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Washington, D.C. 20554

In the Matter of)
)
Restoring Internet Freedom) WC Docket No. 17-108

Reply Comments of ITIF

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I. INTRODUCTION AND SUMMARY

The Information Technology and Innovation Foundation (“ITIF”)¹ respectfully submits these reply comments in response to initial comments in the Restoring Internet Freedom proceeding.² We at ITIF have long been engaged on the topic of how best to secure a dynamic, evolving Internet that supports open, “permissionless” innovation. We offer these reply comments in this spirit—highlighting agreement with other filers, as well as note points of departure, as to how best support a thriving Internet ecosystem, in all parts, including the core and the edge.

There is considerable diversity of positions expressed in the record, with many comments appearing notably polarized. On one hand, some filers are strongly in favor of maintaining the classification of broadband Internet access service (BIAS) as a common carrier under Title II of the Communications Act, with the strict bright-line rules and broad authority for the Commission to intervene in the provision broadband access technology afforded by the 2015 Title II Order. Others advocate for a far more relaxed approach, leaving oversight to the Federal Trade Commission or generalist courts. Others still advocate for relatively simple brightline rules to prevent blocking, throttling, or paid prioritization, but are silent as to the legal mechanism to achieve those rules.

ITIF continues to believe the best approach is to chart a path down the middle of these options: Recognizing there are legitimate concerns raised by a number of commenters, we reiterate the need for pragmatic problem solving. The FCC has the authority to craft a compromise that simultaneously gives users and edge providers assurance that their access to the Internet will remain unimpeded—that the Internet remains freewheeling and open—and gives those building and operating these capital-intensive systems the flexibility to manage and improve last-mile networks, and offer quality-assured services on a commercially reasonable basis. This is not, nor should it be, an either-or proposition.

¹ The Information Technology and Innovation Foundation (ITIF) is a non-partisan research and educational institute – a think tank – whose mission is to formulate and promote public policies to advance technological innovation and productivity internationally, in Washington, and in the states. Recognizing the vital role of technology in ensuring prosperity, ITIF focuses on innovation, productivity, and digital economy issues.

² *Restoring Internet Freedom*, GN Docket No. 17-108 (May, 2017) Notice of Proposed Rulemaking https://apps.fcc.gov/edocs_public/attachmatch/FCC-17-60A1_Rcd.pdf (NPRM).

The Commission proposes to reclassify broadband Internet access service as an information service under Title I of the Communications Act and reinstate mobile broadband service as a private mobile service.³ These efforts are laudable, and there is considerable support in the record for the Commission should follow through on these aspects of the proposal.

The proposal, however, appears to take a skeptical stance as to whether the FCC has authority over broadband. The *Verizon* decision has made clear that section 706 gives the Federal Communications Commission (FCC) a claim to an affirmative grant of authority to make rules more than sufficient to protect and promote the openness of the Internet.

The answer is essentially antitrust-informed regulation—relying on section 706 to institutionalize predictable, but flexible expert oversight, with processes designed to prevent capricious blocking or degradation of traffic by BIAS providers, but also allow new BIAS services based on traffic differentiation. Working to put guardrails on the “virtuous cycle” theory, bringing clarity and predictability to an antitrust-like, case-by-case approach can allow for those pro-consumer, pro-competition deals to go forward on an individually negotiated basis while also protecting the openness of the Internet. This is clearly the superior policy choice compared to over-enforcement under Title II or, on the other hand, abdicating authority to antitrust authorities.

There is significant discussion of a potential legislative fix in the record, some even going so far as to argue that the issue demands attention from Congress and Congress alone. For example, one coalition of commenters asserts that (beyond returning broadband to Title I and removing the general conduct standard) “it is Congress alone” that should decide how to move forward with net neutrality policy.⁴

No doubt, Congressional action is the right solution long-term. But the Commission should not count on legislation any time soon. Instead of abdicating even basic oversight of the most important communications platform of today, the Commission should utilize the authority courts have recognized under section 706 to create light-touch rules of the road overseeing BIAS providers.

