**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

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|---|---|---|
| In the Matter of | ) | |
| Protecting and Promoting the Open Internet | ) | GN Docket No. 14-28 |
| Framework for Broadband Internet Services | ) | GN Docket No. 10-127 |

# COMMENTS OF NETFLIX, INC.


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## EXECUTIVE SUMMARY

Adopting strong net neutrality is the best way to support the virtuous circle of increasing investment in broadband networks and the applications that drive the demand for faster, more affordable Internet access. To ensure that the Internet continues to grow as platform for consumer choice and economic growth, the Commission should use all the statutory and non-statutory tools at its disposal to adopt strong open Internet protections.

Netflix urges the FCC to protect openness, not only on the last mile, but also at the point of interconnection to the last mile. Failing to address interconnection abuse by terminating Internet Service Providers (ISPs) will undermine the efficacy of any open Internet or consumer protection rule that the Commission adopts in these proceedings. As important as they are, last-mile protections are insufficient if ISPs can move discriminatory conduct to interconnection points with content providers.

The "commercially reasonable" standard proposed by the Commission appears neither clear enough nor strong enough to protect an open Internet. The Commission's proposal would, for the first time since the beginning of the commercial Internet, authorize an ISP to charge content providers for prioritized access to consumers. By endorsing the concept of paid prioritization, as well as ambiguous enforcement standards and processes, the Commission's proposed rules arguably turn the objective of Internet openness on its head—allowing the Internet to look more like a closed platform, such as a cable television service, rather than an open and innovative platform driven by consumers and the virtuous circle. Given this, no FCC rules would be preferable to rules endorsing paid priority deals on the Internet.

The Commission should adopt clear and strong open Internet protections that prevent blocking, interconnection access tolls, unreasonable discrimination, and paid prioritization on any point in the network controlled by the terminating ISP. Transparency rules should be augmented to require ISPs to provide meaningful, real-time disclosures of network performance and congestion to keep the public properly informed.

The Internet is at a crossroads. Down one road—a road defined by the Commission's failure to put in place meaningful open Internet rules—is an Internet that looks more like cable TV, one characterized by legalized discrimination, carriage disputes, gamesmanship, and content blackouts which harms consumers. Down another road is a scalable, more affordable, and open Internet built on strong network neutrality rules and a policy of settlement-free interconnection to last mile ISP network.

Netflix urges the FCC to focus on policies that will set the foundations for the Internet's long-term growth. No rules would be better than rules legalizing discrimination on the Internet.

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## I. INTRODUCTION

Netflix, Inc. ("Netflix") hereby submits these comments in response to the Commission's Notice of Proposed Rulemaking ("NPRM") and the Wireline Competition Bureau's Public Notice in the above-captioned proceedings.[1] While the Commission's focus on the issue of protecting and promoting the open Internet should be commended, the NPRM raises serious concerns that threaten to undermine this country's, if not the world's, most important platform for economic growth, innovation, and competition.

Netflix is the world's leading Internet television provider with over 48 million members in more than 40 countries enjoying more than one billion hours of TV shows and movies per month, including Netflix's original series. For a low monthly price, Netflix members can watch as much as they want, anytime, anywhere, on nearly any Internet-connected screen.

[1] Promoting and Protecting the Open Internet, GN Docket No. 14-28, *Notice of Proposed Rulemaking*, 29 FCC Rcd. 5561, 5563 ¶ 4 (2014) ("*Open Internet NPRM*"); Wireline Competition Bureau Seeks to Refresh the Record in the 2010 Proceeding on Title II and Other Potential Legal Frameworks for Broadband Internet Access, GN Docket No. 10-127, *Public Notice*, DA 14-748 (rel. May 30, 2014).

Since launching our streaming service in 2007, Netflix has seen rapid growth both domestically and internationally. The service is available on a broad array of consumer electronic devices, including Internet-connected TVs and set-top boxes, game consoles, computers, tablets, and mobile phones. As our service has grown in popularity, our content has evolved from an eclectic offering of older movies and TV shows to award winning original productions, such as *House of Cards* and *Orange is the New Black*. In fact, just this past week, Netflix's original programming was honored with a record 31 Emmy nominations, the most ever for an online subscription-television service.[2] Likewise, as technology has improved, including the continued advancing speeds of cable broadband, our service has begun to offer its members new and innovative features, including higher resolution 4K content—a resolution that is unavailable through traditional MVPD services. The ability of Netflix to innovate, grow, and offer consumers new and exciting ways to enjoy television content was made possible by the open Internet.

Netflix has been a vocal advocate for the adoption of strong net neutrality rules that protect openness, not only on the last mile, but also at the point of interconnection to the last mile.[3] Failing to address interconnection abuse by terminating ISPs will undermine the efficacy of any open Internet or consumer protection rule that the Commission adopts in these proceedings. As important as they are, last-mile protections are insufficient if ISPs can move discriminatory conduct to interconnection points with

[2] David Zurawik, *Netflix Rising to TV Top with Emmy Nominations for 'Cards,' 'Orange'*, *The Baltimore Sun*, July 11, 2014, *available at* http://touch.baltimoresun.com/#section/-1/article/p2p-80780039/.

[3] *See, e.g.*, Reed Hastings, *Internet Tolls and the Case for Strong Net Neutrality* (Mar. 20, 2014), http://blog.netflix.com/2014/03/internet-tolls-and-case-for-strong-net.html.

content providers. The complete and strong form of open Internet protections ensures no blocking, no access fees, and that no unreasonable discrimination occurs at any point in the network controlled by the terminating ISP.

