

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
) GN Docket No. 14-28
Protecting and Promoting the Open)
Internet)
)

**ELECTRONIC FRONTIER FOUNDATION'S
COMMENTS REGARDING PROPOSED RULEMAKING**

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I. Overview

An open, neutral, and fast Internet has helped spark an explosion of free expression, innovation, and political change. More than that, it has become an essential tool for basic communication. Internet-based services help us learn, find jobs, organize politically and socially, file tax returns, manage our healthcare, connect to family and friends, and contribute our common culture.

It is increasingly clear, however, that the principles of openness and neutral handling of data that were crucial to the development of the Internet (and that were once reinforced by a competitive marketplace that allowed dissatisfied users to vote with their wallets) are under threat. The companies who have quasi-monopoly power over Internet access have gotten bigger and have begun to abuse that power.

EFF believes that market competition should be the first and preferred line of defense for innovators and consumers against abusive ISP practices. Because most Americans have only one or two realistic choices for residential broadband, however, normal market mechanisms may not effectively prevent dominant ISPs from adopting policies that undermine the openness that has characterized the Internet. These companies have economic incentives to leverage their ownership of the transmission infrastructure at the expense of the open and neutral Internet. Switching costs and consumer lock-in further undermine the ability of marketplace forces to prevent non-neutral practices.

Against this background, the FCC can play an important role in curbing actual and potential abuse. To play that role effectively, however, it must reverse its 2002 decision to treat broadband as an “information service” rather than a “telecommunications service.” The Commission’s current course has led it down a dangerous path toward proposed rules that fundamentally contradict the Commission’s

stated goals. As the D.C. Circuit Court of Appeals explained in *Verizon v FCC*¹, the Commission cannot impose meaningful non-discrimination obligations on Internet access providers without treating them as common carriers. It is time to stop trying. Reclassification will give the FCC the authority it needs to do its part to support the open Internet.

Once it has regained its legal footing, the FCC must regulate narrowly, making sure that its rules promote user choice, permissionless innovation and an application-blind network. To minimize the practical costs of regulation, particularly for small businesses and new entrants, it should enact clear and simple prescriptive rules and exercise restraint in enforcement where such enforcement might inhibit rather than promote competition.

The FCC should take two more immediate steps. First, the FCC should revisit the open access rule that was once so effective in promoting competition in Internet access services. Real competition should help to obviate the need for extensive FCC regulation; consumers can vote with their wallets against services that are undermining the open and neutral Internet. Second, the FCC should strengthen its effort to enact meaningful transparency rules. We offer detailed suggestions below to assist in that effort.

II. About EFF

EFF is a member-supported nonprofit organization devoted to protecting civil liberties and free expression in technology, law, policy and standards. With over 27,000 dues-paying members, EFF is a leading voice in the global and national effort to ensure that fundamental liberties are respected in the digital environment.

EFF has campaigned both in the United States and abroad against ill-considered efforts to block, filter, or degrade access to the public Internet. EFF is actively developing and promoting technological tools that help consumers and public interest

¹ 740 F.3d 623 (D.C. Cir. 2014).

groups test their broadband connections to see if Internet access providers are interfering with the traffic to and from users' computers. EFF was among the first to independently test and discover the precise nature and scope of Comcast's 2007 interference with BitTorrent and other peer-to-peer applications.

III. The FCC Needs a Different Approach

A. The FCC's Goals Are Laudable, But the Proposed Rules Do Not Serve Those Goals.

EFF applauds the FCC for seeking to promote an open and neutral Internet. The Commission and the D.C. Circuit Court of Appeals have identified several real and credible issues, including:

- “[B]roadband providers’ potential disruption of edge-provider traffic [is] itself the sort of ‘barrier’ that has ‘the potential to stifle overall investment in Internet infrastructure’”;²
- Broadband Internet access providers “have incentives to interfere with the operation of third-party Internet-based services that compete with the providers’ revenue generating telephone and/or pay-telephone services”;³
- “[B]roadband providers’ position in the market gives them the economic power to restrict edge-provider traffic and charge for the services they furnish edge providers . . . the provider functions as a ‘terminating monopolist’ . . . [and has] this ability to act as a ‘gatekeeper’”;⁴
- “[E]nd users are unlikely to [switch to a competing broadband provider]” as “end users may not know” that their broadband provider is behaving in non-neutral ways and “even if they do

² *Id.* at 642-43, citing *In the Matter of Preserving the Open Internet*, FCC Rcd. 17905, 17969 (2010) at ¶ 120. (hereinafter *Open Internet Order*).

³ *Id.* at 645-46 (“As the Commission noted, Voice-Over-Internet Protocol (VoIP) services such as Vonage increasingly serve as substitutes for traditional telephone services, and broadband providers like AT&T and Time Warner have acknowledged that online video aggregators such as Netflix and Hulu compete directly with their own ‘core video subscription service.’ . . . Broadband providers also have powerful incentives to accept fees from edge providers, either in return for excluding their competitors or for granting them prioritized access to end users”), citing *Open Internet Order* at ¶¶ 22-24.

⁴ *Id.* at 646, citing *Open Internet Order* at ¶ 24.

have this information [consumers] may find it costly to switch.”⁵

- In light of recent history, “the threat that broadband providers would utilize their gatekeeper ability to restrict edge-provider traffic is not . . . ‘merely theoretical.’”⁶

Given these threats, the FCC can and should take steps to protect the open Internet. However, in its effort to enact rules that both rely on its existing Section 706 authority and can survive judicial scrutiny, the Commission has offered proposals that run directly contrary to its purported intent.

The Commission proposes a rule against the blocking of “lawful content, applications, services or non-harmful devices, subject to reasonable network management.”⁷ The Commission also proposes a rule against “commercially unreasonable practices” with another explicit carve-out for “reasonable network management.”⁸ Taken together, these rules would forbid broadband providers from engaging in several kinds of discrimination, but simultaneously allow them to negotiate special arrangements with some edge providers, so long as such arrangements are “commercially reasonable.” The Notice of Proposed Rulemaking (NPRM) also suggests that broadband providers would have to guarantee edge providers a minimum level of access to subscribers; any special arrangements could not interfere with that minimum access.⁹

There are several problems with these proposals. First, the proposed rules implicitly bless the blocking of “unlawful” content. Such a rule could put ISPs in the position of a court, effectively enjoining content, applications, etc., that might or might

⁵ *Id.* at 646-647, citing *Open Internet Order* at ¶ 27.

⁶ *Id.* at 648, citing *Open Internet Order* at ¶ 35.

⁷ *In the Matter of Protecting and Promoting the Open Internet*, Notice of Proposed Rulemaking (hereinafter “NPRM”), GN Docket No. 14-28, App. A §§ 8.5, 8.7 (May 15, 2014).

⁸ *Id.* at App. A. § 8.7.

⁹ *Id.* at ¶ 89.

not be lawful.¹⁰ And even if a court order were required, such blocking could easily require snooping on the data habits of its users. Further, to the extent that ISP practices purportedly aimed at curtailing unlawful activities also interfere with lawful content and activities, they pose the same dangers to competition, innovation, and openness as other non-neutral practices. For example, if ISPs deploy undisclosed mechanisms in the name of copyright enforcement that selectively block protocols or applications, innovators who want to offer new products and services may have to negotiate with ISPs, hat in hand, to ensure that their products will not be thwarted by these mechanisms.¹¹

Second, and more broadly, the Commission's obligation (so long as it relies on Section 706) to leave "substantial room for individualized bargaining and discrimination in terms"¹² has led it far away from the bright line rules against discrimination that we need to protect the open Internet. The proposed rules offer instead a murky set of guidelines that are more likely to line the pockets of telecommunications lawyers than protect the open Internet. Many practices may be dressed up as "commercially reasonable" and/or necessary for "reasonable network management" but still undermine an open and neutral Internet and the free expression and commerce that depend on it. Further, a "commercially reasonable" standard, paired with a "reasonable network management" exception is too vague to be meaningful, and likely difficult to enforce. This is a recipe for litigation and confusion.

