isn't One

There aren't "lanes" on the Internet. Numerous factors determine the ultimate performance of network data flows, including throughput, latency, jitter and packet loss. It is more accurate to say that "prioritization" is the application of network management strategies to ensure that prioritized content arrives with properties appropriate to its data type at a higher guaranteed minimum level than minimal "best practices" management would. That's not as catchy as "fast lane," but more accurate. Thus, prioritized videoconferencing data arrives with less latency; streaming video data with better throughput.

The presence (or absence) of congestion is key to assessing both the purported problem itself, as well as the costs and benefits of any proposed solution. Priority really matters only when there is congestion.¹⁰⁶ But this also means it may be correct to assume that priority, in the first instance, means not just better service for some, but worse service for others (if some content gets better service when there is congestion, the capacity to do so can only come from throttling other bits). But there is a proposed minimum guarantee in the proposed rules, to some extent inherent in "best efforts" Internet, and in certain less-restrictive (and likely more effective) proposals like one put forward by the FCC's now-Chief Economist in 2010.¹⁰⁷

¹⁰⁶ See, e.g., Jan Krämer & Lukas Wiewiorra, *Network Neutrality and Congestion Sensitive Content Providers: Implications for Service Innovation, Broadband Investment and Regulation*, (MPRA Paper No. 27003, Oct. 2010), available at http://mpra.ub.uni-muenchen.de/27003/1/MPRA_paper_27003.pdf. See also Drew Fitzgerald, *How the Web's Fast Lanes Would Work Without Net Neutrality*, WALL STREET J. (May 16, 2014), <http://online.wsj.com/news/articles/SB1000142405270230490830457956588025774274>.

¹⁰⁷ Discussed *infra*, notes 146 to 151, and accompanying text.

One key result of a minimum guarantee is that no service can be degraded below some point *and* that any promise of *better* service will be limited by the bandwidth available given minimum obligations to non-priority service. This, in turn, means that ISPs that offer priority service are likely to actually *increase* network capacity as a consequence of prioritization (in order to escape limits on their ability to offer priority service).¹⁰⁸

But even when capacity has not yet expanded (or when further expansion is infeasible), prioritization with a minimum guarantee does not significantly impair Internet service or create substantially differentiated service levels. While “slower” becomes a reality with congestion, a minimum guarantee ensures that, in the same circumstance (congestion), “faster” is of decreasing significance in direct proportion to the amount of congestion. Thus, the practical difference between the fast and slow “lanes” will be less than generally assumed, and will vary depending on the amount of traffic at any given time flowing in each “lane.”

This also means that the *value* of prioritized service to content providers that want it will be lower—which also means the price will be lower, and that a larger number of resource-constrained providers will be able to purchase priority. In turn, this means that an ISP’s ability to offer much better service to prioritized content will be lessened (absent technological developments or capacity expansion). If, in the end, practically everyone is paying for priority, priority will be both cheap and only marginally relevant.

For all the breathless claims, funny videos and content providers bemoaning the threat to their existence if they are relegated to a “slow lane,” the reality, if it ever came to pass, would be dramatically different. For many of those fretting, their own content’s lack of sensitivity to latency and packet loss, for example, means the consequence of being in even the fanciful “slow lanes” they describe would be minimal to non-existent. If the differences between “fast” and “slow” are relevant at all only rarely (when there is enough congestion) and then only marginally so, it is hard to imagine the suggested parade of horrors coming to pass.¹⁰⁹

But more fundamentally, how does it help anyone if VoIP providers are *not* able to buy a latency guarantee that email providers would have no interest in paying for regardless, when the alternative (given enough congestion) is that email remains unaffected but VoIP

¹⁰⁸ See Mark A. Jamison & Janice A. Hauge, *Getting What You Pay For: Analyzing the Net neutrality Debate* (TPRC 2007) at 14-15, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1081690. (“When the non-degradation condition holds, a network provider will increase network capacity when providing premium transmission service.”).

¹⁰⁹ The claims run the gamut: slow/fast lane will be the sole determinant of success or failure online; venal ISPs will “freeze someone out of the fast lane before they even start[] competing;” ISPs will intentionally degrade service; and “any new innovation that would make the network faster or more responsive will debut in the fast lane,... [a]nd [] may not ever trickle down into the slow lane;” Michael Weinberg, *5 Reasons Why Internet Fast Lanes Can Never Make Sense*, Public Knowledge (May 15, 2014), available at <https://www.publicknowledge.org/news-blog/blogs/5-reasons-why-internet-fast-lanes-can-never-make-sense>.

is unusable? And on the multi-purpose Internet this also necessarily means that email providers and users must subsidize the provision of a network with high enough average quality to accommodate the performance demands of the VoIP providers/users with whom they share it.

Relatedly, is there any principled basis for prohibiting this form of prioritization in a world where cable companies offer their own VoIP services over proprietary networks unhindered by congestion on the public Internet? From a competition perspective, if anything, a competitive concern would more likely arise *without* the availability of VoIP prioritization, not with it.

When we understand the characteristics of real-time applications versus the characteristics of P2P applications..., reserving [] bandwidth for VoIP or any other similar real-time application is the obvious correct thing to do because we don't want it to break. This is precisely why Vonage (a VoIP telephone service provider that competes with Comcast) is keenly interested in partnering with Comcast to ensure that the new network management scheme provides safety mechanisms for VoIP traffic.

When we think about the fact that Comcast is effectively helping out one of their [sic] telephony competitors to provide better Internet service for their customers, we realize that there is nothing sinister about favoring one application over another.¹¹⁰

Taken to its logical conclusion net neutrality would have to treat cable itself as a non-neutral service, and probably other services, as well. Some neutrality proponents are unabashed about wanting this, in fact, seeking an outright structural prohibition on vertical integration between networks and content.¹¹¹

Perhaps most importantly, it turns out that increased capacity—the very broadband investment that the “triple bank shot” is supposed to incentivize—isn't even enough to thwart congestion. Rather, prioritization and discrimination (or else perpetual congestion) are still required, even on the world's fastest networks:

Many people in [Japan] believe that by simply offering more capacity, there would be no need to manage the network since congestion problems would be gone. But Japan teaches us that no matter how much capacity you throw at the problem, congestion will always be a problem and the vast majority of it will be caused by P2P traffic.¹¹²

And, eerily reminiscent of Netflix users' burdens on our own networks today, according to

¹¹⁰ George Ou, Comments of the Information technology and Innovation Foundation, In the Matter of Broadband Industry Practices, WC Docket No. 07-52, at 6 (Dec. 11, 2008), *available at* <http://www.itif.org/files/networkmanagementschemes.pdf>.

¹¹¹ See, e.g., SUSAN CRAWFORD, CAPTIVE AUDIENCE (2011).

¹¹² George Ou, Japan's ISPs agree to ban P2P pirates, ZDNet (Mar. 16, 2008), *available at* <http://www.zdnet.com/blog/ou/japans-isps-agree-to-ban-p2p-pirates/1063>.

data from 2008,

P2P users that make up 10% of all Internet users in Japan hog ~75% of bandwidth resources and 1% of all Internet users in Japan consume...47% of all the Internet traffic in Japan.¹¹³

For all its investment and its near-ubiquitous 100 Mbps fiber network, Japan averages download speeds, according to Akamai, of just over 7 Mbps.¹¹⁴

These issues are considerably more complex than the simple slogans of net neutrality advocates, or even the 100 pages of the NPRM suggest. To take just one example, a 2011 paper by a group of network engineers studied the network characteristics of video streaming data from Netflix and YouTube.¹¹⁵ Netflix's and YouTube's streaming strategies vary with the application used to view a video and the video encoding rate. In some cases the application determines the strategy, in others the content server does. Network capacity and device capabilities affect the choice of strategy and which video resolution is delivered.