The concerns Netflix has raised about the market dynamics between large network operators and edge providers have been and continue to be important for the Commission to address. As highlighted in our comments to the Commission's 2010 proceeding on preserving the open Internet, the fact that broadband network operators, which are also MVPDs, control the delivery pipes and generate significant revenue from content that travels over those pipes provides both the means and motivation for discriminating against online video distributors.[4] This remains a major concern and has been exacerbated by the fact that, in the intervening years since 2010, cable Internet access has become the primary means for obtaining high-speed broadband. It is within this context of a consolidating market that the Commission must consider how to protect and promote an open Internet.

## II. THE VIRTUOUS CIRCLE: OPENNESS SUPPORTS THE INTERNET'S GROWTH

The Internet is improving lives everywhere—democratizing access to ideas, services, and goods. The Internet has grown into the amazing medium it is today largely because information is received by the person requesting it efficiently, unimpeded by gatekeepers. In other words, "the Internet's remarkable ability to generate innovation, investment, and economic growth is a product of its openness."[5] Furthermore, the

[4] Comments of Netflix, Inc., GN Docket. No. 09-191, at 5-6 (Jan. 14, 2010).

[5] Amicus of Internet Engineers and Technologists, *filed in Verizon v. FCC*, No. 11-1355, at 3 (D.C. Cir. Nov. 15, 2012).

cooperative relationship between broadband networks and the information and services they carry drives improvements both among network operators and edge service providers.

This "virtuous circle" creates opportunities for greater and richer applications that in turn drive consumer demand for better and faster broadband connectivity. Absent protections to preserve an open Internet, this virtuous circle—and much of the innovation and economic growth it has created to date—is threatened. Unfortunately, the Commission's proposal does little to protect the open Internet. In fact, by endorsing the concept of paid prioritization, as well as ambiguous enforcement standards and processes, the Commission's proposed rules arguably turn the objective of Internet openness on its head—allowing the Internet to look more like a closed platform, such as a cable television service, rather than an open and innovative platform driven by the virtuous circle.

## III. THE FCC SHOULD NOT CODIFY FAST AND SLOW LANES ON THE INTERNET

The Commission has previously concluded that paid prioritization "would represent a significant departure from historical and current practice" that "could cause great harm to innovation and investment in and on the Internet."[6] Netflix agrees. Yet, the Commission's NPRM would for the first time since the beginning of the commercial Internet authorize an ISP to charge content providers for prioritized access to consumers. In essence, the Commission's proposed rule would codify discrimination on the Internet.

Chairman Wheeler has pledged to "prevent the kind of paid prioritization that could result in 'fast lanes,'"[7] but as a legal matter this pledge is irreconcilable with the

[6] Preserving the Open Internet, *Report and Order*, 25 FCC Rcd. 17905, 17947 ¶ 76 (2010) ("*Open Internet Order*"), *aff'd in part, vacated and remanded in part sub nom. Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014).

[7] *Open Internet NPRM*, Separate Statement of Chairman Tom Wheeler.

text and terms of the proposal advanced in the NPRM. This contradiction is driven by the Commission's underlying legal theory in support of the proposed rules, which looks to authority solely under Section 706.[8] Unfortunately, in doing so, the Commission must water down and even reverse the protections and presumptions of openness that have characterized the Internet since its inception. So despite good intentions, the Commission apparently believes that a bad rule is better than no rule. Netflix disagrees. No rule is better than a bad or ineffectual rule.

### A. Paid Prioritization Is Bad Public Policy

The Internet today functions as a competitive equalizer because all edge providers enjoy the same ability to reach end users over last-mile networks. Through an open Internet, the consumer, not the ISP or the edge provider, picks the winners and the losers. Prioritization turns this successful model on its head, effectively allowing ISPs to choose what their subscribers see and do on the Internet and from whom they get their content.

In a pay-for-priority model, the ISP's subscribers likely will face less choice and diversity in edge provider services (at higher cost) while receiving poorer service from their ISP. Rather than incentivizing edge providers to offer more and diverse services, paid prioritization would raise barriers to entry, lessen competition and innovation, and impose needless transaction costs. A pay-for-priority Internet also inflicts unique harms on noncommercial end users, particularly those that choose to communicate their ideas or opinions "through video or other content sensitive to network congestion."[9] Pay-for-

[8] Telecommunications Act of 1996, § 706 (codified at 47 U.S.C. § 1302).

[9] *Open Internet Order*, 25 FCC Rcd. at 17947 ¶ 76.

priority also would enable terminating ISPs to increase costs for online rivals or degrade their services.

Furthermore, pay-for-priority arrangements undermine an ISP's incentive to continue building capacity into its network. Prioritization has value only in a congested network. After all, there can be no "prioritization" in an uncongested, best-efforts network; all packets necessarily move at the same speed. As the Commission has acknowledged, this creates a perverse incentive for ISPs to forego network upgrades in order to give prioritization value.[10]

Ironically, given the FCC's reliance on section 706 to authorize its proposal, paid prioritization is in irreconcilable tension with the statutory mandate of section 706 to encourage broadband adoption and deployment. Allowing ISPs to monetize congestion will likely create more congestion, threatening the current model that has made the Internet so successful, and likely raising barriers for innovative services. In a pay-for-priority model, if the ISP has foregone infrastructure deployment in order to monetize prioritization, the edge provider is really only purchasing the same slow lane it has today; not a fast lane that provides opportunities for better and more innovative services.