II. THE RECORD—WHILE POLARIZED—SUPPORTS REVISITING THE 2015 TITLE II ORDER

The record, while far from uniform, shows extensive support for revisiting the 2015 Title II Order. The Title II Order was a very controversial regulation. While the legality of the order was maintained at the D.C.

³ NPRM at para. 25 - 55.

⁴ Comments of Coalition of 65, organized by Katherine McAuliffe, Digital Liberty.

Circuit Court, many question its legal foundation of Title II classification. The policy justification of the Title II order is even more suspect.

Commenters are rightly concerned by the slide towards more extensive common carrier regulation. As put by the Technology Policy Institute, “Economic analysis and U.S. history with Title II-style, common carrier, regulation strongly suggest that the 2015 [Open Internet Order] will be detrimental to innovation and to the development of both infrastructure and edge investment.”⁵ Considering how aspects of telecommunications policy have become markedly more political, and the partisan, populist roil that U.S. politics is currently experiencing, these fears are not wholly unfounded.

On the other hand, some of legal arguments made in support of maintaining Title II in the record are fundamentally tautological, confusing a misguided policy preferences that that BIAS be treated as a telecommunication service with the legal, empirical question of whether it is in fact. The record shows much of the fearmongering over supposed net neutrality violations to be dramatically overstated, and also supports rejection of the flawed “gatekeeper” hypothesis advanced in support of the 2015 Title II Order.

Much of the argument over investment—whether investment is up or down after the Title II Order—is something of a red herring. Whether investment is up or down after Title II classification doesn’t necessarily tell us much about to what extent FCC policy is to thank (or blame) for those changes. Not only is the time period far too short, investment overall could very well be up, but not up as much as it otherwise would be without Title II (as would also be true if there was a decline)—this is a difficult policy question to analyze. As a policy matter, the Commission should not be overly concerned with simplistic analysis presented by some advocates whether investment is up or down after the Title II Order—though it indeed appears to be down.⁶

It should be sufficient to recognize that the Title II Order read the record incorrectly—BIAS is better understood as an information service as both a legal and policy matter. It is incontrovertible that we are more likely to see the type of long-term, sunk investment in the actual deployment of networks that we should be looking to promote with a focus on light-touch focus on competitive deployment, not a backslide to common carriage. Jason Furman, then-chairman of the White House Council of Economic Advisers, explained in 2013 that “investments in infrastructure depend critically on a stable, predictable, and light touch regulatory

⁵ TPI Comments at 1.

⁶ See Doug Brake “Broadband Myth Series, Part 1: What Financial Data Shows About the Impact of Title II on ISP Investment” *Innovation Files* (June 2017) <https://itif.org/publications/2017/06/02/broadband-myth-series-part-1-what-financial-data-shows-about-impact-title-ii>.

regime.”⁷ While there are many legitimate goals of regulation, he said, this need for a light touch regime stability and predictability has historically been “the motivation for the approach this administration and the Federal Communications Commission have taken in a wide range of areas like the Open Internet”—at least prior to 2015. Returning the broadband regulatory regime to one that is stable, predictable, and light-touch should be the ultimate goal—this proceeding is an important step in that direction. Legislation is the best cure for stability, but aiming at a workable middle-ground solution that speaks to concerns expressed on different sides of this issue has the best shot at seeing a regulatory framework that lasts the test of time.

As ITIF argued in 2015, Title II classification is a poor long-term solution to preserving the open Internet, not the unalloyed win some proponents claim. It does nothing to improve the competitive dynamic driving broadband deployment; if anything, it has had a moderately negative effect on existing providers’ investment levels and raised the risks for new entrants. Title II was written assuming a static system that did one thing—switch telephone calls. As such, it will chill innovation and experimentation in new networking technologies designed to support a dizzying variety of services, consigning us to the broadband of today, not tomorrow.⁸ It is time to revisit this decision, and find a more sustainable framework for overseeing the continued growth of the Internet ecosystem.