In this circumstance, particularly when the content in question is Netflix, with 30% of network traffic, both the network's and the content provider's transmission decisions may be determinative of network quality, as may the users' device and application choices:

This is a concern as it means that a sudden change of application or container in a large population might have a significant impact on the network traffic. Considering the very fast changes in trends this is a real possibility, the most likely being a change from Flash to HTML5 along with an increase in the use of mobile devices.... We derive a model for the aggregate traffic generated by the different streaming strategies. We use this model to show that streaming videos at high resolutions can result in smoother aggregate traffic while at the same time linearly increase the aggregate data rate due to video streaming.¹¹⁶

If a network uses QoS (quality of service) mechanisms (rather than best efforts) to manage its traffic to the net benefit of Netflix's content, is it unreasonably discriminating against, say, VoIP traffic? If Netflix pays the Network to adopt QoS, is the decision unreasonable? Is it a problem if the Network imposes lower QoS not on Netflix but on certain video encoding, impairing Netflix's ability to manage its data streams as it would prefer but also resulting in lower aggregate data use? Should there be any mechanism by which the network can

¹¹³ *Id.*

¹¹⁴ Kevin Walsh, *How "Fast" is Broadband?*, Connected Planet (May 18, 2009), available at http://connectedplanetonline.com/residential_services/commentary/broadband-services-speed-0518/. ("Second, the primary problem is (most often) not the capacity of the broadband pipe but rather congestion within the overall broadband network. This congestion, while not deleterious to garden variety web browsing and emailing, severely hampers streaming video.")

¹¹⁵ Ashwin Rao, et al., *Network Characteristics of Video Streaming Traffic*, CoNEXT '11: Proceedings of the Seventh Conference on emerging Networking EXperiments and Technologies (2011), available at <http://conferences.sigcomm.org/co-next/2011/papers/1569470149.pdf>.

¹¹⁶ *Id.* at 12.

alter Netflix's privately optimal, but possibly socially detrimental, incentive to stream videos at high resolution?¹¹⁷

X. The Red Herring of Harm to Small Content Providers and Start-Ups

Net neutrality advocates assert versions of the argument that

The internet is different. If broadband providers divide the internet up into proverbial fast lanes and slow lanes, it could make it difficult for the next YouTube or Netflix to break into the market.¹¹⁸

The problem is that, while "fast lanes and slow lanes" *could* make new entry more difficult, they could also make it *easier*.

Because exclusivity is often more beneficial to new business models than old ones, blanket bans are likely to have the perverse effect of discriminating against innovation and, by extension, against entry.¹¹⁹

The baseline state of affairs is that entrants are at a disadvantage to incumbents. Incumbents have larger economies of scale, benefits of learning by doing, larger customer bases, more brand loyalty, lower search costs, lower marketing costs, established relationships, etc. Prioritization can ameliorate many of these for new entrants.

[P]remium service stimulates innovation on the edges of the network because lower-value content sites are better able to compete with higher-value sites with the availability of the premium service. The greater diversity of content and the greater value created by sites that purchase the premium service benefit advertisers because consumers visit content sites more frequently. Consumers also benefit from lower network access prices.¹²⁰

The claim that prioritization necessarily benefits "the big boys," without evidence and without consideration or evaluation of the possibility that the opposite is true is, is unsupported. The fantasy victim is the "small content provider": The proverbial garage start-up, the independent filmmaker, the blogger making political waves.

¹¹⁷ Note, of course, that Netflix already employs its own optimization and prioritization. Netflix's CDNs are, among other things, rate-limited, because optimal viewing doesn't require maximal speed. Thus, even on Google's Gigabit fiber networks, Netflix claims to stream at 3.63 Mbps—not because Google's network limits it, but because that's all it needs. See Netflix, *USA ISP Speed Index*, Netflix, available at <http://ispspeedindex.netflix.com/usa>.

¹¹⁸ Timothy B. Lee, *Why you shouldn't freak out about AT&T buying DirecTV*, Vox (May 19, 2014), <http://www.vox.com/2014/5/19/5732224/why-you-shouldnt-freak-out-about-at-t-buying-directv>.

¹¹⁹ Jeffrey A. Eisenach, *Broadband Competition in the Internet Ecosystem*, AEI Economic Studies (October 2012), at 30.

¹²⁰ Mark A. Jamison & Janice Hauge, *Dumbing Down the Net: A Further Look at the Net Neutrality Debate*, in *INTERNET POLICY AND ECONOMICS: CHALLENGES AND PERSPECTIVES* 57-71 (William H. Lehr & Lorenzo Maria Pupillo, eds., 2009).

The danger here, as Ohanian said, is that small companies — the Googles and Net-flixes of tomorrow — won't have the capital to "win on the merits" of their technology, and that the entrenched tech powers won't be challenged, or, as he said repeatedly, "disrupted."¹²¹

While these small entities exist, of course, they are, in fact, likely in more danger from mandated neutrality than from its absence, and it's no accident that the strongest proponents of net neutrality have been giant companies like Netflix and Google.

According to Senator Al Franken

To illustrate why net neutrality is so critical to innovation on the web, I like to tell the story of a small online startup that launched in 2005 above a pizzeria in San Francisco. It had a product that now seems simple: it allowed people to upload videos so others could stream them. It was called YouTube - you may have heard of it.

At the time, Google had a similar product - Google Video - but it wasn't as easy to use, so consumers took their business to YouTube. The site took off and, less than two years after it launched, YouTube was purchased by Google for \$1.6 billion. Not a bad payday.

But it wouldn't have been possible without net neutrality. If Google had been able to pay Comcast and other large Internet service providers to prioritize its data - and make YouTube's videos load more slowly - YouTube wouldn't have stood a chance. Google's inferior product would have won.¹²²

Unfortunately, what this story misses is the importance of search costs, advertising, reputation and the like in protecting incumbents. Many a new entrant has foundered on the shoals of obscurity. In a functioning competitive market, there are mechanisms to help entrants overcome these structural impediments. They usually cost money. And they implicitly amount to favoritism.

Who stands to benefit more from—and be willing to pay for—artificial relative quality? The company that is already known or the one that no one's ever heard of?

To make the trade-off clear, take Franken's story and tweak it slightly. What if Google's incumbent video offering weren't so crummy, but YouTube was nevertheless still better? What would have happened in a neutral world? Likely no one would have bothered with YouTube (and perhaps YouTube would never have been created in the first place). We would have lost out on an incremental improvement because the impediments to a mar-

¹²¹ Joseph Bernstein, *Reddit Co-Founder On Net Neutrality: "It's a Terrible Brand"*, BUZZFEED (Jul, 7, 2014), <http://www.buzzfeed.com/josephbernstein/reddit-co-founder-on-net-neutrality-its-a-terrible-brand>.

¹²² Al Franken, *Huffington Post Op-Ed: Net Neutrality is Under Attack...Again*, WEBSITE OF SENATOR AL FRANKEN (Nov. 8, 2011), <http://www.franken.senate.gov/?p=news&id=1831>. Barbara van Schewick tells the same story: Barbara van Schewick, *Opening Statement at the Federal Communications Commission's Workshop on Approaches to Preserving the Open Internet* (April 28, 2010), WC Docket No. 07-52, GN Docket No. 09-191, available at <http://media.law.stanford.edu/publications/archive/pdf/schewick-statement-20100428.pdf>.

ginally better challenger besting an incumbent, given the incumbent's structural advantages, were more costly to overcome than the benefits of doing so.

But what about in a non-neutral world? Let's re-write the end of Franken's story:

If YouTube had been able to pay Comcast and other large Internet service providers to prioritize its data – and even make Google's videos load more slowly - YouTube would have stood a fighting chance. Google's inferior product would not so easily have won because YouTube's product would have "artificially" been enough better than Google's to enable its successful entry.

