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VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: *Open Internet Remand Proceeding*, GN Docket No. 14-28; *Framework for Broadband Internet Service*, GN Docket No. 10-127

Dear Ms. Dortch:

The interconnection of Internet networks and the exchange of Internet traffic have always been accomplished through voluntary, commercially negotiated arrangements.[1] Those interconnection arrangements, moreover, have been deemed to be outside the scope of Open Internet proceedings and not suitable for similar regulation. Recently, however, some have urged the Commission to adopt a final rule in the instant Open Internet remand that would regulate interconnection agreements for the exchange of Internet traffic between broadband service providers' networks, including those relating to entry points to "last-mile networks." *E.g.*, Letter from Netflix, Inc. to FCC, GN Docket No. 14-28 (Oct. 22, 2014).

Those arguments are misplaced and wrong. They are misplaced because, as the Commission itself has repeatedly found, interconnection agreements involve issues that are distinct from net neutrality, which has always focused on broadband Internet access providers' handling of traffic over the last-mile connection to consumers. And they are wrong because, even as the business models of some large content providers (such as Netflix) have consumed an increasingly large share of Internet traffic, the market has responded just as it always has—with individualized agreements that take into account the myriad of unique circumstances that exist between any two

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[1] *See, e.g.*, Verizon Comments, GN Dkt. No. 14-28, at 70-76 (July 15, 2014) ("Verizon Comments"); Verizon Reply Comments, GN Dkt. No. 14-28, at 57-64 (Sept. 15, 2014) ("Verizon Reply Comments"); Mozilla Comments, GN Dkt. No. 14-28, at 21 (July 15, 2014) ("Mozilla Comments").

particular networks considering how to interconnect with each other. This approach has a proven track record of accommodating new business models such as content delivery networks, encouraging more efficient interconnection arrangements, creating incentives for the deployment and upgrade of broadband networks, and ultimately enhancing and improving end users' experience. Regulation of interconnection agreements would only cripple this flexible, market-based dynamic that has played a key role in the explosive growth of the Internet.

In addition, in light of the Commission's past statements on interconnection, to suddenly regulate those agreements for the first time in a final rule in this proceeding would violate the notice and comment requirements of the Administrative Procedure Act—requirements that are grounded in due process. And as explained below, even if the Commission were to issue a Further Notice of Proposed Rulemaking, it could not lawfully accept the suggestion of some regulatory proponents and impose Title II common-carriage regulations on interconnection services.

Internet Interconnection Is Fundamentally Distinct From Net Neutrality.

Both the previous *Open Internet* rules and the Notice of Proposed Rulemaking in this proceeding focused on concerns relating to the management of traffic *within* a broadband provider's local network and over the last-mile connection to a subscriber.[2] By contrast, interconnection agreements inherently involve routing traffic *between* networks. Issues surrounding these agreements, which relate to the physical connections between networks, are "very distinct" from issues concerning the management of traffic over the last-mile, as even regulatory proponents such as Mozilla have recognized.[3]

For good reason, then, the Commission's *2010 Open Internet Order* explained that it would not "affect existing arrangements for network interconnection, including existing paid peering arrangements."[4] The *2014 NPRM* adhered to that approach,[5] which reflected a long line of Commission precedent recognizing that interconnection arrangements are distinct from the

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[2] See *Preserving the Open Internet*, Report and Order, 25 FCC Rcd 17905 (2010) ("*2010 Open Internet Order*"); *Protecting and Promoting the Open Internet*, Notice of Proposed Rulemaking 29 FCC Rcd 5561 (2014) ("*2014 NPRM*").

[3] Mozilla Comments at 21; *see also id.* at 11 (emphasizing that its proposal does "not encompass interconnection or peering practices directly, as the scope is defined for only routing activities within the local network, up to but not including the point of interconnection"); Mozilla, *Petition to Recognize Remote Delivery Services in Terminating Access Networks and Classify Such Services as Telecom. Servs. Under Title II of the Communications Act*, GN Docket Nos. 09-191, 10-127 & 14-28, at 8 & n.13 (May 5, 2014) (last-mile services are "separable from interconnection and peering," which "need not be resolved at this time").