III. THE COMMISSION HAS THE LEGAL AUTHORITY TO RECLASSIFY BIAS AS AN INFORMATION SERVICE UNDER TITLE I OF THE COMMUNICATIONS ACT

The record supports the Commission’s proposal to classify BIAS as an information service under the Communications Act. Considering the fact of how BIAS is offered, an information service classification continues to be the best interpretation of the Act. The Commission has the authority to reclassify, but should make clear that it maintains oversight of broadband as national policy at the federal level.

a. BIAS is Best Understood as an Information Service

The record supports the NPRM’s proposal that BIAS offers users the capability for “generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.”⁹

⁷ Jason Furman, “Total Factor Productivity and Telecommunications: Policy Ingredients for Shared Growth” Remarks as Prepared, AEI’s Center on Internet, Communications and Technology Policy” (Sept. 2013), https://obamawhitehouse.archives.gov/sites/default/files/docs/aei_jf_telecom_9.17.13.pdf.

⁸ Doug Brake and Robert D. Atkinson, “Crafting a Grand Bargain Alternative to Title II: Net Neutrality with Net Adoption,” ITIF (Oct. 2015), <https://itif.org/publications/2015/10/29/crafting-grand-bargain-alternative-title-ii-net-neutrality-net-adoption>.

⁹ NPRM at ¶ 27 *citing* 47 U.S.C. § 153(24).

Some commenters falsely argue that BIAS can only be interpreted as a Title II telecommunication service. The “technologists” filing organized by EFF, for example, is inaccurate and misleading in several aspects when describing technical characteristics of the Internet that they argue support a telecommunications service classification.¹⁰ The EFF technologist filing is rife with problems, but perhaps one of the best examples of its one-sidedness is the twisting of the rise of encryption as an argument that BIAS is a telecom service (a peculiarly nuanced legal argument for a group of “technologists” to be making).

The filing writes “Given the inevitability of ubiquitous encryption, ISP caching is destined to become an obsolete practice.”¹¹ The EFF technologists attempt to twist a simple fact—that the rise of encryption has complicated BIAS-based caching—into support for a legal argument that without caching BIAS is best considered a telecommunication service. First, the filing presents an incomplete view of contemporary research to overcome the difficulty in caching encrypted content.

For example, Ericsson has led the development of a technology described as a “blind cache” or “out-of-band cache” that allows BIAS providers, as well as large content providers or third-party CDN providers, to engage in deep network caching of encrypted data.¹² Other researchers are exploring similar proposals.¹³ Indeed, the interaction between encryption and network management is an area of active research and development within bodies such as Internet Engineering Task Force (IETF) and the Internet Architecture Board (IAB).¹⁴

Remarkably, the technologists’ filing cites some of this research—development of information processing middleboxes that can make significant changes in the form of data (such as compression) as it is conveyed to the end user—as “interference” with the Internet.¹⁵ Such an argument reveals the filing to be fundamentally

¹⁰ Joint Comments of Internet Engineers, Pioneers, and Technologists.

¹¹ *Ibid* at 15.

¹² Göran A.P. Eriksson, et al., “Blind Cache in an All-Encrypted Web: Handling Encryption Everywhere” Ericsson Technology Review (August, 2016), <https://www.ericsson.com/assets/local/publications/ericsson-technology-review/docs/2016/etr-secure-ott.pdf>.

¹³ *See, e.g.*, Andrea Araldo, et al., “Stochastic Dynamic Cache Partitioning for Encrypted Content Delivery,” *available at* arXiv, <https://arxiv.org/pdf/1603.09490.pdf>.

¹⁴ For discussion, *see* 5G Americas, “Optimizing Mobile Media Delivery and the Impact of Encryption” (Oct. 2016), http://www.5gamericas.org/files/8714/7734/8897/2016_5G_Americas-OPTIMIZING_MOBILE_MEDIA_DELIVERY_THE_IMPACT_OF_ENCRYPTION_Final_ABVLeDits_UPLoad.pdf.