### B. The Proposed Rules Advance Ineffective and Onerous Standards and Mechanisms for Protecting an Open Internet

#### 1. The "Commercially Reasonable" Standard Is Uncertain, Complicated and Burdensome

Even if paid prioritization could be squared with the Commission's mandate under section 706, the "commercially reasonable" standard proposed in the NPRM is the wrong tool for protecting consumers and edge providers. The Commission proposes

[10] *See id*. ("[B]roadband providers that sought to offer pay-for-priority services would have an incentive to limit the quality of service provided to non-prioritized traffic.").

broad (and thus necessarily unclear) guidance that undermines any prophylactic value the rules may have. The result is unlikely to help edge providers or consumers avoid abuses by ISPs or seek remedies when they occur.

The FCC previously has adopted a commercially reasonable standard in the context of data-roaming agreements. But data-roaming agreements and broadband network management are very different undertakings. In the data-roaming context, factors specific to either the parties or the particular technology guide the inquiry into commercial reasonableness.[11] Even then, serious questions have been raised about the effectiveness of the commercial reasonableness standard.[12]

Here, by contrast, there is no necessary contractual relationship between an ISP and an edge provider harmed by an allegedly "commercially reasonable" practice. Moreover, because the universe of potential edge providers is extremely heterogeneous, there are significant limitations on how specific any guidance can be. Understandably, then, the NPRM proposes broad and somewhat amorphous factors, or more precisely, categories of potential factors, to assess commercial reasonableness: impact on present

[11] Those factors include, for example, "whether the parties have any roaming arrangements with each other, including roaming for interconnected services such as voice, and the terms of such arrangements; . . . the propagation characteristics of the spectrum licensed to the providers; [and] whether a host provider's decision not to make a roaming arrangement effective was reasonably based on the fact that the requesting provider's provision of mobile data service to its own subscribers has not been done with a generation of wireless technology comparable to the technology on which the requesting provider seeks to roam[.]" Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services, *Second Report and Order*, 26 FCC Rcd. 5411, 5452-53 ¶ 86 (2011).

[12] *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 6 (May 27, 2014).

and future competition, impact on consumers, impact on speech and civic engagement, technical characteristics, "good faith" negotiations, and industry practices.[13]

Aside from their breadth and indeterminacy, some of these considerations have little or no relationship to commerce. For example, the NPRM proposes to adopt "a factor or factors in applying the commercially reasonable standard that assess the impact of broadband provider practices on free exercise of speech and civic engagement."[14] An open Internet is unquestionably linked to free expression and civic participation, and the Commission is rightly concerned with the importance of an open Internet to both commercial and noncommercial endeavors. However, factors aimed at protecting that link appear more closely related to whether broadband practices amount to unjust or unreasonable discrimination than to whether they are commercially unreasonable.[15]

Outside of the *Data Roaming Order* and the factors discussed in the NPRM, there is little relevant precedent to guide the Commission and parties in determining what paid prioritization or other broadband practices may or may not be commercially reasonable. Although the FCC has demonstrated that broadband providers have the incentive and ability to discriminate against edge providers, a reviewing court may look askance on an assertion that a paid-prioritization agreement reached in an arms-length negotiation between two sophisticated parties is commercially unreasonable, notwithstanding the

[13] *Open Internet NPRM*, 29 FCC Rcd. at 5605-08 ¶¶ 124-34.

[14] *Id*. at 5607 ¶ 131.

[15] Many of the protections that the Commission proposes to subsume under the rubric of commercial reasonableness are not "commercial" in nature, which raises serious risk that the rules will not survive judicial scrutiny.

harm that it may inflict on other edge providers and end users who are not parties to that agreement.

### 2. A Case-by-Case "Totality of the Circumstances" Standard Would Require Significant and Frequent FCC Intervention

The uncertainty inherent in the commercial reasonableness factors is compounded by the Commission's proposed application of the commercially reasonable standard through "a case-by-case approach, considering the totality of the circumstances."[16] In contrast with bright-line rules, the proposed approach would require frequent intervention and interference by the Commission until the Commission has adjudicated sufficient complaints to "provide useful guidance on the application of our proposed open Internet rules."[17] Given the elongated timeframe and high cost of adjudicating claims at the Commission, and given the possibility of immediate retaliation by the ISP, it is unlikely that many edge providers will hazard regulatory relief until it is too late.

The experience of parties that have undertaken formal complaints before the Commission in other contexts should give the Commission pause here. Complaints against incumbents regulated by the Commission are expensive and rarely successful. Independent programmers, for example, have incurred great expense but have not once succeeded in program-carriage complaints against cable operators under section 616.[18] Even the Tennis Channel, which benefitted from favorable presumptions and facts, spent two years litigating its complaint against Comcast at the Commission only to see that

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[16] *Open Internet NPRM*, 29 FCC Rcd. at 5608 ¶ 136.

[17] *Id.* at 5619 ¶ 165.

[18] Communications Act of 1934, §616 (codified at 47 U.S.C. § 536).

decision overturned on appeal.[19] And we are still only marginally closer to understanding what a successful program-carriage complaint might look like.