Net neutrality may preclude Google from getting an edge over YouTube, but it also precludes *YouTube* from getting an edge over *Google*. Which of these effects will prevail in any particular circumstance (or in the abstract) is an empirical question; it's possible that, on net, the benefits here of neutrality outweigh its costs. But that simply has not been established. Even worse, the NPRM (and the arguments of net neutrality advocates that animate it) simply neglects to even consider the possibility that net neutrality can *harm* innovation and entry.¹²³

Further, the neutrality argument is that *ISPs* will use their monopoly to harm new content providers. But it is not clear why Comcast would care about some small start-up with no traffic. And while Google may care about the next Google killer, there is little reason to think that Comcast will be complicit with Google in harming its enemy. To the extent that *Google* (for example) engages in practices (like paying Comcast for priority service that ends up foreclosing new competition for Google), there may be an antitrust case against Google in this hypothetical case. But this doesn't justify net neutrality rules that hamstring Comcast. It simply demonstrates why we have the laws we already have—and why they are of general applicability, not specific to a particular technology or "layer" of the Internet.

It's not an accident that Reed Hastings is the one calling for "strong net neutrality." It's *neutrality* that actually benefits the large *incumbents*. Content providers have far less to worry about and face far less competition from broadband providers than from big, incumbent competitors. It is often claimed that "Netflix was able to pay Comcast's toll, but a small startup won't have that luxury." But Comcast won't even notice or care about a small startup; its traffic demands will be inconsequential. Netflix can afford to pay for Internet access for precisely the same reason it came to Comcast's attention: It's hugely successful, and thus creates a huge amount of broadband traffic.

Thus some contend, for example, that a small, start-up gaming company can't or won't invest and innovate without the assurance of a fast (or is it "equal"?) Internet connection. The claim is that competitors will buy into a fast lane, leaving only an insufficient connection for the start-up.

¹²³ See *infra* notes 134 to 145, and accompanying text.

But this argument doesn't comport with reality. The key is that no one at all will pay unless there's congestion. But if there's congestion, the small gaming company is going to suffer anyway. Prioritization at least requires content providers to respond to incentives—to take congestion into account instead of using up a common resource without regard to cost. It also allows the gaming company to buy better service, which isn't an option at all with neutrality, under which it just has to suffer congestion. The truth is that, if the game developer can't afford to pay for clear access, then it may have a bad business model if it is built on an expectation that it will have unfettered, free access to a scarce, contestable resource.

Moreover, the ability to charge high-usage content directly instead of all ISP subscribers indiscriminately enables (requires) the gaming company to charge its users for the bandwidth it uses instead of charging everyone, including non-users. Of course, it's no secret why the gaming company would prefer everyone else subsidize its customers, but that hardly seems like an optimal result overall—or a sound basis for regulatory decision-making.

It is similarly claimed that *current* successful businesses might not have arisen under non-neutral rules. But this cuts both ways. Even if true, the businesses vying for investment dollars might be *different* ones if they built their business models in a different legal/economic environment, but this says nothing about the amount of investment, the types of businesses or the quality of businesses that would arise under a different set of rules. It says only that *past* specific investments might not have been made.

Unless the contention is that businesses would be systematically worse under a different rule, this is irrelevant. While that claim may have been made, there is no evidence to support it. Businesses thrive in unequal, cost-laden environments all the time. It costs something like \$1 million/30 seconds to advertise during the Super Bowl; Budweiser and Doritos, two of the largest ad buyers during the 2014 Super Bowl, must pay millions to do so.¹²⁴ That Sierra Nevada and Pringles, for example, can't or won't do so does not support a conclusion that Super Bowl advertising should be free or shouldn't cost more than other advertising. And, in the meantime, neither Sierra Nevada nor Pringles has gone out of business.

As noted, non-neutrality offers the prospect that a startup might be able to buy priority access to overcome the inherent disadvantage of newness, and to better compete with an established company. Neutrality, on the other hand, means that that competitive advantage is unavailable, and that the baseline relative advantages and disadvantages remain—which helps incumbents, not startups. With a neutral Internet the advantages of the incumbent competitor can't be dissipated by a startup buying a favorable leg-up in speed and the Netflix's of the world will continue to dominate.

¹²⁴ Glenn Davis, *The rising cost of Super Bowl ads in one chart*, USAToday (Feb. 1, 2014), available at <http://admeter.usatoday.com/story/sports/ad-meter/super-bowl/2014/01/20/ad-meter-story-super-bowl-ad-costs/4476441/>.

Of course the claim is that incumbents will use their huge resources to gain even *more* advantage with prioritized access. Implicit in this must be the assumption that the advantage that could be gained by a startup buying priority offers less return for the startup than the cost imposed on it by the inherent disadvantages of reputation, brand awareness, customer base, etc. But that's not plausible for all startups, and investors exist precisely because they are able to provide funds for which there is a likelihood of a good return – so if paying for priority *would* help overcome inherent disadvantages, there would be money for it.

Also implicit is the claim that the benefits to incumbents (over and above their natural advantages) from paying for priority, in terms of hamstringing new entrants, will outweigh the cost. This is unlikely generally to be true, as well. They already *have* advantages. While sometimes they might want to pay for more, it is in *precisely* the cases where it would be worth it to do so that the new entrant would also be most benefitted by doing so itself—ensuring, again, that investment funds will be available.

Finally, implicit in these arguments is the claim that content deserves to be subsidized, while networks neither need subsidy nor the flexibility to adopt business models to increase returns or operate their networks optimally. But broadband providers, equipment makers and the like have spent trillions of dollars to build the infrastructure of the Internet. The “neutrality for startups” argument holds that content providers shouldn't be the ones to pay for it, but it maintains this without evidence that mandating subsidies to content providers (in the form of zero-price Internet access) will actually lead to optimal results.¹²⁵

XI. Economic Logic and the Economic Literature Support Non-Neutral Networks

In fact, Tim Wu has argued that even a “zero-pricing rule” should permit prioritization:

As a result, we do not feel as though a zero-pricing rule should prohibit this particular implementation, as here content providers are not forced to pay a termination fee to access users.¹²⁶

Moreover, it is important to note that not all innovation comes from small, start-up edge providers. As economists Peter Klein and Nicolai Foss have pointed out,

The problem with an exclusive emphasis on start-ups is that a great deal of creation, discovery, and judgment takes place in mature, large, and stable companies. Entrepreneurship is manifest in many forms and had many important antecedents and consequences, and we miss many of those if we look only at start-up companies.¹²⁷

¹²⁵ See, e.g., Robin S. Lee & Tim Wu, *Subsidizing Creativity through Network Design: Zero-Pricing and Net Neutrality*, 23 J. ECON. PERSPECTIVES 61, 67 (2009). See also *infra* note 136 and accompanying text.

¹²⁶ *Id.* at 73-74.

¹²⁷ Ángel Martín Oro, *Interview: Nicolai J. Foss and Peter G. Klein on “Organizing Entrepreneurial Judgment,” SINTETIA* (Jul. 7, 2014), <http://www.sintetia.com/interview-nicolai-j-foss-and-peter-g-klein-on-organizing-entrepreneurial-judgment/>. See also NICOLAI J. FOSS & PETER G. KLEIN, ORGANIZING ENTREPRENEURIAL JUDGMENT:

Adopting a regulatory schema that prioritizes startup innovation (although, as noted, it likely doesn't even do that) at the expense of network innovation, in part because network operators aren't small startups, may materially detract from consumer welfare and the rate of overall innovation.¹²⁸

In effect net neutrality claims that the only proper price to charge content providers for access to ISPs and their subscribers is zero. As an economic matter, that's possible. But it most certainly needn't be.