¹⁵ Joint Comments of Internet Engineers, Pioneers, and Technologists at 40.

question-begging: of course BIAS looks like a telecommunications service if you define all information service features to be “interference” that should be banned through regulation.

Commenters like the EFF technologists attempt to present their policy preference—BIAS providers as “dumb” transmission—and a narrow, static view of broadband technology as if immutable and natural, instead of recognizing the reality of a constantly-evolving, innovating, complex system that must manage a wide variety of applications, each with different network needs. EFF, as well as other commenters, elevate the design heuristic of the so-called “end-to-end principle” which guided development of early Internet protocols to some sort of 10 commandments that should guide today’s mandate for network neutrality. However, as ITIF has long argued, the Internet was not designed as a static system, but one that should be constantly changing.¹⁶ In fact, while end-to-end arguments reflect important aspects of the Internet’s organization, the belief that the Internet is built on negative principles—prohibitions on taking action—is a serious misunderstanding of how the Internet was designed and how it works.

We shouldn’t engage in revisionist Internet history regarding design guidelines (like the end-to-end principle) and appropriate levels of abstraction, nor should these guidelines be set in stone. With the commercial Internet led by the private sector, there will inevitably be tussles over its best design and evolution. Not all developments will be good, but it is not the regulator’s place to attempt to lock down a static transmission system. It is, however, their job to limit market abuses.

Beyond caching and DNS, and beyond the offering of the capability for information processing, BIAS providers are integrating more and more functionalities that involve information processing within the service itself. In addition to the obvious security protections, IPv6 conversions, and DDoS detection, developments in software defined networking and network functions virtualization are enabling platforms for network application development, allowing for more and more information processing within the network itself.¹⁷

The truth of the matter is BIAS does not fit cleanly into the existing legal framework—either Title I or Title II. The courts have recognized that the Commission receives deference in making that call, and the Supreme Court has recognized that cable modem service as a Title I information service is a permissible interpretation. Title I classification is the superior policy choice—the Commission can use Title I to lawfully oversee potential abuses while leaving room for innovation in networks and at the edge.

The Internet is the type of complex and evolving system that Congress intended be shielded from sclerotic, common carrier regulation when making the distinction between information and telecommunications

¹⁶ Richard Bennett, “Designed for Change: End-to-End Arguments, Internet Innovation, and the Net Neutrality Debate” *ITIF* (Sept. 2009), <http://www.itif.org/files/2009-designed-for-change.pdf>.

¹⁷ See e.g., AT&T Inc., “ECOMP (Enhanced Control, Orchestration, Management & Policy) Architecture White Paper, available at <https://about.att.com/content/dam/snrdocs/ecomp.pdf>.

services. Internet access should be allowed to continue to evolve, and software defined networking, which makes broadband access even more clearly an information service, is the next step in its evolution.

Furthermore, the FCC should follow through on its proposal to return broadband Internet access to the lightly regulated information service classification as it would prevent a slide to more extensive common carrier regulation. Full common carriage regulation of the type found in Title II is best reserved for any remaining explicit monopoly markets with little room for innovation—not dynamic services like Internet access provision. Common carriage, where used, has proven difficult to implement as well as enforce, risks dramatically reducing the incentive to economize on costs or to innovate new technologies or business models and inevitably raises barriers to entry. In short, this is not a route we should want to go down for regulating Internet access, and the Commission is right to correct this error of the Title II Order.

The forbearance from many of these utility regulations in the Title II Order exposes Title II authority as a kludge of a legal mechanism for supporting open Internet rules, it also presents a dangerous slippery slope that the Commission should remove itself from. The Title II Order spoke of forbearance “for now,” clearly leaving the possibility that these legal tools, most of which were intended for a then-monopoly telephone network, could be applied in the future.

Common carriage has had a challenged history in the communications context, and the Commission should head off the slippery slope to further implementation of Title II.¹⁸ But what’s more, common carriage is not necessary to secure a continued open Internet as both a theoretical and empirical fact.