As the National Association of State Utility Consumer Advocates (NASUCA) has noted with respect to the "reasonable network management" exception alone:

Economic self-interest can now be implemented deep in the software that determines network architecture. Thus private computer code replaces government regulation as the sovereign. It is safe to say that neither the

¹⁰ See generally Electronic Frontier Foundation Comments, GN Docket No. 09-191, (Jan. 14, 2010), avail. at <https://www.eff.org/files/filenode/nn/EFFNNcomments.pdf>.

¹¹ *Id.* at 17.

¹² See III.B, *supra*, for further discussion.

Commission nor even the most knowledgeable consumer is aware of the full extent of discriminatory network conduct. Thus, any application on a case-by-case basis of a “reasonable network management” standard, as necessary as such a standard may be, could be an invitation to further rounds of litigation and expense.¹³

ISPs have every incentive to quietly discriminate and/or make deals with established incumbents, wait and see whether anyone notices or complains, and then litigate the “reasonableness” of those decisions before the Commission on a case-by-case basis. They can afford that risk and expense; innovators and users cannot. With media industries and many other economic sectors increasingly consolidated and vertically integrated, favoritism by ISPs at the expense of smaller, non-integrated users is increasingly likely. Companies and users who believe they are victims of unreasonable practices would have to invest substantial resources in litigating the question before the FCC, with no clear guarantee as to the outcome.

Ironically, the “commercially unreasonable practices” rule and the “reasonable network management” exception are also a recipe for regulatory overreach. While the NPRM lays out a variety of possibilities for what the “commercially unreasonable” rule could accomplish,¹⁴ it remains unclear what is and is not “reasonable,” and litigating the question will potentially give the FCC veto power over innovation. A future FCC that is less concerned with restraint might abuse that power to effectively pick winners and losers.¹⁵ Broadband providers should not have that power, and neither should government regulators.

¹³ National Association of State Utility Consumer Advocates (NASUCA) Comments, GN Docket No. 09-191, at 17 (Jan. 14, 2010) (citations omitted).

¹⁴ NPRM ¶¶ 116-138.

¹⁵ In the mobile context, at least one service provider has found “commercial reasonableness” to be a difficult, uncertain and anti-competitive standard. See Petition for Expedited Declaratory Ruling of T-Mobile USA, Inc., *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, WT Docket No. 05-265, at 13 and Exhibit 1, Declaration of Dirk Mosa ¶ 10 (May 27, 2014).

Taken together, we fear the proposed rules would inevitably be abused to discourage the emergence of new Internet-based services, particularly those launched by small businesses. As commenter Etsy, Inc., noted:

Etsy's business model would not have worked under the Chairman's proposal, which would have allowed more established e-commerce companies to negotiate individualized, differentiated arrangements and pay for priority access to consumers. Though our low fees would have helped us build an initial group of sellers, our low margins would have prevented us from paying for access to buyers, disrupting the virtuous cycle of growth that underpins Etsy's success. If Etsy were forced to pay for priority access to consumers in our early years, we would have likely set our initial fees much higher or limited our outreach to fewer markets. In either case, it is unlikely that we could have reached the critical mass necessary to succeed.¹⁶

Additionally, Etsy would not have been able to attract the early capital investment that allowed us to scale our operations. Our founding team built a product and demonstrated its viability in the open marketplace, which gave investors the confidence to invest in its growth and development. Had we entered a marketplace where entrenched companies negotiated priority access to consumers, we might have had to spend much more money up front, just to prove ourselves.¹⁷

Not surprisingly, Etsy's concerns have been echoed by other small businesses and their investors.¹⁸

Of course this problem is not confined to a realm of pure commerce. The Supreme Court rightly called the Internet "the most participatory form of mass speech yet developed."¹⁹ Thanks in large part to the innovative services that have been able to emerge and flourish on the open Internet, the Internet has become our public square, our

¹⁶ Etsy, Inc. Comments, GN Docket No. 14-28 at 5 (July 8, 2014).

¹⁷ *Id.*

¹⁸ See, e.g. <https://www.techdirt.com/articles/20140710/17450827845/kickstarter-etsy-dwolla-all-speak-out-net-neutrality-why-fccs-plan-is-dangerous-to-innovation.shtml>; http://openmic.org/files/Open%20MIC%20et%20al_GN%20Docket%20No.%2014-28_Comment.pdf; <http://engine.is/wp-content/uploads/Company-Sign-On-Letter.pdf>.

¹⁹ *Reno v. ACLU*, 521 U.S. 844, 863 (1997) (citing *ACLU v. Reno*, 929 F. Supp. 824, 883 (E.D. Pa. 1996)).

newspaper, our megaphone. We use a range from services and platforms, large and small, to communicate, stay informed, share views and organize. In a 2009 speech, then Secretary of State Hillary Clinton credited Internet platforms with giving a voice to “ordinary citizens”:

We have seen the possibilities of what can happen when ordinary citizens are empowered by Twitter and Facebook to organize political movements, or simply exchange ideas and information. So we find ourselves living at a moment in human history when we have the potential to engage in these new and innovative forms of diplomacy and to also use them to help individuals be empowered for their own development.²⁰

Secretary Clinton was referring primarily to movements abroad, but the same holds true domestically. Every day, Americans use the Internet to discover, discuss, and make local, national and international news. During the 2010 election cycle, for example, political campaigns, advocacy groups, and ordinary citizens created and posted videos dealing with a variety of campaign issues, including illegal immigration, health care reform, education and teachers’ unions, the federal budget deficit, bank bailouts, and taxes.²¹ In 2012, the Pew Research Center’s Internet & American Life Project found that 39% of all American adults have used social media to engage in civic or political activities.²²

Paid prioritization, blocking, access charges and other discriminatory practices could transform this extraordinary engine for civic discourse into something more like the old broadcast model, where a few powerful companies had inordinate power over the public sphere. Unfortunately, Internet censorship via a variety of means already occurs.²³

²⁰ Hillary Clinton, U.S. Sec’y of State, Remarks to U.S. Global Leadership Coalition (Dec. 7, 2009), available at <http://www.state.gov/statecraft/index.htm>.

²¹ CitizenTube Blog, The 2010 Election on YouTube by the Numbers, Nov. 1, 2010, <http://www.citizentube.com/2010/11/2010-election-on-youtube-by-numbers.html>.

²² See <http://www.pewinternet.org/2012/03/12/main-findings-10/>.

²³ See generally, <https://www.eff.org/free-speech-weak-link>; <https://www.eff.org/issues/bloggers-under-fire>.

But as we discovered with broadcast media, there is no need for direct content-based censorship when market incentives will do it for you.

And the risks go further still. Across the country, people depend on high-speed Internet to access a variety of public and nonprofit services. Hospitals, libraries, firefighters, churches, schools, and social service organizations need a fast and open Internet to provide high-quality services. As one library representative noted:

We work every day with students of all ages, with adults, with families, with researchers, with small businesses, with advance research in our academic institutions – and we see every day the impact that an open Internet can have. . . . And we know that most of our users and our institutions cannot afford the higher speeds to be able to provide our services along with those that I will euphemistically call the “big guys.”

. . .