At the most basic level, it is simply not demonstrably the case that content markets *themselves* are best served by being directly favored to the exclusion of infrastructure. The two markets are symbiotic, in that gains for one inevitably produce gains for the other (*i.e.*, increasing quality/availability of applications/content drives up demand for broadband, which provides more funding for networking infrastructure, and increased bandwidth enabled by superior networking infrastructure allows for even more diverse and innovative applications/content offerings to utilize that infrastructure). Absent an assessment of actual and/or likely competitive effects, it is impossible to say *ex ante* that consumer welfare in general, and regarding content in particular, is best served by policies aimed at encouraging innovation and investment in one over the other.

To the extent that new entrants might threaten ISPs' affiliated content or services, the rules are on somewhat more-solid economic ground.¹²⁹ But such a risk justifies, at most, *only* a limited rule like the one proposed in the NPRM (and about which the NPRM seeks comment) that adopts a "rebuttable presumption that a broadband provider's exclusive (or effectively exclusive) arrangement prioritizing service to an affiliate would be commercially unreasonable."¹³⁰ But even then, the logic behind such a rule tracks precisely the well-established antitrust law and economics of vertical foreclosure, which neither justifies a presumption (even a rebuttable one) nor the imposition of a targeted regulation beyond the antitrust laws themselves.¹³¹

A. The Economic Literature

While the NPRM purports to seek comment on "whether there are other economic theories that the Commission should consider to better understand and assess broadband providers'

A NEW APPROACH TO THE FIRM (2014).

¹²⁸ See *infra* notes 134 to 145 and accompanying text.

¹²⁹ Nevertheless, the NPRM offers only two possible examples of such conduct, and fails to assess in any way the extent of the problem or to consider possible countervailing benefits of such conduct. NPRM, *supra* note 25, ¶ 41.

¹³⁰ *Id.* ¶ 126.

¹³¹ See Thomas W. Hazlett & Joshua D. Wright, *The Law and Economics of Network Neutrality*, George Mason Law & Economics Research Paper No. 11-36 (Sept. 12, 2011), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1917587.

incentives to engage in practices that affect the Internet’s openness,”¹³² of the specific questions enumerated there, only *one* even adverts in the direction of a theory that might offer justification for non-neutral treatment—and it happens to be the only question in the paragraph meriting a footnote, noting that the suggested theory “has been called into question.”¹³³

But there is, in fact, an extensive economic literature on vertical agreements going well beyond the theories suggested by the NPRM’s questions. The literature holds decisively that vertical integration almost uniformly benefits consumers and competition, and that restrictions on vertical integration (including mandatory unbundling and nondiscrimination requirements) generally harm competition:

[O]verall a fairly clear empirical picture emerges. The data appear to be telling us that efficiency considerations overwhelm anticompetitive motives in most contexts. . . . It says that, under most circumstances, profit maximizing vertical-integration decisions are efficient, not just from the firms’ but also from the consumers’ points of view.... Furthermore, we have found clear evidence that restrictions on vertical integration that are imposed, often by local authorities, on owners of retail networks are usually detrimental to consumers. Given the weight of the evidence, it behooves government agencies to reconsider the validity of such restrictions.¹³⁴

The evidence specific to telecommunications networks, meanwhile, also points decisively in the opposite direction of the NPRM:

[T]he available evidence fails to support the proposition that mandatory separation improves market performance, but this evidence does suggest that such a policy leads to reduced levels of innovation and investment.¹³⁵

The only remaining concern suggested by the NPRM (the use of paid prioritization as a means for ISPs to recover infrastructure costs) raises the fundamental empirical question that, as we have noted, is unaddressed by the NPRM or the OIO: whether the benefits of mandated “openness” outweigh the forsaken benefits to consumers, infrastructure investment and competition from prohibiting discrimination.

A related question was considered by Tim Wu, who acknowledged the presence of trade-offs inherent in mandating neutrality. Among other things, prohibiting content prioritization (thus precluding user subsidies) raises consumer prices:

¹³² NPRM, *supra* note 25, ¶ 50.

¹³³ *Id.* n. 112.

¹³⁴ Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LIT. 629, 680 (2007).

¹³⁵ Robert W. Crandall, et al., *Vertical Separation of Telecommunications Networks: Evidence from Five Countries*, 62 FED. COMM’NS. LAW J. 493, 497 (2010).

Of course, for a given price level, subsidizing content comes at the expense of not subsidizing users, and subsidizing users could also lead to greater consumer adoption of broadband. It is an open question whether, in subsidizing content, the welfare gains from the invention of the next killer app or the addition of new content offset the price reductions consumers might otherwise enjoy or the benefit of expanding service to new users.¹³⁶

The NPRM, however, as well as many of the policy advocates supporting net neutrality, fundamentally misunderstands this dynamic, instead seemingly presuming that discrimination by ISPs can only harm networks.¹³⁷ As Public Knowledge has claimed:

If Verizon – or any ISP – can go to a website and demand extra money just to reach Verizon subscribers, the fundamental fairness of competing on the internet would be disrupted. It would immediately make Verizon the gatekeeper to what would and would not succeed online. ISPs, not users, not the market, would decide which websites and services succeed.

* * *

Remember that a “two-sided market” is one in which, in addition to charging subscribers to access the internet, ISPs get to charge edge providers on the internet to access subscribers as well.¹³⁸

And elsewhere:

Comcast’s market power affords it advantages vis-à-vis recipients of Internet video content as well as creators of Internet video content. For example, Comcast will be able to distribute NBC content through its Xfinity online offering without having to pay itself license fees.

This two-sided market advantage results from Comcast’s position as a gatekeeper: it provides access to customers for content creators and it provides access to content for customers. Control over both directions of this transaction allows Comcast the opportunity for anticompetitive behavior against either content creators or consumers, or both simultaneously.¹³⁹

¹³⁶ Lee & Wu, *supra* note 125, at 67.

¹³⁷ See, e.g., NPRM, *supra* note 25, ¶ 26. It is worth noting that, even on the NPRM’s own terms that propose a(n) undefined and amorphous) public interest standard beyond competitive effects, . Moreover, to the extent that the Commission’s authority is derived from Section 706 it is the effect on broadband investment that matters. By the *Verizon* court’s and the FCC’s own admission, this is a function of the extent of consumer demand for content—which obviously turns on price but does not obviously turn on the amorphous criteria suggested by the Commission. In other words, at best there is a trade-off that must be evaluated between the net effect of advancing those priorities while raising prices. This evaluation is absent from any of the Commission’s materials on net neutrality.

¹³⁸ Michael Weinberg, *But For These Rules....*, PUBLIC KNOWLEDGE (Sept. 10, 2013), <https://www.publicknowledge.org/news-blog/blogs/these-rules>.

¹³⁹ Public Knowledge, *Petition to Deny, In the Matter of Applications of Comcast Corporation, General Electric*

These comments fundamentally misunderstand the economics of two-sided markets: Rather than facilitating anticompetitive conduct or enabling greater exploitation of both sides of the market, two-sided markets facilitate otherwise-difficult, efficient economic exchange and almost all incorporate subsidies from one side of the market to the other—not excessive profiteering by the platform.¹⁴⁰ The “two-sidedness” of markets does not inherently confer increased ability to earn monopoly profits, and, in fact, the literature suggests that the availability of subsidization *reduces* monopoly power and increases welfare. In the broadband context, as one study notes,

Imposing rules that prevent voluntarily negotiated multisided prices will never achieve optimal market results, and...can only lead to a reduction in consumer welfare.¹⁴¹

Business models frequently coexist where different parties pay for the same or similar services. Some periodicals are paid for by readers and offer little or no advertising; others charge a subscription and offer paid ads; and still others are offered for free, funded entirely by ads. All of these models work. None is necessarily “better” than the other. There is no reason the same isn’t true for broadband and content.