The record also supports rejection of the flawed “gatekeeper” hypothesis advanced in support of the 2015 Title II Order.¹⁹ This “gatekeeper” theory confused a very different policy issue—that of the terminating access monopoly—which arose due to unique regulation of legacy telephone networks, whereby local exchange carriers could charge interexchange carriers at rates that would prevent arbitrage. As well explained by Jonathan Nuechterlein and Christopher Yoo in their note in the *Colorado Tech Law Journal*, the “terminating access monopoly” concept does not transfer to broadband providers—simply because users typically only purchase one wired connection to their home at a time doesn’t tell us much about how it should be regulated.²⁰

¹⁸ See, e.g., Bruce M. Owen, “Antecedents to Net Neutrality,” *Regulation* Vol. 30, No. 3 (2007).

¹⁹ Comments of U.S. Telecom at 19.

²⁰ Jonathan E. Nuechterlein and Christopher S. Yoo, “A Market-Oriented Analysis of the ‘Terminating Access Monopoly’ Concept,” 14 *Colo. Tech. L. J.* 21, <http://ctlj.colorado.edu/wp-content/uploads/2015/12/v2.-Final-Nuechterlein-and-Yoo-11.16.15-JRD.pdf>.

b. The Commission has the Legal Authority to Reclassify BIAS

The Commission clearly has the legal authority to reclassify BIAS as a Title I information service. *Brand X* makes clear that this interpretation is a permissible one.²¹ The Administrative Procedure Act and *Fox Television* clearly allow the Commission to change its mind, and revert to this prior policy, so long as it explains its reasons for the changed interpretation. The record provides bountiful support for reverting to the policy that so well supported the growth of broadband services up until 2015.

c. The Commission Should Establish a National Policy Framework Other Than Title II

Regardless of the specific decisions the Commission makes as to implementing specific net neutrality rules, it is important it makes clear that broadband policy is made at the national, not state, level. Former Chairman Kennard, in a 1999 speech titled “The Unregulation of the Internet: Laying a Competitive Course for the Future,” laid out why it was in “the national interest that we have a national broadband policy...a de-regulatory approach, an approach that will let this nascent industry flourish.”²²

In that speech, he laid out the importance of having a unified national policy on broadband, rather than allowing individual state utility regulators create disparate regulations. The importance of such an approach remains today. If the FCC steps back too far from overseeing BIAS, it risks a thicket of state-led efforts to regulate net neutrality. Regardless of the specific substantive rules, this Commission should make clear broadband is a fundamentally intra-state service and its policy is made at the federal level.

Similarly, it is important the United States shows leadership on open Internet policy to influence the direction of foreign regulators. Title II set a poor precedent, giving foreign countries an excuse for more extensive regulation, including on price, in the Internet space. Indeed, the tariffing present in telecommunications regimes around the world historically did not have a zero price for the sending party. Although Title II in the United States is now seen as a tool to ensure a “fair” and open Internet, other countries, especially ones as not amenable to our most successful edge providers, could use the same legacy telecommunications regulatory regimes to protect their own operators, contrary to the interests of both the United States and the open and interconnected global Internet.

At the same time, by abdicating its role in overseeing healthy dynamics in the continuing evolution of the Internet and BIAS provision, the FCC would create a vacuum for foreign regulators to imagine alternative

²¹ National Cable & Telecommunications Ass’n v. Brand X Internet Services, 545 U.S. 967 (2005).

²² William E. Kennard, “The Unregulation of the Internet: Laying a Competitive Course for the Future” Speech before the FCBA (July 1999), <https://transition.fcc.gov/Speeches/Kennard/spwek924.html>.

paths. By putting forth a clear, light-touch, predictable, case-by-case framework under the legal authority recognized by the courts, the FCC sets a good example for others to follow.