Entrenched incumbent operators likely will have the home-field advantage in these adjudications. Just like cable operators in the program-carriage context, ISPs will enjoy a repeat-player lead over edge providers. ISPs generally have existing regulatory personnel and are large enough and entrenched enough to see an advantage in a long, drawn out regulatory process. By contrast, edge providers (particularly smaller companies and start-ups) often lack any regulatory expertise, let alone a budget sufficient to spend years arguing in front of the Commission. Weighing the cost of an administrative proceeding and the uncertainty of success, many edge providers likely will choose to forego engagement with the Commission. If lucky, they will be able to pay the broadband provider to avoid the unlawful discrimination; otherwise, they will simply fold. This of course assumes that the edge provider is even aware the broadband provider with whom it has no contractual relationship is manipulating its traffic.[20]

## IV. INTERCONNECTION BETWEEN NETWORKS IS CRITICAL TO INTERNET OPENNESS

It is called the *Inter*-net for a reason. That is, the *Inter*-net comprises interconnections between many autonomous networks, all sharing common protocols. As the Commission already understands, effective rules must "ensure that a broadband

[19] *Comcast Cable Communications, LLC v. FCC*, 717 F.3d 982 (D.C. Cir. 2013).

[20] The Commission hopes to address this problem, in part, by creating "an ombudsperson whose duty will be to act as a watchdog to protect and promote the interests of edge providers, especially smaller entities." *Open Internet NPRM*, 29 FCC Rcd. at 5621 ¶ 171. Although the solicitude for small businesses is appropriate and commendable, the necessity of an ombudsperson points to the unnecessary complexity and uncertainty of the proposed rules and their enforcement.

service provider would not be able to evade our Internet rules by engaging in traffic exchange practices that would be outside the scope of the rules."[21] Open Internet protections that guard only against pay-for-play and pay-for-priority on the last mile can be easily circumvented by moving the discrimination upstream. As such, for any open Internet protection to be complete, it should address the points of interconnection to terminating ISPs' networks.

Some ISPs have argued erroneously that any congestion occurring at the point of interconnection is out of their control and that edge providers are solely responsible for any problems they have accessing the terminating ISP's network.[22] ISPs, not online content providers, set the universe of available pathways into their network. Applications and services cannot utilize any route into the network unless it is "advertised" by an ISP. What's more, the availability, terms, and quality of interconnection to that network are controlled and set by the terminating ISP. So, when an ISP like Verizon fails to upgrade interconnection points to its network, Netflix data enters the network at a drip-like pace, and consumers get a degraded experience despite already paying Verizon for more than enough bandwidth to enjoy high-quality online video services. There can be no doubt that Verizon owns and controls the interconnections that mediate how fast Netflix servers respond to a Verizon Internet access consumer's request.

Putting in last-mile protections while leaving interconnection exposed to abuse will do nothing about congestion at the entrance to a terminating ISP's network. Instead,

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[21] *Open Internet NPRM*, 29 FCC Rcd. at 5582 ¶ 59.

[22] *See* Verizon Policy Blog, *Why Is Netflix Buffering? Dispelling the Congestion Myth* (July 10, 2014), http://publicpolicy.verizon.com/blog/entry/why-is-netflix-buffering-dispelling-the-congestion-myth.

it will create a perverse incentive for the ISP to leave interconnection points congested, even in the face of growing data requests from its customers, in order to try to extract fees from online content providers to buy their way out of congestion.

Discrimination and unfair access charges at interconnection points are not theoretical. Their effects on consumers have been picked-up in the popular press.[23] As the Commission is aware, Netflix and its members have been impacted by interconnection congestion, particularly on Comcast's and Verizon's networks.

The Comcast situation provides a case study in how an ISP can use its terminating access monopoly to harm edge providers, its own customers, and the virtuous circle by discriminating at interconnection and peering points. The amount of video content traffic requested by Comcast's broadband subscribers has increased significantly over time. In 2012, Netflix realized that the interconnection traffic created by the data requests from ISP customers for Netflix content was rising faster than many ISPs were increasing their interconnection capacity. In an effort to limit any negative impacts from the increased traffic, Netflix offered to deploy for free its Open Connect platform[24] on Comcast's network, but Comcast refused.

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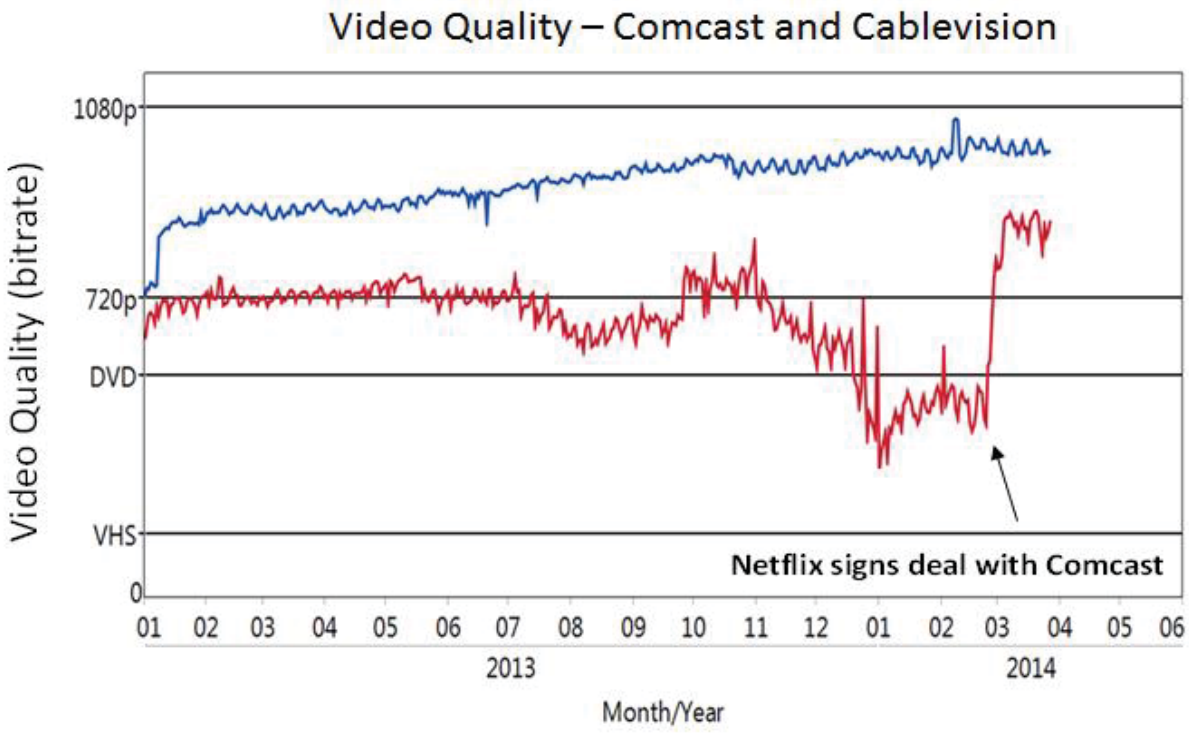
[23] *Watch* John Oliver, *Last Week Tonight*, HBO (June 1, 2014), *available at* https://www.youtube.com/watch?v=fpbOEoRrHyU&feature=kp.