What’s more, the literature directly contradicts the assumption that neutrality improves consumer welfare or encourages infrastructure investment. In fact, the opposite appears to be true, and non-neutrality actually generally benefits both content providers as well as consumers:

Our main result is that a switch from the net neutrality regime to the discriminatory regime would be beneficial in terms of investments, innovation and total welfare. First, when ISPs offer differentiated traffic lanes, investment in broadband capacity increases. This is because the discriminatory regime allows ISPs to extract additional revenues from CPs [Content Providers] through the priority fees. Second, innovation in services also increases: some highly congestion-sensitive CPs that were left out of the market under net neutrality enter when a priority lane is proposed. Overall, discrimination always increases total welfare....¹⁴²

Another recent paper finds the same result, except in a small subset of cases:

Our results suggest that investment incentives of ISPs, which are important drivers for innovation and deployment of new technologies, play a key role in the net neutrality debate. In the non-neutral regime, because it is easier to extract surplus

Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees, MB Docket No. 10-56, available at <https://www.publicknowledge.org/files/docs/PK-nbc-comcast-20100621.pdf>.

¹⁴⁰ See generally Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EUR. ECON. ASSOC. 990 (2003).

¹⁴¹ Larry F. Darby & Joseph P. Fuhr, Jr., *Consumer Welfare, Capital Formation and Net Neutrality: Paying for Next Generation Broadband Networks*, 16 MEDIA L. & POL’Y 122, 123 (2007).

¹⁴² Marc Borreau, et al., *Net Neutrality with Competing Internet Platforms* 3, CEIS TOR VERGATA RESEARCH PAPER SERIES, vol. 12 no. 307 (2014), available at <ftp://www.ceistorvergata.it/repec/rpaper/RP307.pdf>.

through appropriate CP pricing, our model predicts that ISPs' investment levels are higher; this coincides with the predictions made by the defendants of the non-neutral regime. On the other hand, because of platforms' monopoly power over access, CP participation can be reduced in the non-neutral regime; this coincides with the predictions made by the defendants of the neutral regime. We find that in the walled-garden model, the first effect is dominant and social welfare is always larger in the non-neutral model. While this still holds for many instances of the priority-lane model, the neutral regime is welfare superior relative to the non-neutral regime when CP heterogeneity is large.^{143 144}

The economic literature does provide some support for the imposition of a minimum-quality standard, however:

We extend our baseline model to account for the possibility that ISPs engage in quality degradation or "sabotage" of CP's traffic. We find that sabotage never arises endogenously under net neutrality. In contrast, under the discriminatory regime, ISPs may have an incentive to sabotage the non-priority lane to make the priority lane more valuable, and hence, to extract higher revenues from the CPs that opt for priority. Any level of sabotage is detrimental for total welfare, and therefore, a switch to the discriminatory regime would still require some regulation of traffic quality.¹⁴⁵

Even here, however, the analysis does not consider disclosure-based (transparency) restraints on quality degradation, and it is entirely possible that a transparency rule (or simply the risk of public disclosure even without such a rule) would be sufficient to deter quality degradation.

Regardless, the literature supports at most a minimum quality requirement and perhaps only a transparency requirement; it does not support mandated nondiscrimination rules.

XII. FCC Chief Economist Tim Brennan's Solution Offers a More Sound Approach

It is worth noting that the current Chief Economist of the FCC, Tim Brennan, has proposed a form of net neutrality regulation that recognizes both what is unique about broadband access by edge providers, as well as the fundamental, underlying economics.¹⁴⁶

¹⁴³ Paul Njoroge, et al., *Investment in Two-Sided Markets and the Net Neutrality Debate*, 12 REV. NETWORK ECON. 355, 361 (2013).

¹⁴⁴ Some previous papers have found the opposite result in some instances. All of these models exclude important aspects of the more updated literature, however. See Njoroge, et al., *supra* note 143, 362-65, for a literature review. One, in particular, finds a welfare increase from neutrality, although *not* with monopoly platforms, interestingly. But this paper *does not incorporate infrastructure investment incentives in its models*. See Nicholas Economides & Joacim Tåg, *Network Neutrality on the Internet: A Two-sided Market Analysis*, 24 INFO. ECON. & POL'Y 91 (2012).

¹⁴⁵ Borreau, *et al.*, *supra* note 142, at 3-4.

¹⁴⁶ See Timothy Brennan, *Net Neutrality or Minimum Standards: Network Effects vs. Market Power Justifica-*

In its simplest form, Brennan's proposal requires only a minimum quality guarantee from ISPs, and permits any otherwise-legal arrangements beyond that. While Brennan leaves unanswered the thorny question of how the minimum standard should be defined, the principle is well-explained in his article. To begin, he notes that,

This story [that discrimination is inherently anticompetitive] does not hold when the potentially discriminating firm is unregulated, as it can exploit whatever market power it has directly, and thus lacks this incentive to discriminate. Without price regulation, the likelihood of discrimination against content providers and the incremental effect of its doing so is, at worse, unpredictable. The more robust and varied the content, the more people would pay for access to it and the more money the firm can make by leaving access unfettered. Hence, the first-order effect of discrimination is to sacrifice profits. That sacrifice may well be warranted by cost savings or other efficiencies associated with content delivery, e.g., marketing both the conduit and the content together or improving overall functionality through congestion management.¹⁴⁷

Brennan's proposal is based on his rejection not only of net neutrality proponents' arguments, but also those of its critics. Instead, Brennan focuses on the importance of network effects:

Content providers frequently, if not typically, post links to other content on their websites and social network pages or in their emails and tweets. Consequently, the value to content provider A of internet access depends on the A's confidence that its viewers will be able to access links to B's content that A may post. This confidence depends upon the quality of service that the broadband service providers, to which A's viewers subscribe, can access B's content.¹⁴⁸

As a descriptive matter, this is probably overstated. While some edge providers do care about complementary content, the most significant edge providers do not; neither video providers nor game developers nor telemedicine nor...any number of the most significant applications depends on links to other content in a substantial way.

Nevertheless, Brennan's analysis presents a potentially sensible solution:

tions, in NETWORK NEUTRALITY AND OPEN ACCESS 61-78 (I. Spiecker and J. Krämer eds. 2011), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1622226. Note that Brennan's proposal rejects the argument here, that market power/competition policy is appropriate for net neutrality: "The relevant market failure is not insufficient competition but failure to recognize the network externality in the broadband environment: the value of internet access to a content supplier depends upon its viewers' ability to access links in its content. This market failure does not justify full net neutrality, in particular, a non-discrimination rule. It does suggest a minimum quality standard...." Timothy J. Brennan, *Network Neutrality or Minimum Quality? Barking Up the Wrong Tree—and Finding the Right One*, CPI CHRONICLE (March 2012 (2)).

¹⁴⁷ Timothy J. Brennan, *Network Neutrality or Minimum Quality? Barking Up the Wrong Tree—and Finding the Right One*, CPI ANTITRUST CHRONICLE March 2012 (2), at 4.

¹⁴⁸ *Id.* at 7.

Not only is a minimum quality standard best suited to address network externalities; it also addresses the major contentions on both sides of the net neutrality debate. For those in favor of network neutrality, a minimum quality standard prevents permanent blocking. It thus would prevent the occurrence of the isolated but compelling horror stories that have energized much of their concern. For network neutrality opponents, 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.¹⁴⁹

Most important, a minimum quality standard (without more) offers an *ex ante* rule that may be administrable at relatively low cost by the FCC, but which does not necessarily thwart welfare-enhancing network management and innovation.¹⁵⁰ If the minimum requirement is set at a level that approximates what antitrust law would require—the avoidance of foreclosure sufficient to prevent edge providers from achieving minimum viable scale¹⁵¹—it could be not only administrable, but also economically appropriate.