[W]hat we as librarians and as educators in our communities see is that subtle differences in these speeds can make a great difference in how a user receives and uses the information. Even slight slowdowns will have an impact and can potentially limit public access to public schools, to public libraries, to public education.²⁴

These entities are unlikely to be able to negotiate with quasi-monopolies for access to the “fast lane” arrangements available to others.²⁵ Instead they, and those that rely upon them, are more likely to be relegated to the “minimum access” slow lane, with little meaningful recourse.

According to a recent Pew Center survey, many Internet experts fear that “commercial pressures affecting everything from Internet architecture to the flow of information will endanger the open structure of online life.”²⁶ Unfortunately, the proposed rules will to little to ward off that threat, and may actually increase it.

²⁴ See, e.g., <http://www.washingtonpost.com/blogs/the-switch/wp/2014/05/16/why-the-death-of-net-neutrality-would-be-a-disaster-for-libraries/>.

²⁵ *Id.*

²⁶ Net Threats, Pew Research Internet Project, July 3, 2014, <http://www.pewinternet.org/2014/07/03/net-threats/>.

B. The FCC Cannot Escape the Section 706 Quagmire and Protect the Open Internet At the Same Time

Many of the flaws in the proposed rules stem from the FCC’s continued reliance on Section 706 of the Telecommunications Act.²⁷ Quite simply, the D.C. Circuit’s decision in *Verizon v. FCC*²⁸ gives the Commission broad statutory authority under Section 706, *except* when it comes to addressing the very practices that “erode Internet openness” that are the reason for this rulemaking.²⁹ Proceeding under Section 706 is a recipe for futility.

In the *Verizon* decision, the D.C. Circuit held that the Commission has authority under Section 706 to promote the deployment of high-speed Internet service, and that the Commission had a good basis for concluding that access providers’ “disruption of edge-provider traffic” through discriminatory practices threatened that deployment by reducing incentives to invest at the edges of the network.³⁰ But the court went on to hold that any regulations promulgated under Section 706 authority (that is, any regulations promulgated without reclassifying high-speed Internet access as a Title II telecommunications service) cannot be the sort of regulations that would create common carrier status.³¹

The court drew some distinctions between rules that unquestionably create common carrier status, rules that require certain levels of service while leaving space for “individualized negotiation,” and rules that are “limited to remedying a specific perceived evil.”³² The test for whether a rule is lawful without reclassification is therefore an imprecise one and may depend on a number of factors. It is clear from the court’s

²⁷ 47 U.S.C. § 1302(a), (b).

²⁸ 740 F.3d 623 (D.C. Cir. 2014).

²⁹ NPRM ¶ 26 .

³⁰ 740 F.3d at 523, 640-45.

³¹ *Id.* at 650.

³² *Id.* at 650-659.

decision, though, that the purpose and effect of a rule is what matters, not its form or wording. The Commission cannot impose an effective “anti-discrimination obligation [on] broadband providers,”³³ regardless of its wording.

This leaves the Commission in a bind if it continues to rely on Section 706, because the very characteristics that will make the open Internet rules effective at achieving their goal are the characteristics that the D.C. Circuit identified as hallmarks of common carriage, and thus impermissible without reclassification. The worrisome ISP practices that the Commission identifies in the NPRM, from Comcast’s blocking of peer-to-peer communications to Verizon’s ban on tethering apps to pay-for-priority proposals,³⁴ have at their core an ISP’s decision to favor or disfavor certain Internet traffic — in other words, to discriminate. But a firm rule prohibiting “unreasonable discrimination” is precisely what the D.C. Circuit said the Commission cannot impose under Section 706.³⁵

The D.C. Circuit suggested that *some* rules aimed at preserving the open Internet will be legally permissible under the FCC’s Section 706 authority, and this understanding appears to be the basis for the “commercially unreasonable practices” rule proposed in the NPRM.³⁶ But the *Verizon* decision makes clear that such rules must be limited in scope, effect, or definiteness to pass muster. A “commercially reasonable” standard, said the court, cannot be applied in a “restrictive manner” that prevents broadband providers from making “individualized decisions.”³⁷ Also, any particular application of such a rule that is seen as overly “restrictive” will be subject to an “as applied” legal challenge.³⁸

³³ *Id.* at 655.

³⁴ NPRM ¶¶ 18, 41.

³⁵ *Verizon* 740 F.3d 623, 655-58.

³⁶ 740 F.3d 623, 652 (quoting *Cellco Partnership v. FCC*, 700 F.3d 534, 547 (D.C. Cir. 2012); NPRM ¶¶ 114-116.

³⁷ 740 F.3d at 657.

³⁸ 740 F.3d at 652.

The court also noted that a narrow rule requiring cellular data roaming, a rule that benefitted only a limited number of mobile carriers and was “limited to remedying a specific perceived evil”³⁹ was not an imposition of common carrier status. Thus, a rule that requires “open” conduct with respect to a small set of beneficiaries and that addressed a specific instance of “non-neutral” behavior by a network operator can also pass muster.

The opinion also suggested that without reclassification, the Commission *must* permit ISPs to engage in discriminatory paid prioritization — that is, levels of service made available to some edge providers and denied to others. In discussing the no-blocking rule, the D.C. Circuit held that such a rule must, for example, allow Verizon to “charge an edge provider like Netflix for high-speed, priority access while limiting all other edge providers to a more standard service.”⁴⁰ Presumably, this limitation would apply to the “commercially reasonable practices” rule as well. Thus, absent reclassification, the law requires the Commission to allow access providers to give preferential treatment to an edge provider while denying it to other edge providers *at any price*. As this is the essence of a practice that threatens the open Internet and the “virtuous cycle” of investment, it is difficult to see what can remain of effective open Internet regulations under Section 706.

These limitations leave the Commission, at best, walking a thin line between rules that are definite enough to guide the conduct of access providers and edge providers on one hand, and rules that are malleable or narrow enough to avoid a court challenge on the other. Nearly every attempt to enforce a “commercially unreasonable practices” rule — whether that rule is understood in terms of rebuttable presumptions or otherwise — might result in a court challenge concerning whether the rule is being applied flexibly enough.

³⁹ *Id.* at 656.

⁴⁰ *Id.* at 658.

To avoid such challenges, we fear the Commission will lean towards allowing preferential treatment of particular applications or providers based on “particularized” circumstances that a large incumbent can readily provide and a new entrant cannot easily refute. In practice, the difference between “individualized negotiation” with a “commercial reasonableness” requirement and harmful disparate treatment of Internet users will evaporate.

The *Verizon* decision makes clear that the Commission can enact some species of Open Internet rules using its Section 706 authority, but the more effective those rules are in both wording and application, the more their lawfulness can be questioned. The Commission should not enact a catch-22 for itself.

C. A Better Way Forward: Reclassification, Bright-Line Rules

1. *Reclassify*

The 2002 classification of cable broadband service (and later of broadband over other facilities) as an “information service” “was incorrect when made, and has become ever more incorrect, inadequate, and destructive of broadband progress with each passing year.”⁴¹ Today, the Commission’s continued reliance on its Section 706 authority means it is constrained to implicitly bless non-neutral arrangements such as paid prioritization schemes. If it reclassifies broadband service provision as a telecommunications service, it can solve this problem.