[24] Open Connect is an open-source content delivery network ("CDN") that allows the most popular Netflix content to be stored within the ISP's network footprint. Open Connect uses a "proactive caching" method to conduct daily content updates during periods when the network is least used, such as early in the morning, to avoid congesting the network. By placing popular Netflix content closer to those ISP subscribers who are seeking access to it, Netflix can help ISPs avoid creating unnecessary traffic "up the chain"—either over the middle-mile or at the ISP's interconnection points. These significant and mutual efficiency gains mean that globally Netflix is directly interconnected with 99% of ISPs without any exchange of payment between the ISP and Netflix.

Instead, Comcast allowed every port carrying Netflix data to become congested by refusing to make routine upgrades to those interconnection points. One transit provider even offered to send for free the equipment Comcast would need to mitigate the congestion. Again Comcast refused.

During this period, the harm to Comcast's and Netflix's mutual customers was significant. Comcast subscribers went from being able to view Netflix content, on average, at 720p (i.e., HD quality) to nearly VHS quality. Many Comcast subscribers experienced bit rates that were even lower—so low that they were either unable to view content all together or at least not without constant, annoying rebuffering. This scenario contrasts with data regarding Cablevision's customers. Cablevision incorporated Open Connect, which resulted in its subscribers experiencing video quality approaching 1080p during the same period as Comcast's customers were experiencing VHS quality video or worse.



Comcast chose to engage in its congestion strategy, even though it knew that it would be significantly deteriorating the online experience of its own subscribers. While it had promised its customers "blazing fast" Internet speeds, Comcast simultaneously was preventing those customers from receiving their content at the speeds Comcast had promised. Comcast customers experienced this degraded network performance regardless of the service tier they purchased. Comcast customers paying for a broadband Internet access connection of 25 Mbps were, during the worst of the congestion, getting Netflix content at less than 1 Mbps, and often less than that. But Comcast customers paying significantly more for a 105 Mbps connection fared no better. Due to Comcast's degrading its interconnection points, the first customer received less than 6% of the broadband service she had purchased from Comcast, while the second received only 1%.

Even in the face of significant negative news reports over its congestion strategy, Comcast was willing to let congested network conditions persist. Comcast would not address the problems its customers experienced until Netflix paid. Once Netflix paid, Comcast immediately rectified the congestion problem. As the above graph demonstrates, Comcast effectively doubled its capacity at the congested interconnection points within 8-9 days.

In an attempt to foreclose criticism of its interconnection practices, Comcast has claimed that there are myriad ways into its network. But the number of transit providers or pathways into Comcast's network is irrelevant to this issue. Indeed, prior to its agreement to interconnect directly with Comcast, Netflix purchased all available transit capacity into Comcast's networks from multiple large transit providers. Every single one of those transit links to Comcast was congested (even though the transit providers

requested extra capacity). All other routes into Comcast's network were subject to access charges, in addition to the transit fees Netflix was already paying.[25] Such a situation highlights that every transit provider must ultimately negotiate with Comcast for a connection to Comcast's network, and Comcast controls the terms of that access. Simply put, there is still one and only one way to reach Comcast's subscribers: through Comcast. Again, it is within the context of this market dynamic that the Commission must consider its open Internet rules.

Comcast also has attempted to confuse the matter by suggesting that Netflix's payments to Comcast have allowed Netflix to cut out the "transit middleman" and save costs.[26] But for edge providers such as Netflix, paying a terminating ISP like Comcast for interconnection is not the same as paying for Internet transit. Transit networks like Level 3, XO, Cogent, and Tata perform two important services: (1) they carry traffic over long distances; and (2) they provide access to every network on the global Internet. Comcast does not connect Netflix to other networks. Nor does Comcast carry Netflix traffic over long distances. Netflix is itself bearing the costs and performing the transport

[25] Some large ISPs attempt to justify these access charges based on a ratio "imbalance" between downstream and upstream traffic. But these ratios are arbitrarily set and enforced and are not reflective of how ISPs sell broadband connections and how consumers use them. Traffic volumes are consistently and significantly greater downstream than upstream and ISPs who deliver traffic over the last mile can never be in balance with the networks that deliver video. ISPs typically do not sell symmetrical Internet connections to consumers. Even though ratio-based peering does not make much sense, edge providers and ISPs still have a mutual interest in interconnecting in a way that saves costs, maximizes efficient delivery of content to end users, and makes sure that the Internet continues to scale to meet consumer needs. Indeed, globally Netflix is interconnected with hundreds of ISPs, 99% without ratio-based access charges.