XIII. Competition Policy, the Communications Act and the “Round Peg; Square Hole” Problem

The NPRM represents an admirable attempt by the agency to adopt regulations it asserts are in the public interest within the existing framework of the Communications Act (and thus the powers delegated to the agency by Congress). But the structure of the current Act simply doesn’t accommodate the regulation of a market borne of transformative technological change not contemplated by the Act. We discuss the legal/regulatory limits to the FCC’s asserted authority at great length in our companion filing.¹⁵² But beyond those technical legal limits, there are sound policy rationales that counsel against trying to force to round peg of broadband regulation into the square hole of the Communications Act.

For many years, government regulation assumed clear, stable boundaries between industries and markets. This assumption sometimes prompted regulators to view (and to regulate) firms in various industries differently, even when they offered similar services. It also caused regulators to address the threat of anticompetitive conduct on the part of some firms by barring them from certain industries and markets.

¹⁴⁹ *Id.* at 8.

¹⁵⁰ *But see* Hazlett & Wright, *supra* note 131.

¹⁵¹ Joshua D. Wright, *Moving Beyond Naïve Foreclosure Analysis*, 19 GEO. MASON L. REV. 1163, 1166 (2012) (“A consensus has emerged that a necessary condition for anticompetitive harm arising from allegedly exclusionary agreements is that the contracts foreclose rivals from a share of distribution sufficient to achieve minimum efficient scale.”)

¹⁵² TechFreedom-ICLE Legal Comments, *supra* note 31, § V.

The time has come for another approach. Even if the lines between industries and markets were clear in the past, technological and market changes are now blurring them beyond recognition, if not erasing them entirely. Regulatory policies predicated on such perceived distinctions can harm consumers by impeding competition and discouraging private investment in networks and services. The Administration is therefore committed to removing unnecessary and artificial barriers to participation by private firms in all communications markets....

This was not the rhetoric of the Bush Administration or its FCC Chairmen, but the guiding vision of the Clinton Administration — the core of the “Telecommunications Policy Reform Initiative” released in January 1994.¹⁵³

Unfortunately, while the Telecommunications Act of 1996 did do much to clear the way for competition within sectors of the telecommunications industry, it preserved the rigid silos of voice, video, terrestrial broadcast, satellite broadcast, wireless, “information” services, and so on. Shortly after President Clinton signed the 1996 Act, John Podesta offered a particularly damning—and sadly prescient—initial assessment:

Technology, and especially the Internet, is about to sweep past this legislation and make it obsolete.... Congress failed to understand the potential of the Net to deconstruct the existing industry structure. Aside from hooking up schools and libraries, and with the rather major exception of censorship, Congress simply legislated as if the Net were not there.¹⁵⁴

Yet here we are, twenty years after Clinton and Gore called for a technologically neutral communications act, still watching the FCC struggle to apply the 1996 Act in a world that looks nothing like its basic assumptions, and where voice, video and information have transformed from network services into applications delivered over platforms that look nothing like those contemplated by the Act.

A. The Disconnect between the Act’s Formalism and the Internet

It is important to recall the purposes of the 1996 Act and the role of competition policy within it. At the time, the central competition issue for communications law and policy was viewed as the facilitation of entry into long-distance and enhanced telephony markets following the breakup of AT&T and the implementation of the court order (the “MFJ”) regulating the resulting BOCs.¹⁵⁵ In the most important respects the central purpose of the 1996 Act was mandatory unbundling — facilitating entry on the assumption that new entrants couldn’t build new infrastructure to compete with incumbent carriers. Much of the Act’s approach to competition policy flows from that purpose.

¹⁵³ White House Office of Commc’ns, Background on Telecommunications Policy Reform Initiative, 1994 WL 9916 (1994).

¹⁵⁴ John D. Podesta, *Unplanned Obsolescence: The Telecommunications Act of 1996 Meets the Internet*, 45 DE-PAUL L. REV. 1093 (1996).

¹⁵⁵ See *id.* at 1104-08.

The 1996 Act focuses heavily on vertical relationships and the threats to competition that can arise from (regulated) monopolists' extensions (of single-function networks) into complementary markets. The *Hush-a-Phone* and *Carterfone* disputes of the Ma Bell era centered on AT&T's attempts to control complementary markets, and eventually gave rise to the divestiture of the BOCs and the MFJ that governed them and mandated structural separation, the FCC's *Computer Inquiries* of the 1970s and 1980s, and ultimately the 1996 Act. Compared to the previous regulatory frameworks, the 1996 Act is somewhat "deregulatory," insofar as it eschews strict structural separation for what amount to, largely, conduct regulations.

Yet even the allegedly deregulatory 1996 Act takes an inherently structural view. While it eschews the strict structural *separation* of the MFJ, it nevertheless adopts the same, strict structural framework, imposing extensive unbundling and interconnection (access) requirements on infrastructure providers on the assumption that entry into complementary markets requires specific restraints based on formalistic distinctions between price-regulated infrastructure and complementary services. Whether or not that makes sense for the TDM, constant-bitrate telecommunications services regulated under Title II, the extension of those presumptions to non-price-regulated, variable-bitrate, multi-function broadband services is not necessarily inappropriate—or neutral.¹⁵⁶

Moreover, the 1996 Act's formalism isn't limited to vertical structures. Rather, it contemplates competition only within its specified technological silos, and does not readily accommodate the intermodal competition that characterizes today's communications ecosystem. Thus, where wireless service competes with wireline service, VoIP provides the same functionality as wireline and wireless telephony, and IP video challenges cable television, the regulatory structure of the 1996 Act is out of sync with the markets it now governs:

The Internet isn't simply a telephone network with greater bandwidth; it's an entirely different approach to telecommunications. Hence, Internet regulations need to depart from the telephony model. The best option is to look toward non-technology-based frameworks, such as those developed in competition and consumer protection contexts.¹⁵⁷

The 1996 Act thus incorporates at least two basic, formalistic premises that underpin its approach to competition issues:

¹⁵⁶ We have discussed this issue at some length in our filings in the IP Transition docket. See Starr, Manne & Szoka, *Toward Modern Modest Regulation for the IP Transition*, Comments, In the Matter of the Technological Transition of the Nation's Communications Infrastructure, GN Docket No. 12-353 (January 28, 2013), available at <http://apps.fcc.gov/ecfs/document/view?id=7022113680>; Manne, Starr, Szoka & Downes, *How the FCC Can Lead the Way to Internet Everywhere by Enabling the IP Transition*, Reply Comments, In the Matter of the Technological Transition of the Nation's Communications Infrastructure, GN Docket No. 12-353 (February 25, 2013), available at <http://apps.fcc.gov/ecfs/document/view?id=7022125022>.

¹⁵⁷ Bennett, *supra* note 3, at 38.

1. First, competitive concerns arise from anticompetitive extensions of monopoly power by operators of the core physical layer into the provision of various applications connected to it, where “network” and “applications” are inherently distinct and where the overriding concern is for innovation and competition in services, not the physical network.
2. Second, competitive concerns are essentially *intramodal*, arising from the divergent incentives of incumbent providers and new entrants, on the one hand, and affiliated and unaffiliated services on the other, all operating upon the same underlying technology.

Unfortunately, these presumptions are overly rigid given current market realities. In fact, the formalistic borders of the Communications Act are blurring more and more all the time, as even the NPRM must, and does, recognize.¹⁵⁸

VoIP presents perhaps the simplest example of the failings of such rigidity. While VoIP is decidedly an application running atop IP-enabled physical infrastructure, it offers functionality that is essentially identical to that provided by the public switched telephone network. Meanwhile, while cable ISPs offer VoIP services through channels dedicated to their proprietary cable networks, unaffiliated VoIP providers offer identical services over the public Internet channels and/or wireless networks. And at the same time, cable-network VoIP services have significantly eroded the market share of ISDN telephony and POTS running on switched copper networks, and wireless telephony has further eroded the dominance of all of these wireline telephony services.