Reclassification is pure common sense. First, broadband Internet access *is* a telecommunications service. The Telecommunications Act of 1996 defined telecommunications as “the **transmission**, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the

⁴¹ NASUCA Comments, *Reclassification NOI*, GN 10-127, at 3, (July 15, 2010) citing its previous January 14, 2010 [Opening] Comments and April 26, 2010 Reply Comments in *In the Matter of Preserving the Open Internet*, GN Docket No. 09-191, *Broadband Industry Practices*, WC Docket No. 07-52, Notice of Proposed Rulemaking, FCC 09-93 (rel. October 22, 2009) (*Open Internet NPRM*).

information as sent and received.”⁴² Many competitive providers offer content and services similar to what the ISPs might bundle with their transmission, *e.g.*, email, web browsers, search engines, etc., but those services do not provide the transmission service itself. Even if a transport provider bundles these other services along with its transmission service, they remain distinct from that transmission component.⁴³ As Justice Scalia noted in his dissent in *Brand X*:

If, for example, I call up a pizzeria and ask whether they offer delivery, both common sense and common “usage” would prevent them from answering: “No, we do not offer delivery – but if you order a pizza from us, we’ll bake it for you and then bring it to your house.” The logical response to this would be something on the order of, “so, you *do* offer delivery.” But our pizza-man may continue to deny the obvious and explain, paraphrasing the FCC and the Court: “No, even though we bring the pizza to your house, we are not actually ‘offering’ you delivery, because the delivery that we provide to our end users is ‘part and parcel’ of our pizzeria-pizza-at-home service and is ‘integral to its other capabilities.’” Any reasonable customer would conclude at that point that his interlocutor was either crazy or following some too-clever-by-half legal advice.⁴⁴

“Clever” lawyering will not protect the Internet; common sense just might.

Second, reclassification brings the goals and law of net neutrality into alignment. The concept of “net neutrality” or the “open Internet” is very close to the much older legal concept of common carriage that applies to most telecommunications services. Indeed, the Commission applied the common carrier non-discrimination rules to plain old telephone service (“POTS”) for the better part of the last century, and that same

⁴² 47 U.S.C. § 153(43) (emphasis added).

⁴³ The Commission’s conclusion that the Domain Name System (DNS) functionality provided by most ISPs made them information services was incorrect in 2002 and remains incorrect today. Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities, 17 FCC Rcd. 4798, 4821-22 (2002). While DNS is an “information processing and retrieval capability,” it is indispensable to many of the Internet’s data transmission functions and does not transform those basic functions into an information service.

⁴⁴ *NCTA v. Brand X Internet Services*, 545 U.S. 967, 1007 (2005) (Scalia, J., dissenting) (internal citations omitted).

regulatory scheme helped foster the Internet as we know it today. Today, broadband Internet access providers perform much the same function performed by POTS, i.e., they provide the last mile connection to the consumer. Small wonder that the author of the phrase “net neutrality” has called it “the twenty-first century’s version of common carriage.”⁴⁵

Third, there is little question that the FCC has the legal power to reclassify. In *Brand X* the Supreme Court accepted the Commission’s prior classification under *Chevron* deference.⁴⁶ It did not rule on the merits of the classification, though four justices suggested that the classification was “implausible,” or beyond the agency’s authority.⁴⁷ The majority noted that a change in circumstances or even administration could justify a change in the classification of broadband Internet access service.⁴⁸ More recently, as noted above, the D.C. Circuit has clearly signaled its conclusion that reclassification is an appropriate path forward for the Commission.⁴⁹

Finally, reclassification could help clarify not only the basis for the FCC’s authority, but also its limits. The Commission should not be focused on regulating “the Internet,” (the content carried on the wires) but the wires themselves, i.e., the underlying transmission network. Thus, net neutrality rules should seek to ensure that broadband carriers’ “telecommunications” services — i.e., the “transmission, between or among points specified by the user, of information of the user’s choosing, without change in the

⁴⁵ TIM WU, *THE MASTER SWITCH* 236 (2010).

⁴⁶ *NCTA v. Brand X Internet Services*, 545 U.S. 967, 980 (2005).

⁴⁷ *Id.* at 1003 (Breyer, S. concurrence, “within the agency’s discretion, but barely”) and 1006 (dissenting opinion of Justice Scalia, joined by Justices Souter and Ginsburg for the “pizza” analogy, *infra*); *see also id.* at 1005 (“implausible reading of the statute”).

⁴⁸ *Id.* at 981 (“the agency . . . must consider varying interpretations and the wisdom of its policy on a continuing basis,” [citing *Chevron, supra, at 863-864*] . . . for example, in response to changed factual circumstances, or a change in administrations”).

⁴⁹ *Verizon*, 740 F.3d 623, 650 (holding that the ban on common carrier treatment flows from “the Commission’s still-binding decision to classify broadband providers . . . as providers of “information services”).

form or content of the information as sent and received”⁵⁰ — occur in a non-discriminatory way. Title II authority will help orient the FCC in precisely that direction.

2. *Light, limited, bright-line regulation*

As it enacts and enforces rules based on Title II authority, the FCC should seek to promote user choice, permissionless innovation and an application-blind network.⁵¹ Moreover, to minimize the practical costs of regulation, particularly for small businesses and new entrants, it should seek both to enact clear and simple prescriptive rules and to exercise restraint in enforcement where such enforcement might inhibit rather than promote competition.

In keeping with these goals, those rules should include prohibitions on blocking, application-specific discrimination, and paid prioritization.⁵² Internet access providers should not be permitted to charge special fees for the right to reach that provider’s Internet service customers. This is not to say that all tiering of service must be banned; companies could still impose application neutral bandwidth charges. Thus, for example, a company might offer different plans for business versus residential customers. But Internet access providers should never be able to take advantage of their subscriber’s relationship to effectively direct those subscribers toward (or away) particular applications, services, or content.

In addition, once it has reestablished its Title II authority, the Commission should forbear from any common carrier regulation that is not clearly essential to meet the above goals.⁵³ As the Center for Democracy and Technology has noted, rules regarding such

⁵⁰ 47 U.S.C. § 153(43) (definition of telecommunications).

⁵¹ See generally Barbara van Schewick, *Network Neutrality and Quality of Service: What a Non-Discrimination Rule Should Look Like*, CENTER FOR INTERNET AND SOCIETY, (June 2012), http://cyberlaw.stanford.edu/files/publication/files/20120611-NetworkNeutrality_0.pdf; see also <http://media.law.stanford.edu/publications/archive/pdf/schewick-statement-20100428.pdf>.

⁵² *Id.*

⁵³ The Commission can do so sua sponte. See, e.g., *Cable Modem Order* ¶94 (initiating forbearance inquiry sua sponte); *Wireline Broadband Order* ¶¶91-95 (forbearing sua sponte from Section 203-205 tariff requirements on certain carriers); and Policy and Rules Concerning the Interstate, Interexchange

things as “tariff filing, price regulation, and other features of monopoly telephone regulation could be taken off the table from the start.”⁵⁴ Ultimately, the end result would most likely be ‘Title II light,’ not the burdensome regulatory structure carriers decry.”⁵⁵ That forbearance analysis should specifically address *all* relevant Title II obligations, so as to avoid an explosion of forbearance petitions.

In addition, we urge the Commission to clarify that its proposed regulations do not reach noncommercial providers of broadband Internet access service, whether they are individuals who operate open Wi-Fi networks at home, or public-minded entities that provide free Internet access in their local communities. The Commission should avoid the specter of federal regulation looming over noncommercial, public-spirited network providers. Federal regulation of these initiatives is not necessary to vindicate the openness, competition, innovation, and free expression goals of this proceeding.

IV. The Commission Should Specifically Seek Comment and Create a Rulemaking Record on the Advisability of Access Remedies in the Instant Proceeding

As detailed above, EFF believes that the Commission should reclassify the Internet connectivity service offered as part of broadband service as a telecommunications service, but forbear from enforcing any and all provisions of Title II that are unnecessary to address the concerns identified in the NPRM such that Internet information services remain unregulated. Combining anti-blocking, anti-discrimination and transparency rules is likely to significantly address the problems that led to this proceeding without impeding either innovation or the role of electronic communications as an essential input in the democratic process.