[26] Amadou Diallo, *Comcast Pitches Merger to Senate, Boosts Download Speeds*, Forbes, Apr. 9, 2014, http://www.forbes.com/sites/amadoudiallo/2014/04/09/senate-hearing-opens-debate-on-comcast-merger/.

function. It is Netflix that incurs the cost of moving Netflix content long distances, closer to the consumer, not Comcast.

Comcast and other ISPs have even gone so far as to suggest that Netflix is "free-riding" by unilaterally "dumping as much volume" as it wants onto their networks.[27] Netflix does not "dump" data; it satisfies requests made by ISP customers who pay ISPs a lot of money for high-speed Internet access, precisely so that they can access data-rich media like streaming video. Netflix does not send any data unless members request a movie or TV show. ISPs also argue that Netflix should help cover their network costs because Netflix members account for about 30% of peak residential Internet traffic. But online applications and services like Netflix are why consumers purchase broadband access services in the first place. If ISPs want online applications to share their costs, perhaps they should also be willing to share their revenues.

Netflix is not a free rider. Netflix does not pay Comcast for transit. Nor does Netflix pay Comcast for priority treatment of its traffic. In effect, Netflix pays access fees—without which Comcast has refused to provide sufficient capacity for Netflix movies and TV shows to enter its network and to reach our mutual customers efficiently and without degradation.

[27] Erik Gruenwedel, *Verizon CFO: Netflix Traffic Necessitates a Transit Fee*, Home Media Magazine (Mar 10, 2014), http://www.homemediamagazine.com/cable/verizon-cfo-netflix-traffic-necessitates-transit-fee-32754.

## V. THE COMMISSION SHOULD IMPLEMENT CLEAR RULES PROHIBITING ISPs FROM IMPEDING OR FAVORING DATA SOURCES AND FROM CHARGING ACCESS FEES FOR INTERCONNECTION

Instead of adopting a complicated framework premised on vague and ineffective standards, the Commission should implement clear rules that comprise the following three components:

1) terminating ISPs cannot degrade or impede particular data sources, or charge data sources to avoid degradation;

2) terminating ISPs cannot favor particular data sources, for a fee or otherwise; and

3) terminating ISPs cannot charge data sources for interconnection and must provide adequate no-fee interconnection to wholesalers and Internet services so consumers experience the broadband speeds for which they have paid.

With respect to (3) above, the Commission should take the same approach that it took in its recent *Intercarrier Compensation Order* dealing with interconnection for telecommunications services: that is, bill-and-keep. As the Commission has explained, bill-and-keep has "significant policy advantages," because it "ensure[s] that consumers pay only for services that they choose and receive, eliminating the existing opaque implicit subsidy system under which consumers pay to support other carriers' network costs."[28] It also "imposes fewer regulatory burdens and reduces arbitrage and competitive distortions inherent in the current system, eliminating carriers' ability to shift network costs to competitors and their customers."[29]

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[28] *Intercarrier Compensation Reform Order*, 26 FCC Rcd. 17663, 17904 ¶ 738 (2011).

[29] *Id.* To prevent terminating ISPs from undermining this policy, the Commission should also require terminating ISPs to provide sufficient interconnection capacity so as to avoid congestion of those ports for data requested by the terminating ISP's subscribers. Put differently, terminating ISPs should be required to open sufficient ports so that their

If the Commission does not want to implement a rule modeled after bill-and-keep, it should at least adopt a mechanism that prevents terminating ISPs from frustrating the purpose of the open Internet rules. This could be accomplished by prohibiting terminating ISPs from taking any action that has the effect of degrading a consumer's access to content in the last mile, rather than the Commission limiting its evaluation to whether the terminating ISP's actions occurred in one part of the network or another. In particular, the Commission should specify that any action taken by a terminating ISP (or which a terminating ISP fails to take) that prevents its own customer from receiving content at the speed for which it has advertised and/or contracted with the customer will be a violation of the anti-discrimination rule.

This rule should be crafted in a way that is unambiguous and avoids the need for frequent intervention by regulators to make assessments against malleable standards that will be subject to time-consuming and costly administrative or judicial challenges. For example, the Commission should consider adopting a rebuttable presumption that a terminating ISP has violated the anti-discrimination rule if a user is not receiving third-party data near or at the maximum speed at which she has contracted. The terminating ISP could overcome this presumption by showing that the edge provider (or the transit provider over which the data was sent) had sufficient settlement-free interconnection capacity, and that the consumer's traffic was being transmitted at the same rate at which it had been received.

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subscribers can obtain data at the speed they have purchased from the ISP. This need not require a terminating ISP to provide for the transportation of data beyond its own end-user network; nor must the terminating ISP provide more capacity than is necessary to fulfill the demands of its own customers.

## VI. THE COMMISSION SHOULD REQUIRE REAL-TIME DISCLOSURE OF NETWORK CONGESTION

Among the many tools at the Commission's disposal, transparency provides an important and effective tool for fighting unjust and discriminatory conduct by ISPs—one for which the Commission has unquestioned authority.[30] As the Commission has acknowledged, the transparency rules "should require that broadband providers disclose meaningful information regarding the source, location, timing, speed, packet loss, and duration of network congestion."[31] To be meaningful, the public (consumers and edge providers) must receive immediate information about the network and performance problems with a terminating ISP's network in real time. To be complete, those disclosures must embrace the ISP's interconnection and peering points as a fundamental part of the ISP's network.