IV. THE MIXED RECORD SUPPORTS A MIDDLE-GROUND COMPROMISE UNDER SECTION 706

The record in this proceeding is far from uniform; some commenters go too far in demanding extensive utility-style regulation of BIAS providers, while others argue that the rule of law demands the FCC to abdicate all authority over BIAS providers. Both users and edge providers—both existing and future—deserve confidence and trust that they will be able to use the Internet freely without undue and anti-competitive interference (although the historical record suggests little to be concerned about on this matter). At the same time, BIAS providers should be allowed to find areas to add value to this ecosystem beyond dumb transmission. For example, offering quality of service guarantees that allow for higher-order systems to be built on top of an otherwise unpredictable, stochastic system adds real value and should be welcomed. Such traffic differentiation need not come at the expense of best-efforts data as in the case for example of allowing companies to purchase prioritization for latency sensitive applications. As ITIF has shown, Internet packet routing is not zero-sum, rather it can be welfare maximizing for all involved.

The best legal mechanism to see this compromise—while we wait for legislation to wind its course—is section 706 of the Communications Act. Section 706, and the “commercially reasonable” standard explored in *Cellco* set out the means for the FCC to design a process to oversee innovative traffic differentiation that improves on best-efforts offerings, while curtailing anticompetitive or anticonsumer practices that are not commercially reasonable.

a. End Users and Edge Providers Deserve Assurance that BIAS Providers will Not Capriciously Block, Slow, or Degrade Legitimate Internet Traffic, Demanding More Than Antitrust Alone

While it is extremely unlikely that a BIAS provider would see it in its interest to capriciously block or degrade traffic in a way that harms the development of the Internet ecosystem, a balanced approach to open Internet policy demands that participants have confidence that they can freely innovate on these communications platforms. As put by Amazon, “In order to deliver new products and services to consumers, companies need to know with a reasonable degree of certainty that a new product or service will be able to be deployed without undue interference by broadband service providers.”²³

Furthermore, access to high speed internet is a powerful force for democracy, education, and commerce. Any enforcement regime should acknowledge that there are more than purely economic harms at stake when a free and open internet is challenged. Furthermore, the critical role that the internet plays in enabling innovation

²³ Comments of Amazon.

throughout the US economy deserves a forward-looking regulatory approach. Antitrust enforcement actions are often only focused on the particulars of the cases involved in the enforcement proceeding, and lack a forward-looking approach. Relying solely on antitrust principals does not ensure that the interests of future innovators are represented. Moreover, it is not necessarily responsive enough to potential threats to business models in real time.

The Internet is an incredibly complex system that supports an amazing array of services and applications. It is possible, if not likely, that problems will eventually arise that implicate open Internet concerns. These problems may be legitimate threats to Internet openness or innocuous, unpredictable changes to the system. Challenges can be unintended consequences of subtle technical changes in the network. It would be better that the FCC design an institutional process to collaboratively uncover the truth in a complex and contentions technical environment, rather than rely on adversarial processes. Again, we want to reiterate a key point: no major BIAS provider has ever unfairly blocked or degraded traffic, but, at the same time, providers should not have the right to capriciously block or degrade traffic.

b. BIAS Providers Should be Allowed to Explore Commercially Reasonable, Individually Negotiated Traffic Differentiation that Does Not Harm the Open Internet

The harms that net neutrality rules are intended to protect are vastly overstated in popular discourse and are highly unlikely to come to fruition even in the absence of rules, undermining the need for the strongest possible regulatory regime. To date there has been only one example of obviously anti-competitive conduct by broadband providers, which was quickly resolved despite the lack of a rigid regulatory structure in place at the time.²⁴ Every major broadband provider has made public commitments to support the open Internet. Broadband providers should have no interest in stifling the fount of innovation and consumer benefit the open Internet provides, and no interest in blocking or degrading legitimate traffic.