Marketplace and Implementation of Section 254(g) of the Communications Act of 1934, as amended, *Report and Order* (rel. Aug. 7, 1996) ¶21 (conducting a *sua sponte* forbearance analysis to determine whether it should permit IXCs to depart from geographic rate averaging where it had permitted them to do so under pre-1996 Act policy).”

⁵⁴ Center for Democracy and Technology Reply Comments, GN Docket No. 09-191 at 12 (April 26, 2010).

⁵⁵ *Id.*

The Commission has also asked about the incentives and ability of broadband Internet providers to limit openness, but it has not specifically asked about the potential role of access obligations.⁵⁶ In asking, “what are the implications when consumers have no ability to switch providers because there is only one provider offering service to the consumer’s location?”⁵⁷ however, the Commission has implicitly raised the issue of access obligations, and therefore should investigate obligations such as line sharing because addressing the so-called “last-mile monopoly” may sufficiently mitigate termination-based power so as to obviate more intrusive regulation.

As the Berkman Center explained, the main regulatory methods “have been an effort to leverage cable and telephone convergence: fostering competition between these two platforms in the broadband market; and using new regulatory techniques to enable competition over shared or partially shared infrastructure. These have been complemented in a few places by public investment in the public-utility-like facilities.”⁵⁸

But past reliance on facilities-based competition assumed that “cable and telephone infrastructures already in place needed relatively low and largely symmetric cost upgrades to provide Internet services. This meant that, at a minimum, there would be two facilities whose incremental upgrade costs were sufficiently low to be able to compete head-to-head in retail broadband markets.”⁵⁹

That assumption is no longer true. Growth in “fiber to the home” (FTTH) will involve high short-term costs “of low-tech, labor-intensive elements like digging trenches, placing ducts, and pulling fibers through the walls of subscribers’ homes” —

⁵⁶ NPRM ¶¶ 42-53.

⁵⁷ *Id.* at ¶ 46.

⁵⁸ BERKMAN CENTER FOR INTERNET AND SOCIETY, NEXT GENERATION CONNECTIVITY: A REVIEW OF BROADBAND INTERNET TRANSITIONS AND POLICY FROM AROUND THE WORLD (2010) at 9.

⁵⁹ *Id.* (also noting “there were some hopes that the same would be true of power lines and wireless systems.”).

considerably higher than the cost of cable upgrades. In the long term, however, FTTH networks are likely to be faster and easier to upgrade.⁶⁰

Accordingly, the Commission should investigate open access — competition over shared or partially shared infrastructure. EFF believes, however, that the lack of solid modern data about the costs and benefits of access obligations makes it impossible for the Commission to take action here without additional factual development.

Specifically, the Commission should solicit additional comment on matters such as: the effects of past access regulation on competition in the DSL markets; the effects of access regulation on competition in markets outside the United States, such as in the European Union; the economic and technical feasibility of line sharing in the U.S. cable broadband access market and in the emerging U.S. FTTH market; and the likely effects of line sharing and similar access remedies on innovation, competition, consumer welfare, and privacy and First Amendment freedoms on the Internet.

Finally, the Commission should expressly consider how to architect and implement its intended transparency regulations to ensure that the public is accurately informed about the costs and benefits of open access.

In short, the Commission should investigate seriously the extent to which some combination of access obligations, transparency obligations, and low switching costs can address the problems that motivated this proceeding.

A. Background

The Commission has historically been concerned about termination-based power, such as the “last-mile monopoly.”⁶¹ In the first Computer Inquiry, while the Commission determined that common carrier participation in the data processing market would benefit consumers, it expressed concern that common carriers might engage in unfair

⁶⁰ *Id.*

⁶¹ *Verizon* 740 F.3d at 638 (noting “the Commission’s long history of subjecting to common carrier regulation the entities that controlled the last-mile facilities over which end users accessed the Internet”).

competition. The dangers of unfair competition relate “primarily to the alleged ability of common carriers to favor their own data processing activities by discriminatory services, cross-subsidization, improper pricing of common carrier services, and related anticompetitive practices and activities.”⁶²

Following the enactment of the Telecommunications Act of 1996, the Commission imposed a range of competitive last-mile access remedies called for in the Act, including Local Loop Unbundling (LLU) and shared access. Soon thereafter, however, the Commission began to deregulate broadband Internet access. In 2002, access to the Internet sold bundled with cable modem access was declared to be an information service, thus exempting it from regulation as a telecommunications service.⁶³ Other FCC actions had lifted local loop unbundling obligations for fiber-optic access, while retaining them for copper-based access; had effectively eliminated shared access (line sharing) obligations; and had eliminated obligations to offer the most popular form of unbundled loop, UNE-P. In 2005, Internet access via telecommunications sold bundled with xDSL access was declared to be an information service, again exempting it from regulation as a telecommunications service.⁶⁴

As a result, in 2014 neither cable nor telephone company broadband Internet access is subject to meaningful last-mile access obligations. Many U.S. consumers live in areas where the main competition is between one telephone company and one cable operator. In some areas, only one of these two is present. Indeed, the Verizon court recognized that approximately 14-24 million Americans had no access to broadband,⁶⁵

⁶² *Regulatory and Policy Problems Presented by the Interdependence of Computer and Communications Services and Facilities* (hereinafter *Computer I*), Final Decision and Order, 28 FCC 2d 267, at ¶ 12 (1971).

⁶³ *Cable Modem Declaratory Ruling and Notice of Proposed Rulemaking*, 14 March 2002.

⁶⁴ See generally *Verizon*, 740 F.3d 623, 631 (describing history of Commission’s exempting broadband providers from Title II obligations beginning in 2002).

⁶⁵ *Id.* at 641 (citation omitted) (applying “broadband” benchmark of “four megabytes per second (mbps) for end users to download content from the Internet—twenty times as fast as the prior threshold—and one mbps for end users to upload content.”).

and end users with inadequate service “may have no option to switch, or at least face very limited options,” noting that “as of December, 2009, nearly 70 percent of households lived in census tracts where only one or two wireline or fixed wireless firms provided broadband service.”⁶⁶

Most consumers also can seek broadband Internet access from mobile wireless providers, but even wireless “last mile” service is strongly dependent on physical transmission: the smartphone user’s data still traverses the “middle mile” infrastructure.

Unfortunately, it is currently unclear whether merely imposing last-mile obligations on the U.S. marketplace today will have the desired effects. First, while many believe that the open access regime prior to 2002 was beneficial, and the departure from open access was harmful to competition, there is no clear consensus. More important, the situation in 2014 is significantly different; the Commission now at least needs to study open access in the fiber and cable contexts as well as copper.

B. Further Recommendations.

In order to craft a sensible approach to open access, the Commission should invite comment and evidence on a series of central questions.

1. What is the technical and economic feasibility of open access in fiber and cable networks? What are the likely welfare effects of an open access regime? The older literature suggests that it is not technically difficult or financially onerous either to share their lines. In 2010, the Berkman Report noted: “The various types of access — unbundled local loop, shared access, bitstream access, or wholesale — differ primarily in how they trade off the level of investment a competitor must make to provide competing services, in exchange for the flexibility that the new entrant has in what improvements it may offer consumers.”⁶⁷ But that comment was made primarily in the context of DSL services. How should these approaches be compared for 2014 and the future?

⁶⁶ *Id.* at 647 (citation omitted).

⁶⁷ BERKMAN REPORT at 85.