Congestion can be temporary or "bursty," and consumers rarely if ever have adequate information to know what is causing disruption of their service. As Netflix's recent experiment with providing real-time notifications of congestion shows, terminating ISPs have a significant incentive to avoid notifying customers of congestion when it happens, relying instead on vague time-delayed statements about general congestion over time. Yet this real-time data is essential for allowing consumers to make informed decisions about their services.[32] Accordingly, the transparency rules must require that a

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[30] *Verizon v. FCC*, 740 F.3d at 659.

[31] *Open Internet NPRM*, 29 FCC Rcd. at 5591 ¶ 83.

[32] *See* Jon Brodkin, *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/ (noting that Verizon's Vice President for Federal Regulatory Affairs had blamed the congestion solely on Netflix). Indeed, Chairman Wheeler recently told an audience that

terminating ISP notify its consumers when its network is congested through a means intended and likely to reach the consumer in real time.[33]

## VII. THE FCC SHOULD USE ALL TOOLS AT ITS DISPOSAL TO ACHIEVE STRONG NET NEUTRALITY

The Commission possesses a multitude of non-mutually exclusive alternatives to protect an open Internet, including enforceable industry standards, self-regulatory codes of conduct, and statutory tools. Netflix does not suggest at this point that the FCC rule out any combination of these options. However, given all the noise regarding the Commission's authority to promulgate open Internet rules, we make the following observations.

### A. Section 706 by Itself Is Likely Not Enough to Sustain Meaningful Open Internet Protections; Nor Will It Guard Against Further Legal Challenges from ISPs

The D.C. Circuit has twice found section 706 insufficient on its own to support the kind of open Internet protections that the public and innovators, users and creators, have come to expect and demand. There is no guarantee that the third time will prove the charm, and reliance on section 706 alone will certainly not dissuade ISPs from appealing

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"like other people, [he] finds the video sometimes stutters and doesn't stream properly. 'You're chairman of the FCC, why is this happening?' Wheeler said his wife complained." Amy Schatz, *FCC Chairman Hints at Net Neutrality Action*, Re/Code, http://recode.net/2014/01/28/fcc-chairman-hints-at-net-neutrality-action/ (last visited July 15, 2014).

[33] In addition, terminating ISPs should be required to articulate and disclose their interconnection policies, and to inform consumers and edge providers how those policies will impact service to the terminating ISP's customers. Real-time congestion information should be aggregated into monthly data reports, which disclose the number of notices sent to subscribers, the duration of congestion, and the times of day when congestion occurred. To make that information useful and usable by the public, the Commission should require that such disclosures are machine-readable and immediately available to the public.

the Commission's decision. Indeed, the only reason that the Commission finds itself, once again, attempting to promulgate open Internet rules is because first Comcast, then Verizon, challenged the use of section 706 as grounds for authority—even though both have claimed to support Commission action to preserve an open Internet.[34] To the extent that the Commission intends to pursue meaningful open Internet protections, continuing to rely on section 706 authority by itself is a recipe for "weak tea" that is likely to prove both legally unsatisfying to the courts and substantively unsatisfying to Internet users.

Conversely, Title II provides a solid basis to adopt prohibitions on blocking and unreasonable discrimination by ISPs. Opposition to Title II is largely political, not legal. The D.C. Circuit in *Verizon* pointed to the Commission's failure to reclassify broadband Internet access as a telecommunications service under Title II as the chief impediment to

[34] The Commission has twice sought to anchor open Internet rules in section 706 only to have the D.C. Circuit strike down the resulting agency action. In *Comcast v. FCC*, the D.C. Circuit held that under the Commission's own precedent, section 706 was not an independent grant of authority and therefore could not authorize the sanctions the Commission imposed on Comcast for degrading peer-to-peer traffic on its network. *Comcast v. FCC*, 600 F.3d 642, 658 (D.C. Cir. 2010). Following this decision, the FCC once again adopted open Internet protections anchored in the Commission's section 706 authority. When Verizon challenged those rules, the D.C. Circuit again determined that section 706, standing alone, did not provide the Commission with sufficient authority to promulgate the core of the open Internet rules: the prohibitions on blocking or discriminating against edge-provider content and services. Specifically, the court held that because the Commission did not classify broadband access as a Title II telecommunications service, the "no unreasonable discrimination" and "no blocking" rules ran afoul of the common-carrier prohibition in section 153(51): "A telecommunications carrier shall be treated as a common carrier under this [Act] only to the extent that it is engaged in providing telecommunications services." 47 U.S.C. §153(51). The no-blocking and no-discrimination rules violated the common-carrier prohibition because they did not allow broadband providers to engage in "individualized bargaining and discrimination in terms." *Verizon*, 740 F.3d at 655-58.

a solid jurisdictional basis for meaningful open Internet rules.[35] Bernstein Research recently noted that, although reclassification is politically challenging, "Title II is the cleanest legal foundation for net-neutrality rules and there is little doubt that the Commission has the authority to reclassify broadband[.]"[36]

### B. The Telecommunications Component of Broadband Access Is Severable

In the end, all the handwringing over Title II is inconsistent with how the FCC historically has distinguished between content and conduit in terms of regulatory treatment under Title II. For decades, the FCC treated the Internet as comprising two distinct components: (1) a "basic" physical access or transmission component, which was regulated as a telecommunications service under Title II (this included DSL services and facilities-based providers of dial-up Internet service); and (2) an "advanced" content/application component, essentially unregulated by the FCC.[37] Web applications provided by Google, Facebook, Twitter, and Netflix are each examples of unregulated applications.