Extensive voluntary two-sided price discrimination is also highly unlikely to develop. While a decade ago, such two-sided markets might have seen much more likely to be widespread given the limited capacities of broadband networks, the continued improvement of best efforts networks mean that the need for this kind of networking is much less now. Rather, a two-sided market for enhanced broadband services will likely only emerge in those circumstances where true value would be created. For example, guaranteed end-to-end quality of service would certainly justify price discrimination, but now only make sense for applications that push the boundary of what networks are able to provide on a “best efforts” basis. Where that business model makes sense is likely far narrower than is imagined in popular discourse about net neutrality. Transaction costs for negotiating this type of agreement will limit its economic viability, regardless of net neutrality regulation or the lack thereof. The predominant broadband Internet access service is likely to remain a “best efforts”

²⁴ Madison River Communications, LLC and affiliated companies, File No. EB-05-IH-0110, *Consent Decree*, https://apps.fcc.gov/edocs_public/attachmatch/DA-05-543A2.pdf.

approach. But it is important to note that banning two parties from voluntarily agreeing to an exchange to provide improved service for broadband users is clearly not in consumers' interest or the public interest.

Given that the theoretical harms have not yet become manifest, despite years with little more than guiding principles, combined with the fact that the Commission now has D.C. Circuit-approved authority to police this area under section 706 (or, for that matter, the Title II sword of Damocles), resorting to the utility-style regime designed for the old monopoly telephone system is wildly imprudent. Imposing restrictive common carrier regulations would undoubtedly slow innovation, potentially requiring any company who falls under Title II's expansive definitions to seek out permission before deploying beneficial new services.

Furthermore, more robust, faster broadband will continue to further reduce the need for stronger rules. The greater the available bandwidth, the less likely the network is to see congestion, and the less likely there will be a need for prioritization or otherwise differential treatment, although some latency sensitive traffic like high-definition video conferencing will likely remain problematic absent purchased service quality guarantees. The efforts by the Commission and others to lower the barriers to infrastructure investment will not only see more and better broadband, they will help further obviate the need for restrictive net neutrality rules.

There is an incredible diversity of applications that leverage the Internet, and this diversity only promises to increase. Accordingly, different applications have incredibly diverse demands on the network. The success or failure of an application can turn on its sensitivity to latency, jitter, throughput, packet loss, for example. Applications also have varying scope of operations – they can be a video intended to be streamed by millions simultaneously, or a chat with two close friends. Other applications may have other various requirements, such as an unusually fast start-up or resumption of a high send rate after a long idle period.²⁵ Overly strong neutrality requiring dumb pipes to carry only best efforts traffic would limit potential performance of real-time applications, harming both innovators and consumers.

In order for broadband to continue enabling the increasing number of diverse applications that push the boundaries of networks today, network providers need to be able to expand intelligence in the core. Networks should have the flexibility to respect the diverse needs of applications. In some circumstances, special treatment will justify payment from those application providers that desire more than best-efforts treatment. Regulations should not stifle the exploration of these new innovative services for fear that the entire Internet will collapse into a series of tolls. Any such commercial arrangements should be strictly voluntary with all applications having the option of free best efforts last mile delivery. But future real-time, cloud-based applications that require extremely low latency should not be shut out by regulation.

c. Case-by-case Analysis Under Section 706 is Not Unbounded

²⁵ See S. Floyd & M. Allman, "Comments on the Usefulness of Simple Best-Efforts Traffic," RFC 5290 at 4, IETF (July 2008), (discussing the limitations of best-efforts traffic).

Many comments were skeptical of the Internet conduct standard. But some critics are overbroad broad in their complaints, characterizing it as a roaming catchall of unbounded authority. The Internet conduct standard was indeed far too vague and unpredictable in its application—but we should not confuse the design flaws in the Internet conduct standard with the benefits of a standards-based case-by-case approach.

There will always be an irreducible tension between rules and standards in these sorts of debates.²⁶ Both have their advantages and disadvantages—with the authority under section 706, the FCC can design a better standards-based approach. First, the prior attempt at open Internet rules—the Title II Order—drew the line between permissible and impermissible conduct in the wrong place. We should allow individually negotiated deals to go forward, but articulate a number of analytical factors that would guide the application of case-by-case analysis empowering the regulator to step in only where practices are genuinely harmful.

In the face of public choice theory and the vagaries of industry-specific regulator is not to throw up or hands, but to carefully craft institutions in attempt to combine the best of both rules and standards, make decisions predictable and flexible, but effective—attempt to minimize the costs of bot over- and under-enforcement.