2. What is the experience in other advanced economies? The Berkman Report argues that “The most surprising findings to an American seeped in the current debate in the United States are the near consensus outside the United States on the value and importance of access regulation, the strength of the evidence supporting that consensus, and the central role allotted to transposition of that experience to next generation networks in current planning efforts.”⁶⁸ In other words, “there is extensive evidence to support the position, adopted almost universally by other advanced economies, that open access policies, where undertaken with serious regulatory engagement, contributed to broadband penetration, capacity, and affordability in the first generation of broadband.”⁶⁹

3. Does an open access regime entail more challenging operational complications or costs? Possible examples include: coordination of IP address management; customer care and network management; Quality of Service and other potential prioritization issues; and network monitoring.

4. What are the status quo and trends with respect to interconnection? Open access may raise interconnection payment issues — questions about the direction and magnitude of payment flows between ISPs and cable data network operators. Traditionally, users — consumers and companies alike — have paid for transit services. ISPs also pay for transit so that their customers can communicate with customers of other ISPs. Traditionally, large ISPs of similar size or geographic reach agreed to peer with each other — to interchange traffic for their customers or for customers of their customers — usually on a bill-and-keep basis, without cash payments.

How much of this remains true in 2014 is less than clear. EFF suggests that it is difficult for the Commission to evaluate the policy implications of open access without a

⁶⁸ *Id.*, at 85.

⁶⁹ *Id.* at 82.

better empirical understanding of the current transit, peering and other interconnection practices that affect the allocation of costs and investment in the modern Internet, and that the Commission should make transparency about interconnection a core goal of its transparency regime.

V. Mobile Broadband Users Also Need A Neutral Internet

The marketplace for mobile technologies that depend on high-speed Internet access has blossomed since the Commission's Open Internet Order in 2010. Since 2010, mobile high-speed Internet has proliferated via the mass adoption of smartphones, tablets, and other cutting-edge devices, like wearable technologies for example.⁷⁰ Over half of American adults use smartphones.⁷¹ As the Commission correctly notes, African American and Latino communities are more likely than other groups to access the Internet on a mobile device instead of a home wire-line connection.⁷² Cloud services, app development, backend software, hardware and website development make up an industry worth tens of billions of dollars, with growing investment each year.⁷³

Given the increased dependence on and ubiquity of mobile Internet access, EFF believes that the Internet should be no less neutral on mobile platforms. Yet examples of discriminatory practices by mobile providers abound. For example, AT&T blocked Apple's FaceTime iPhone and iPad application over AT&T's mobile data network in 2012.⁷⁴ In the same year, Verizon reached a \$1.25 million dollar settlement with the

⁷⁰ See Maeve Duggan and Aaron Smith, *Cell Internet Use 2013*, PEW RESEARCH INTERNET PROJECT (Sep. 16, 2013), <http://www.pewinternet.org/2013/09/16/cell-internet-use-2013/> (showing an increase in mobile Internet usage between May 2010 and May 2013 from 38% of adults to 60% of adults).

⁷¹ See Duggan and Smith, *supra*, note 54.

⁷² See *Mobile Technology Fact Sheet*, PEW RESEARCH INTERNET PROJECT (January 2014), <http://www.pewinternet.org/fact-sheets/mobile-technology-fact-sheet/>.

⁷³ See generally Roger Entner, *The Wireless Industry: The Essential Engine of US Economic Growth*, RECON ANALYTICS, (May 2012), <http://reconanalytics.com/wp-content/uploads/2012/04/Wireless-The-Ubiquitous-Engine-by-Recon-Analytics-1.pdf>.

⁷⁴ See David Kravets, AT&T Holding FaceTime Hostage is No Net-Neutrality Breach, WIRED.COM (Aug. 22, 2012) <http://www.wired.com/2012/08/facetime-net-neutrality-flap/>.

Commission for refusing to allow tethering on smartphones on Verizon's mobile data network.⁷⁵ AT&T and T-Mobile both forbid users from using peer-to-peer file sharing applications.⁷⁶

As the Commission notes in the NPRM, the 2010 Open Internet order prohibited the blocking of "lawful websites" and "applications that compete with the provider's voice or video telephony services."⁷⁷ Given the expanded diversity of applications that provide voice and video on the Internet that are not explicitly tied to mobile telephony per se, we are concerned that the wording of this rule is now too vague to accomplish its goals.

A. Prohibiting Non-Neutral Practices on Mobile Data Networks

Smartphones and tablets are computers that are used to access the Internet. Mobile device owners should enjoy the same levels of control and choice for networked applications on their mobile devices as they do on their laptops and desktops. Service providers should not block websites, shape traffic, or discriminate against applications in any way, regardless of provider, type or function of the application. In particular, mobile broadband service providers should not be allowed to prohibit tethering.

Restrictions on tethering for mobile devices are discriminatory and anti-innovative measures by ISPs. EFF applauds the FCC's success in protecting tethering applications via the C Block open access rules. The FCC should find the most expedient

⁷⁵ See *In re Complaint of Free Press Against Celco Partnership d/b/a Verizon Wireless for Violating Conditions Imposed on C Block of Upper 700 Mhz Spectrum* (June 6, 2011), available at http://www.freepress.net/sites/default/files/fp-legacy/FreePress_CBlock_Complaint.pdf and Federal Communications Commission, *News Release: Verizon Wireless to Pay \$1.25 Million to Settle Investigation into Blocking of Consumers' Access to Certain Mobile Broadband Applications* (July 31, 2012) http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0731/DOC-315501A1.pdf.

⁷⁶ See AT&T Wireless Customer Agreement § 6.2, available at <https://www.att.com/shop/en/legalterms.html?toskey=wirelessCustomerAgreement#whatAreTheIntendedPurposesOfDataServ> and T-Mobile Terms and Conditions §18, available at http://www.tmobile.com/Templates/Popup.aspx?PAsset=Ftr_Ftr_TermsAndConditions&print=true.

⁷⁷ NPRM ¶ 21.

method of extending the open access rules (or equivalent protections) for tethering (as well as similar applications) to all mobile Internet access services. As a secondary matter, ISPs should be required to document and publicize the methods and circumstances they use to infringe on users' rights to tether.

B. Zero-rating

The Commission asks how the 2010 Open Internet order's application of the no-blocking rule might be enhanced in light of developments in the market.⁷⁸ As stated above, the same network neutrality principles that we recommend for wired broadband should apply to mobile broadband as well. However, one issue unique to mobile broadband which the Commission should consider is the practice of zero-rating on mobile data networks.

Zero-rating refers to when providers do not count data to and from certain websites or services toward users' monthly data limits. T-Mobile's recent announcement of its Music Freedom plan is a good example of zero-rating: users can stream all the music they want from certain services without worrying about their data limit.⁷⁹ This arrangement, however, discourages users from trying other music streaming sites that are not included in T-Mobile's list (which might host alternative artists) since those sites will count towards users' data caps.

This example illustrates how zero-rating is a type of data discrimination: it allows a mobile broadband provider to influence what services, websites, and applications people are more likely to use. In this way zero-rating allows mobile broadband providers to pick winners instead of leaving that determination to the market, thereby stifling competition and innovation.

⁷⁸ NPRM ¶¶ 34, 48.

⁷⁹ See Lily Hay Newman, T-Mobile Is Making Certain Types of Data Use Free. Which Is Suspicious., SLATE.COM (June 27, 2014) http://www.slate.com/blogs/future_tense/2014/06/27/t_mobile_isn't_counting_speedtests_or_certain_music_streaming_toward_users.html.

EFF recommends the Commission investigate zero-rating and how services which are free to users may or may not hinder competition.