Beginning in 2002, the FCC made a series of decisions shifting classification of the access or transmission component of broadband Internet access from Title II to Title I on the theory that the ISP practice of packaging both physical transmission and content

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[35] *See Verizon*, 740 F.3d at 649-50 (noting that section 706 was insufficient authority for an anti-discrimination rule because the FCC had not classified broadband as a Title II service).

[36] Bernstein Research, U.S. Internet and U.S. Telecoms: Why the Current Net Neutrality Debate Does Not Matter for Investors at 9 (July 9, 2014) (unpublished report) (on file with authors).

[37] Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), *Final Decision*, 77 F.C.C. 2d 384, 417-423 ¶¶ 86-101, 428-432 ¶¶ 115-123 (1980).

components, such as free email and web portals, formed a single consumer offering called an "information service."[38] These bundled components were treated as one largely unregulated service. The policy shift was motivated in part by the belief that competition in broadband offerings would discipline discriminatory or rent-seeking behavior by ISPs.[39]

The FCC's decision to classify broadband offerings as a bundled Title I service was met with skepticism and eventually a Supreme Court challenge. Ultimately, the Court determined that the FCC was entitled to deference and was within its expert discretion to classify Internet access as *either* a Title I or Title II service.[40] However, Justice Scalia, in his dissent, took the view that the FCC's finding that Internet access providers were not offering a telecommunications service simply because they sold it as a bundle with information services like email was "implausible," if not unsupported by fact or law:

> There are instances in which it is ridiculous to deny that one part of a joint offering is being offered merely because it is not offered on a "'stand-alone'" basis . . . . The pet store may have a policy of selling puppies only with leashes, but any customer will say that it does offer

[38] Inquiry Concerning High-Speed Access to Internet Over Cable and Other Facilities, *Report and Order*, 17 FCC Rcd. 4798 (2002).

[39] *See* Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Universal Service Obligations of Broadband Providers, *Report and Order*, 20 FCC Rcd. 14853, 14885-86 ¶ 61 (2005) ("As any provider increases its market share or upgrades its broadband Internet access service, other providers are likely to mount competitive challenges, which likely will lead to wider deployment of broadband Internet access service, more choices, and better terms.").

[40] Justice Breyer suggested that the Commission's decision to "exempt cable broadband providers from Title II regulation was 'perhaps just barely' within the scope" of the Commission's authority. *See* Verizon, 740 F.3d at 639, citing Nat'l *Cable & Telecomms. Ass'n v. Brand X Internet Services*, 545 U.S. 967, 1003 (Breyer, J., concurring).

> puppies—because a leashed puppy is still a puppy, even though it is not offered on a "stand-alone" basis.[41]

Law aside, Justice Scalia's view is in tune with why consumers actually purchase and use broadband access. Consumers pay ISPs for the delivery component that allows them to connect with Netflix, Google, Reddit, Etsy, Amazon, and the multitude of other applications and services available online. Today, most consumers receive email accounts for free and those accounts are nearly always provided by someone other than an ISP. It can hardly be said that applications such as email are bundled with underlying transmission to such a degree that this bundling justifies a sweeping decision to take all residential broadband connections out of Title II of the Communications Act. FCC regulatory classifications should better sync with the actual experience of consumers. That the classification of a broadband delivery service continues to rest upon ISPs' bundling of their own affiliated applications (like free email), which few consumers want or use, is the regulatory equivalent of the tail wagging the dog. Or to use Justice Scalia's illustration, consumers are buying the dog, not the leash. But the FCC continues to characterize the product offering as a "leash." Returning to the FCC's original regulatory distinction between the content and facilities-based transmission components of Internet access would better reflect the service that consumers buy and expect from broadband providers.[42] Moreover, it would resolve the persistent legal uncertainty that has plagued these proceedings for over a decade.

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[41] *Id*. at 1005, 1007-08 (Scalia, J., dissenting).

[42] Title II provides a source of authority to promulgate open Internet rules, but it need not and should not be imported in its entirety. Under section 160, the FCC is required to forbear from such overreaching regulation. 47 U.S.C. § 160. Open Internet rules under Title II need go no further than the basic tenets laid down by the FCC in 2010, and could go further only in the face of truly troubling actions on the part of Internet access

In sum, section 706 by itself is unlikely to be sufficient to supply the FCC with the authority to support open Internet rules, including prohibiting unreasonable discrimination and identifying broadband practices that are *per se* unreasonable. Fortunately, the Commission has additional tools to preserve the open Internet, including enforceable industry standards, self-regulatory codes of conduct, and regulatory tools.

## VIII. CONCLUSION

Netflix believes that achieving strong net neutrality is critical to maintaining a vibrant, open Internet to promote free expression, diversity of content, and continued innovation. ISPs should not impede, favor, or charge Internet services that consumers choose to use. To prevent this, the Commission should adopt clear enforceable anti-discrimination and no-blocking rules for the last mile. The Commission also must require ISPs to provide sufficient interconnection to cover the capacity demanded and paid for by their customers, without charging access tolls to online content providers.

Respectfully submitted,

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providers. In sum, Title II does not mean more regulation. It simply provides the FCC with the authority needed to restore the very same open Internet principles that virtually everyone, including ISPs, says they support.