One attribute of the current regulatory framework, as suggested above, is that it is more concerned with preserving and favoring innovation and competition in the applications/content market, rooted in the assumption that network/infrastructure monopolies threaten that market’s competitiveness. Concomitantly, the framework is little concerned with innovation and competition in network/infrastructure markets. But this emphasis is ill-supported in today’s marketplace, and the focus on edge provider innovation to the exclusion of network innovation (and investment incentives) that permeates the net neutrality debate, for example, is in part a symptom of this residual myopia.

In the first place, this emphasis is inconsistent with basic economic logic, which counsels in favor of focusing regulatory attention on increasing competition in the *least* competitive segment of a vertical structure. As Prof. Christopher Yoo has noted:

One of the basic tenets of vertical integration theory is that any chain of production will only be as efficient as its least competitive link. As a result, competition policy should focus on identifying the link that is the most concentrated and the most protected by entry barriers and design regulations to increase its competitiveness. In the broadband industry, the level of production that is the most concentrated and protected by barriers to entry is the last mile. This implies that decisions about In-

¹⁵⁸ See NPRM, *supra* note 25, ¶ 60 (on “Specialized Services”). See also *Id.* Appendix B, ¶ 12.

ternet regulation should be guided by their impact on competition in that portion of the industry.¹⁵⁹

Undoubtedly there is less competition among infrastructure providers and ISPs than among content providers. But, as net neutrality advocates implicitly insist, the 1996 Telecommunications Act (and especially its Title II provisions) aims at preserving and maximizing competition in the most competitive sector of the stack, and essentially assumes the absence of or need for innovation and competition in the network.

This is in part a function of the Act's design — a design predicated on government-guaranteed, rate-regulated, single-function, monopoly infrastructure. But in broadband (and increasingly in telecommunications), this presumption is unwarranted. While infrastructure is certainly less competitive than content, it is becoming increasingly so, and the infrastructure used for broadband is not rate regulated. We are ill-served by appealing to the Act's presumption that network competition is hopeless. Instead, we would do better to focus on removing direct barriers to competition, both wireline and wireless.¹⁶⁰ And for our competition policy, as Yoo further notes:

[P]ublic policy would be better served if Congress and the FCC were to embrace a "network diversity" principle that permits network owners to deploy proprietary protocols and to enter into exclusivity agreements with content providers.

* * *

Intervening by mandating network neutrality would have the inevitable effect of locking the existing interfaces into place and of foreclosing experimentation into new products and alternative organizational forms that transcend traditional firm boundaries.

The decision to permit network diversity to emerge, then, does not necessarily depend on a conviction that it would yield a substantively better outcome, but rather from a "technological humility" that permits exploration to proceed until policy-makers can make a clearer assessment of the cost-benefit tradeoff.¹⁶¹

In short, as a former advisor to both Chairman Kennard and Chairman Hundt put it:

Broadband—and IP-based services more generally—attack the fundamental skeleton of the Communications Act itself, eroding the framework around which the Act's regulations are built.¹⁶²

¹⁵⁹ Yoo, *Beyond Network Neutrality*, *supra* note 68, at 8.

¹⁶⁰ See, e.g., Berin Szoka, et al., *Don't Blame Big Cable. It's Local Governments that Choke Broadband Competition*, WIRE (July 16, 2013), available at <http://wired.com/opinion/2013/07/we-need-to-stop-focusing-on-just-cable-companies-and-blame-local-government-for-dismal-broadband-competition/>.

¹⁶¹ *Id.* at 9, 11.

¹⁶² John T. Nakahata, *Broadband Regulation at the Demise of the 1934 Act: The Challenge of Muddling Through*, 12 COMMLAW CONSPPECTUS 169, 169 (2004), available at <http://scholarship.law.edu/commlaw/vol12/iss2/7/>.

B. The Telecommunications Act's Net Neutrality Problem

Where net neutrality falters is in its embrace of both the vertical structural assumptions of the Act, as well as its affinity for the Act's outdated, *ex ante*, prescriptive approach. Moreover, net neutrality is itself inherently non-neutral, in that it begins with the assumption (discussed above and enshrined in the Act) that innovation and competition in complementary markets should always trump network innovation and competition. As a result, instead of arguing for an *ex post* assessment of competitive effects arising out of the uncertain and always-evolving relationship between broadband networks and edge providers, net neutrality advocates essentially adopt the apparatus of Title II as their competition policy lode-star.

Ironically, appeals to both Title II (with forbearance) and Section 706 as the basis for net neutrality regulation are efforts to overcome the formalism of the 1996 Act in order to invent, out of whole cloth, a new regulatory regime for the most important aspect of modern telecommunications competition policy: the intersection between broadband and applications.

On the one hand, the FCC proposes to place broadband into the regulatory silo of Title II, the set of public utility regulations designed for the monopoly telephone network — the very model of regulation that the Clinton Administration's FCC tried to move away from in its prescient effort to promote the massive capital expenditures needed to build the infrastructure behind today's Internet. Although there are superficial similarities between Title II's formalistic approach to fostering competition through unbundling (a form of open access) and the sort of non-discrimination sought by net neutrality proponents, the competitive and regulatory dynamics are so different that the push for Title II regulation of broadband borders on the absurd. In fact, those now advocating for reclassification essentially claim that the Title II silo fits net neutrality... but that it can and should simultaneously be leveled (through the forbearance process), to suit their needs.¹⁶³

Both claims are false: Title II is not a viable basis for modern competition policy, even from the perspective of those who advocate for net neutrality regulation. Far from banning prioritization (as net neutrality proponents so adamantly insist must be done) Title II simply requires that prioritization be "just and reasonable."¹⁶⁴ While Title II will not get them what

¹⁶³ This reclassification-with-forbearance approach was proposed in 2010 by Chairman Genachowski. In defense of the proposal, Genachowski's General Counsel, Austin Schlick, asserted that: "The Commission is able to tailor the requirements of Title II so that they conform precisely to the policy consensus for broadband transmission services. Specifically, the Commission could implement the consensus policy approach—and maintain substantively the same legal framework as under Title I—by forbearing from applying the vast majority of Title II's 48 provisions to broadband access services, making the classification change effective upon the completion of forbearance, and enforcing a small handful of remaining statutory requirements." Austin Schlick, *Legal Framework: A Third Way Legal Framework for Addressing the Comcast Dilemma* (May 6, 2010), available at <http://www.broadband.gov/third-way-legal-framework-for-addressing-the-comcast-dilemma.html>.

¹⁶⁴ 47 U.S.C. § 202(a) (2012). See also TechFreedom-ICLE Legal Comments, *supra* note 31, at § III.A.

they most want, it *would* trigger, by default, a host of other regulations that are wholly inappropriate for the current environment.

At the same time, there is no easy way for the FCC to whittle Title II down to just the three net neutrality rules the FCC has tried to impose. Forbearance is simply not this easy, as we explain in detail in our Legal Comments.¹⁶⁵

While the Act gives the FCC vast discretion under the standard (or non-standard standard)¹⁶⁶ of the “public interest,” Section 10 of the Communications Act requires much more than this: affirmative findings about the state of competition, market by market.¹⁶⁷ But if the Commission could reverse course, and make forbearance as easy as proponents assert, and if forbearance contains an implied power to *unforbear*, as leading proponents of “re-classification,” maintain, then so too, by implication, would “unforbearance” be just as readily available. That would mean that once a service was placed within Title II, it would *always* be potentially subject to the requirements of Title II, depending on the whims of the FCC.¹⁶⁸ Such regime uncertainty, hinging ironically on the certainty of binary classification decisions under the Act, is merely another manifestation of the Act’s formalism. As such it would perpetuate the outdated structure of the Act and undermine investment in competing infrastructure – precisely the opposite of the pro-deployment agenda begun by the Clinton administration and required as a predicate to regulation in this proceeding.¹⁶⁹

On the other hand, given the impracticality of Title II, and its harmful real-world conse-

¹⁶⁵ TechFreedom-ICLE Legal Comments, *supra* note 31, § III.C.