VI. Meaningful Transparency

Transparency is critically important. Customers, customers, and innovators must have adequate information regarding network management practices, for a variety of reasons. Without adequate information, a customer experiencing a problem with her broadband service may punish the wrong party, by blaming the application vendor, device maker, or herself for the problem. As a result customers will not be able to express their preferences by switching ISPs. This interferes with the market's ability to protect consumers and correct improper ISP practices.

Competitors also need adequate information, so that they can distinguish themselves from incumbents. Without transparency, customers cannot effectively and efficiently reward innovative ISPs in the marketplace for their efforts.

Application innovators also need enough information about ISP practices to enable them to develop new applications and protocols that work reliably without asking permission from ISPs. In the absence of transparency regarding non-neutral practices, constant uncertainty regarding network behavior will operate as a serious barrier to new Internet technology developers. The cost of investigating the unexpected behavior of a piece of software sufficiently to diagnose a problem caused by surreptitious network management practices should not be underestimated. In many instances, such costs may be greater than small innovators can afford.

Finally, transparency is vital to enforcement. As we have seen, ISPs are willing to secretly engage in discriminatory practices on their networks and then lie about those practices to the public.⁸⁰ Strong transparency requirements will help the Commission

⁸⁰ See Seth Schoen, "Comcast and BitTorrent," (Sep. 13, 2007) <https://www.eff.org/deeplinks/2007/09/comcast-and-bittorrent>; Fred Von Lohmann, "FCC Rules Against Comcast for BitTorrent Blocking" (Aug. 3, 2008), <https://www.eff.org/deeplinks/2008/08/fcc-rules->

stop ISPs from saying one thing about their network management practices while doing another.

A. Advantages and Disadvantages of the Existing Transparency Rule

The existing transparency rule states that

“A person engaged in the provision of broadband Internet access service shall publicly disclose accurate information regarding the network management practices, performance, and commercial terms of its broadband Internet access services sufficient for consumers to make informed choices regarding use of such services and for content, application, service, and device providers to develop, market, and maintain Internet offerings.”⁸¹

Most ISPs have complied with this rule by including a short paragraph or two on their websites describing at a very high level how they deal with congestion, with perhaps some statistics about how close their advertised speeds are to the true speeds users experience.

In order to generate these statistics, many of the largest ISPs have taken part in the Commission’s Measuring Broadband America study, which uses third-party white boxes (router-like devices that users plug into their home Internet connections) distributed to volunteers across the country to measure broadband speeds.⁸² The study averages data about latency, download, and upload speed over the period of a month.

The study has accumulated useful data. For speed data, the Commission appropriately includes cumulative distribution functions (CDFs) of download and upload speeds in its Measuring Broadband America report. These graphs allow endpoint service providers and consumer watchdogs to estimate the worst network throughput speeds that

against-comcast-bit-torrent-blocking.; See Peter Eckersley, *Comcast Needs to Come Clean*, ELECTRONIC FRONTIER FOUNDATION (October 25, 2007) <https://www.eff.org/deeplinks/2007/10/comcast-needs-come-clean>.

⁸¹ *In the Matter of Preserving the Open Internet*, FCC Rcd. 17905, 17937 (2010).

⁸² Federal Communications Commission, *Measuring Broadband America*, <https://www.fcc.gov/measuring-broadband-america>.

consumers would experience 1% of the time, 5% of the time, etc., so that the public can get a sense of how variable they should expect their service to be. Unfortunately the report does not tabulate latency data in a similar manner (or even break it out by ISP).

We believe that “the effectiveness of the existing transparency rule” has been limited to making sure that the throughput speeds ISPs advertise to customers match the throughput speeds they actually deliver.⁸³ While this is a good start, the current rule (and the Measuring Broadband America program, which most ISPs use in order to comply with it) is insufficient to flag most of the harms of non-neutral behavior. In particular, the current disclosure requirements regarding network management practices are too vague. In addition, the statistics ISPs currently report in order to comply with the rule would never capture performance issues due to peering, co-location, or content delivery network (CDN) agreements, such as the recent problems Comcast and Verizon subscribers had with slow Netflix download speeds.⁸⁴

One key problem is that the Measuring Broadband America program only takes measurements with respect to servers designed explicitly for testing, the connections to which are almost always uncongested. In the latest Measuring Broadband America study, the authors even went out of their way to *exclude* data that showed congestion due to peering issues, claiming that “The majority of consumers accessing services through the many interconnection points within a service provider’s network would likely not be severely impacted by this situation.”⁸⁵

⁸³ NPRM ¶ 66.

⁸⁴ See Associated Press, *Cogent CEO: Comcast purposefully slowed down Netflix streaming*, SAN JOSE MERCURY NEWS (May 8, 2014) http://www.mercurynews.com/business/ci_25723988/cogent-ceo-comcast-purposefully-slowed-down-netflix-streaming; Jon Brodtkin, *Netflix tells customer, “The Verizon Network is Crowded Right Now”*, ARS TECHNICA (June 4, 2014) <http://arstechnica.com/information-technology/2014/06/netflix-tells-customer-the-verizon-network-is-crowded-right-now/>.

⁸⁵ FCC’s Office of Engineering and Technology and Consumer and Governmental Affairs Bureau, *Measuring Broadband America 2014: A Report on Consumer Wireline Broadband Performance within the U.S.*, at 27.

It is for these reasons that we agree that the Commission “should enhance the transparency rule to improve its effectiveness for end users, edge providers, the Internet community, and the Commission.”⁸⁶ As requested by the NPRM, ¶ 65, we now provide specifics on how the Commission can improve the transparency requirement.

B. A Stronger Transparency Rule

Strong transparency requires two kinds of disclosure. The first is a simple disclosure at the point of sale that includes the 95% percentile minimum and maximum speeds the user will experience to a realistic population of well-connected servers, as well as clear warnings about any fast lanes, premium services, blocking or filtering that the user will not have a simple and practical way to avoid.

The second should be a more detailed disclosure posted on the ISP’s website, which would include CDFs of the sorts of statistics already reported (latency, upload, and download speed), as well as statistics concerning jitter (the variability in the latency of packets, i.e., how much the delay between a packet being sent from its source and being received at its destination changes over time), uptime (the percentage of time a user’s Internet connection is actually available), and packet loss and corruption (even when congestion is not occurring). These metrics are essential for predicting and debugging the performance of many types of network applications including voice and video over IP; online gaming; and use of common tools like SSH for software development and website administration.

ISPs should also update this data on a more regular basis than every six months, which is the current reporting frequency of the Measuring Broadband America report but an eternity in the timescale of the Internet. Ideally, ISPs would update this information much more often so that customers and the Commission could catch harmful changes to ISP network management procedures quickly.

⁸⁶ NPRM ¶ 67.

Additionally, these measurements of network quality need to capture the experience the customer will get when talking to a large set of end points that are (1) well-connected to the Internet backbone and (2) unwilling or unable to pay ISPs for special peering arrangements. Without such measurements the resulting statistics are unlikely to match a customer’s true Internet experience. (As we mentioned above, this sort of testing is not currently done in the Measuring Broadband America program, which only makes measurements with respect to artificial testing servers and purposefully throws out data related to repeated congestion.)

A strong transparency rule that reflects these suggestions will enable customers and the Commission to determine what connection quality ISPs provide to companies that have special peering or interconnection deals, as well as what connection quality they provide to companies that do not. This means that if an ISP hosts its own material or its own services, it should tabulate performance metrics for those services separately from those for servers hosted in unaffiliated data centers. Expanding testing this way will capture any discriminatory tiers that ISPs are implementing in their peering, hosting and CDN arrangements.