The FCC should take advantage of the authority that the courts have agreed 706 authorizes and seek to create a collaborative process to resolve disputes in front of an expert agency with clear guidelines and rules. The FCC can institute a clear, predictable multi-factor test to guide whether it would step in should practices harm the open Internet, and should inform its analysis through an outside multistakeholder body such as the Broadband Internet Technical Advisory Group.²⁷

A commercial reasonableness standard can be designed to be generally permissive of traffic differentiation that is not anti-competitive or otherwise harms consumers.

d. A Middle Ground Approach Would Avoid Further Polarization of the Issue

It is often said that telecommunications policy is usually bipartisan. The entire country wants high-functioning, robust communications. While there are some ideological differences, such as how much emphasis to put on static vs dynamic efficiencies in crafting telecom policy, the techno-economic questions of how to encourage additional efficient supply of broadband capacity is largely empirical and non-partisan. Net neutrality is the obvious exception, having become increasingly partisan and political. By attempting to hold to the middle, the FCC could seize the opportunity to create a workable, lasting framework for protecting the

²⁶ See Pierre J. Schlag, “Rules and Standards,” 33 UCLA L. Rev. 379 (Dec. 1985), *available at* <https://lawweb.colorado.edu/profiles/pubpdfs/schlag/schlagUCLALR.pdf>.

²⁷ See Broadband Internet Technical Advisory Group, <https://www.bitag.org/>.

openness of the Internet, without further enflaming the issue and potentially making the politics more difficult to resolve in legislation.

V. THE RECORD SUPPORTS SECTION 706 AS A LEGITIMATE LEGAL BASIS OF AUTHORITY FOR LIGHT-TOUCH OVERSIGHT OF THE OPEN INTERNET

One area of agreement with Public Knowledge is in its contention that “Section 706 is not merely ‘hortatory.’”²⁸ This is a legal mechanism recognized by the D.C. Circuit that the Commission can rely on to form appropriately-light touch oversight of BIAS practices. In *Verizon v. FCC*, the court held that the Commission’s new understanding of section 706(a), as an affirmative grant of regulatory authority, represented a reasonable interpretation of an ambiguous statute. Accordingly, the FCC was free to promulgate regulations necessary to implement the policy goals laid out for them by Congress. However, the court also noted limiting principals on that authority which the FCC laid out in its reinterpretation of section 706. These two principals required that any regulation must be designed to encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans, and that the section must be read in conjunction with other provisions of the Communications Act.

There is a clear path forward to developing appropriately flexible and light-touch regulation of the Internet, and the Commission is should explore this approach. Section 706 gives the Commission the ability to craft an appropriate nondiscrimination standard allowing for only those commercial arrangements that are voluntary and welfare enhancing. There is opportunity for arrangements, both commercial and non-commercial, that are not strictly “neutral” yet do not threaten the openness of the Internet as a platform for innovation, free expression, and exploration of new services—a flexible framework under section 706 allows those arrangements to grow with the appropriate oversight.

VI. CONCLUSION

The Commission is right to return broadband to a lighter-touch regulation by classifying broadband as an information service—the same legal mechanism that oversaw the flourishing of the open Internet up until 2015. The alternative—common carrier, utility-style regulation—is inappropriate for today’s dynamic Internet. Utility regulation unnecessarily limits innovation in networks, and risks opening the door to price regulation here and abroad. Treating broadband as an information service is not only legally correct, it allows broadband privacy to rightfully be returned to the Federal Trade Commission.

However, the FCC should retain oversight over broadband networks by establishing case-by-case oversight of traffic differentiation, allowing experimentation with commercially reasonable, voluntary and non-exclusive deals that do not harm the openness of the Internet. Courts have recognized that the FCC has great latitude

²⁸ Comments of Public Knowledge at 65.

under section 706 in protecting the open Internet, and antitrust-informed regulation allows for flexible oversight tailored to the goal of promoting an evolving, but fundamentally open, Internet.

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