¹⁶⁶ See Adam Thierer, *Is the Public Served by the Public Interest Standard?*, THE FREEMAN (Sept. 1, 1996), available at http://www.fee.org/the_freeman/detail/is-the-public-served-by-the-public-interest-standard.

¹⁶⁷ See 47 U.S.C. § 160 (2012). Indeed, if the FCC were to accept the dreary claims about the state of the market made by those now advocating Title II, it is difficult to see how the Commission could justify forbearing from the most important aspects of Title II. In fact, the FCC has made forbearance progressively more difficult over the years. See FCC, Petition to Establish Procedural Requirements to Govern Proceedings for Forbearance Under Section 10 of the Communications Act of 1934, Report and Order, FCC 09-56 (2009), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-09-56A1.pdf. See also *Qwest Corp. v. F.C.C.*, 689 F.3d 1214 (10th Cir. 2012) (rejecting appellant’s contention that wireless voice services compete with appellant’s wireline voice services, and then upholding the FCC’s denial of appellant’s forbearance petition because there were only two participants in the market—as defined—and duopolies provide too much threat of tacit price coordination to constitute effective competition).

¹⁶⁸ TechFreedom-ICLE Legal Comments, *supra* note 31, § III.C.4. See also Framework for Broadband Internet Service, *Reply Comments of Public Knowledge*, GN Docket No. 10-127, at 21 (Aug.12, 2010), available at https://www.publicknowledge.org/files/docs/PK_Reply_Comments_Third_Way.pdf (“If the Commission can place a reasonable time limit on forbearance, there is no reason that forbearance should be intended to operate solely as a permanent, regulatory veto of a rule or statute.”).

¹⁶⁹ “How the FCC handles these issues, along with the ability of the Commission and state regulators to implement the interconnection mandate of the 1996 Act, will determine the speed at which the telephone, cable, and Internet-based networks converge into an open data network. The force of technology means that the inevitability of this convergence is not really in question, but the pace of convergence still rests with federal and state regulators.” Podesta, *supra* note 154, at 1114.

quences for broadband as well as edge providers, the FCC seems almost certain to issue new net neutrality rules under Section 706. But, if anything, Section 706 evinces Congress's intent to promote competition and deployment. Allowing it to become instead the *de facto* Telecommunications Act of 2014, however much we need a new Communications Act, would be an affront to the principle that the American people's elected representatives, not unelected bureaucrats, should determine how telecommunications should be governed.¹⁷⁰

Moreover, the Commission's proffered interpretation of Section 706 could allow it not merely to craft a new competition policy for broadband, but to craft a new regulatory regime for competition, consumer protection, copyright, privacy, cybersecurity and so on across the entire field of "communications."¹⁷¹ Thus, Section 706 could be used to regulate the very edge providers that those who advocate for prescriptive net neutrality regulations purport to be trying to keep "free." Most troublingly, Section 706, if it is an independent grant of authority, seems to allow the FCC to regulate informally, without the safeguards of formal rulemaking or the opportunity for judicial review that they offer. And Section 706(a) empowers not only the FCC, but also state regulatory commissions.

C. Toward a Better Approach

As Chairman Kennard once said, "In short, we will be guided by one principle: the elimination of rules that impede competition and innovation and do not promote consumer welfare."¹⁷² In other words, Kennard argued that the FCC should focus on effects rather than formalism. Even Chairman Wheeler recently embraced the same (rhetorical) approach, de-

¹⁷⁰ It is absurd to argue, as the D.C. Circuit did, that Congress intended Section 706 as a secret grant of power that could moot the rest of the Act simply because the sole piece of legislative history on this Section, the Senate Commerce Committee's report, described this section as a "failsafe." *Verizon v. F.C.C.*, 740 F.3d at 639. Congress could have written such a grant of power in clear, explicit terms – and indeed, the Senate did precisely that in what would have been the subsequent section of the Act, only to have that section removed in conference with the House. *Compare* S. 652 ES, 104th Cong., Sec. 304 & 305 (June 15, 1995) (Engrossed in Senate), *with* S.652 EAH, 104th Cong. (Oct. 12, 1995) (Engrossed Amendment House) *and* S.652, 104th Cong. (Jan. 1, 1996) (Enrolled Bill), *available at* <http://beta.congress.gov/bill/104th-congress/senate-bill/652/text>; *see also* S. Rep. No. 104-23, at 51 (1995), *available at* <http://beta.congress.gov/104/crpt/srpt23/CRPT-104srpt23.pdf>. Rather than an independent grant of authority, Section 706 is a mandate to use other grants of authority in the Act for a particular purpose: promoting broadband deployment and competition, just as the FCC concluded in 1998. *See* FCC, Deployment of Wireline Servs. Offering Advanced Telecom. Capability, CC Docket No. 98-147, Memorandum Opinion and Order, FCC 98-188, at 77 (Aug. 7, 1998) ("[I]n light of the statutory language, the framework of the 1996 Act, its legislative history, and Congress' policy objectives, the most logical statutory interpretation is that section 706 does not constitute an independent grant of authority."), *available at* http://transition.fcc.gov/Bureaus/Common_Carrier/Orders/1998/fcc98188.pdf.

¹⁷¹ Subject only to two limits made clear by the D.C. Circuit's decision: (a) the FCC may not violate some specific provision of the act (such as the forbearance requirements of Section 10 or the prohibition on imposing common carriage requirements on an information service) and (b) the FCC must at least assert that its regulations will promote broadband deployment, investment, or competition.

¹⁷² FCC, *A New Federal Communications Commission for the 21st Century*, IV.B. (1999), *available at* <http://transition.fcc.gov/Reports/fcc21.html>.

claring that “the mantra today at the FCC is ‘Competition, Competition, Competition.’”¹⁷³

Such an approach stands in stark contrast to the 1996 Act:

The 1996 Telecommunications Act is not deregulation but a vast new regulatory program designed to mold and shape competition through mandatory wholesale leasing of pieces of an incredibly complicated network at prices that are based on regulators' imperfect understanding of costs.¹⁷⁴

Whereas the 1996 Act, particularly in Title II, adopts formalistic presumptions and imposes specific regulatory outcomes, even in the face of ever-increasing uncertainty and technological change, an effects-based approach would generally employ *ex post* analysis of conduct and a broad assessment of its economic consequences to determine the propriety of various actions. Instead of foreclosing or mandating specific conduct, it allows innovation, technological development and changes in consumer preferences to guide conduct, intervening only where actual competitive harms develop (or, in a few cases, are substantially likely to develop in the future).

Of course, we acknowledge that the FCC’s public interest standard is broader than the consumer protection standard employed by antitrust enforcers. But public-interest-based interventions that deviate from antitrust’s consumer welfare standard should be the exceptions to the general rule that the FCC should be focused on advancing consumer welfare by rigorously assessing costs and benefits, including the error costs of over-regulating, which is both more likely and harder to correct than under-regulating.¹⁷⁵ Moreover, the FCC should be required to approach even these non-economic concerns through an effects-based lens, weighing the tradeoffs and error costs as rigorously as possible.

¹⁷³ FCC, Remarks of Chairman Tom Wheeler at the National Cable & Telecommunications Association 4-5 (Apr. 30, 2014), available at <http://www.fcc.gov/document/chairman-tom-wheeler-remarks-ncta>.

¹⁷⁴ Robert Crandall, *The Telecom Act's Phone-y Deregulation*, WALL ST. J. (Jan. 27, 1999), available at <http://www.brookings.edu/research/opinions/1999/01/27business-crandall>.

¹⁷⁵ See Manne & Wright, *supra* note 44, 158-63.