Finally, any meaningful transparency rule must require ISPs to provide more detailed disclosures about their network management practices to the public, as soon as these network management practices are put into place, if not before.⁸⁷ That is why we support the portion of the proposed transparency rule in the NPRM which states that

“a person engaged in the provision of broadband Internet access service shall publicly disclose in a timely manner to end users, edge providers, and the Commission when they make changes to their network practices as well as any instances of blocking, throttling, and pay-for-priority arrangements, or the parameters of default or “best effort” service.”⁸⁸

⁸⁷ See NPRM ¶ 88 (“In what timeframe should the Commission require providers to report such changes in their traffic management policies to the Commission?”).

⁸⁸ NPRM appendix A, rule 8.3c.

We strongly agree that any content-specific discrimination, including blocking, throttling, or traffic-shaping that an ISP performs on traffic entering or originating in its network should be explicitly listed in whatever disclosure the ISP makes to satisfy the rule — and not buried deep within the legalese of a Terms of Service document.⁸⁹ By requiring ISPs to be specific about these sorts of non-neutral behaviors, the Commission will be able to “ensure that the ability of providers to engage in reasonable network management is not used to circumvent the open Internet protections implemented by [the] proposed rules.”⁹⁰

C. Minimizing the Costs of Transparency

The NPRM seeks comment on whether or not there are “ways to minimize the costs and burdens associated with any enhanced disclosure requirements.”⁹¹ We believe that the costs and burdens of high-quality disclosures are likely to be quite variable, depending on the existing datasets an ISP collects for itself; the competence of the teams the ISP tasks with compiling the disclosure; and the development of standard tools and practices for these disclosures.

With that said, we believe that many ISPs would not face a large burden when it comes to the collection of high-quality transparency data, as the types of measurements we have described are already commonly used in order to diagnose network problems and enhance network performance.

We also believe there are creative measures available to the Commission to simultaneously obtain high-quality data while avoiding the risk of imposing high costs and burdens on ISPs that do not already have extensive performance data about their networks, or the internal capacity to start efficiently collecting and reporting that data.

⁸⁹ See NPRM ¶ 72 (“We are particularly interested in whether there are network practices, performance characteristics, or commercial terms relating to broadband service that are particularly essential but not easily discoverable by end users absent effective disclosure.”).

⁹⁰ NPRM ¶ 61.

⁹¹ NPRM ¶ 86.

The continued use of the Measuring Broadband America program (appropriately updated to make the sorts of measurements we described above) would be one such solution.

D. Privacy Must Be Preserved

The NPRM asks:

“With respect to data caps, should we require disclosures that permit end users to identify application-specific usage or to distinguish which user or device contributed to which part of the total data usage?”⁹²

In most cases, ISPs should not have sufficient access to provide application- or device-specific reports. Giving ISPs the ability to see what devices had connected to a user’s router, what devices are tethered to a user’s phone or tablet, or what applications were running on those devices would constitute a deep violation of the subscriber’s privacy. A better approach that is consistent with user privacy would put users, rather than carriers in charge of acquiring such information through applications or software that they can configure and control on their own devices and networks. Thus we strongly encourage the Commission *not* to require ISPs to invade users’ privacy in order to provide details on application or device-specific usage.

E. Transparency Must Extend to Edge Providers

The NPRM also seeks comment “on the extent to which the transparency rule does, or should, disclose useful information to providers who seek to exchange traffic with broadband provider networks.”⁹³

As the Commission has noted, the emerging environment of discriminatory peering and co-location practices is a dire threat to innovation on the Internet. The parties most threatened by these developments are those who are trying to make novel and unanticipated uses of the network, which is a category that includes some startup companies, some open source projects, and some developers of new network protocols.

⁹² NPRM ¶ 73.

⁹³ NPRM ¶ 76.

The next startup that attempts to offer innovative video streaming products may not have the deep pockets and negotiating strength that Netflix and YouTube currently wield.

In order to counteract the danger of these practices, ISPs should be required to be transparent about the terms of any peering, co-location, or CDN hosting arrangements they make with other parties. By requiring ISPs to publish the contractual details of these arrangements (as well as any technical data necessary to make the arrangements), other parties will be able to request the same reasonable and nondiscriminatory terms without significant negotiation and transaction costs.

F. Mobile Network Data Transparency

In the NPRM, the Commission asks how any enhanced transparency rule should apply to mobile broadband network providers and if any modifications should be made to the rule to accommodate technical specifics of mobile data networks.⁹⁴ As mentioned elsewhere in our comments, we believe that mobile broadband providers should be held to the same standards as fixed broadband providers when it comes to net neutrality rules, including transparency requirements. Mobile broadband providers should have to disclose the same sorts of information as fixed broadband providers about their network performance and peering arrangements. Two specific requirements on mobile providers would significantly reduce the burden of transparency reporting, while maintaining the same level of transparency as fixed broadband providers.

First, some mobile Internet access providers already collect an extraordinary and intrusive amount of data about network performance and user activity from their customers' devices.⁹⁵ In many cases this collection is an unnecessary violation of user privacy, and should be minimized or abolished outright. However, as with fixed broadband, providers that currently collect data on network performance for marketing or

⁹⁴ NPRM ¶¶ 84-85.

⁹⁵ See generally, <https://www.eff.org/deeplinks/2011/12/carrier-iq-architecture>.

other purposes can use the same data, properly aggregated and anonymized, to comply with transparency obligations. Additional cost would be minimal.

Second, providers should give consumers the ability to measure network performance at their device's "baseband chip," the chip that actually communicates with the cellular network, so that the public can take measurements of connection quality. The ability to measure performance at the baseband chip is vital because measuring performance from the operating system layer gives only an approximation of the true picture. This is like the difference between measuring traditional broadband speed using a laptop versus measuring it at the cable or DSL modem: since a laptop may be running slowly due to other programs, the measurements can be skewed.

The Commission has also asked for comment about whether mobile providers should be required to be transparent about any commercial terms that affect mobile network data performance. As with fixed broadband, EFF believes that transparency of commercial terms is a critically important factor in ensuring that mobile broadband providers are not acting in discriminatory and anti-competitive ways. Thus as with fixed broadband, the terms and contracts for interconnection and peering arrangements, as well as other sorts of prioritization agreements, need to be shared with the Commission and made public. Requiring this level of disclosure is essential to promote fairness in the market.

VII. Field Hearings

The present NPRM has had more public participation than any FCC proceeding in history, with over a million Americans from across the nation raising their voices to tell the Commission how new regulations concerning Internet providers will affect their lives. Yet the commission has largely fielded this debate in Washington, D.C., accepting comments via the online filing system. EFF believes that the Commission should hold a series of public hearings in geographically diverse locations around the country.

Filing a comment with the FCC is largely done via webforms on advocacy sites. We believe the Commission would greatly benefit from hosting public meetings to hear stories and opinions directly from the vibrant and richly diverse American public. If anyone can tell the FCC what is right and what is wrong with a potential rule set that would allow Internet providers to offer pay-to-play service for certain websites, it will be the students, entrepreneurs, artists, public safety officials, and everyday people for whom the Internet is a vital for meeting the information needs of our communities.

In 2007 the Commission held six field hearings across the nation to discuss the future of media ownership.⁹⁶ EFF believes the openness of the Internet is as least as important a topic, and suggests that the Commission act similarly to foster civic engagement in this NPRM preceding.

⁹⁶ See *Public Hearings on Media Ownership*, FEDERAL COMMUNICATIONS COMMISSION (2006) <http://transition.fcc.gov/ownership/hearings.html>.