[4] *Open Internet Report & Order*, ¶ 67 n.209; *id.*, ¶ 50 (noting that the Commission's new rules would not apply beyond "the limits of a broadband provider's control over the transmission of data to or from its broadband customers").

[5] *See 2014 NPRM*, ¶ 51 n.113 (stating that the proposed rules would "reflect the scope of the 2010 *Open Internet Order*, which applied to broadband provider conduct within its own network").

regulation of broadband Internet access service.[6] Chairman Wheeler, for example, has testified before Congress that peering is "a separate issue,"[7] and has elsewhere described interconnection as perhaps a "cousin[ ]" of open Internet issues, "but they're not the same thing."[8] Backbone interconnection "has been lumped into the 'open Internet' kind of issues" by some, the Chairman added, "but I don't think it really is [part of that set of issues]."[9] Chairman Wheeler took the same view in his statement on the most recent *2014 NPRM*: "the question of interconnection ('peering') between the consumer's network provider and the various networks that deliver to that ISP . . . . is a different matter that is better addressed separately."[10]

Issues relating to the management of traffic within the last mile network thus are distinct from issues involving interconnection between networks. Nevertheless, Internet players such as Netflix and Cogent have called for the Commission to reach beyond the last mile and regulate interconnection points or the terms of interconnection, on the ground that congestion at those points can affect the speeds that end users experience when accessing content. But Netflix, Cogent, and numerous other Internet players make decisions on their own networks that affect the speeds or performance that end users experience. Cogent, for example, has at times discriminated between wholesale traffic and retail traffic by dropping and then resending wholesalers' packets.[11] And Netflix, through its Open Connect program, has set up its own proprietary content delivery networks ("CDNs") that speed the delivery of Netflix traffic to the last-mile networks of certain broadband providers.[12] Any argument to regulate interconnection arrangements therefore would apply equally to those arrangements, but Netflix and Cogent presumably would object to doing so because those decisions—like Internet interconnection—raise issues that are distinct from the delivery of traffic in the last mile. By conflating last-mile regulation with interconnection issues,

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[6] *See, e.g.*, *Federal-State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd 11501, ¶¶ 62–63 (1998) ("*Stevens Report*") (distinguishing Internet backbone services and Internet access service); *AT&T Inc. & BellSouth Corp. Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd 5662, ¶¶ 125, 133 (2007) (distinguishing Internet backbone services from retail Internet access services).

[7] Hearing Before the Commc'ns and Technology Subcomm. of the H. Comm. of Energy and Commerce, 113th Cong. (May 20, 2014) (statement of FCC Chairman Wheeler).

[8] Statement of FCC Chairman Wheeler, Press Conference, June 13, 2014.

[9] Matthew Schwartz, *Wheeler Promises FCC Will Be 'Nimble' as Technology Evolves*, COMMUNICATIONS DAILY (Feb. 11, 2014).

[10] *2014 NPRM*, Statement of FCC Chairman Wheeler.

[11] *See, e.g.*, Jon Brodkin, *During Netflix money fight, Cogent's other big customers suffered too*, ARS TECHNICA (Nov. 5, 2014), http://arstechnica.com/information-technology/2014/11/during-netflix-money-fight-cogents-other-big-customers-suffered-too/.

[12] *See, e.g.*, Netflix Comments, GN Dkt. No. 14-28, at 12 & n.24 (July 15, 2014) ("Netflix Comments"). As Commission Pai has observed, this raises important questions about whether Netflix's practices are consistent with its rhetoric. *See* Letter of Commissioner Pai, to Reed Hastings, CEO of Netflix, Inc., at 2 (Dec. 2, 2014).

these entities are baldly pursuing regulatory rents that would reduce the costs of their business models by shifting them onto broadband subscribers.[13] Interconnection issues are—and should remain—separate from net neutrality issues, which are focused on concerns relating to paid prioritization, blocking, and throttling within the last mile.

A Flexible, Market-Based Approach To Interconnection Agreements Is Critical To The Continued Growth Of The Internet.

The Commission should not expand the scope of this proceeding to the commercially negotiated interconnection agreements that have been used successfully for decades. With so many differences among backbone providers, Internet content providers, Internet transit providers, content delivery networks, and ISPs, interconnection is not an area that can be addressed through top-down, one-size-fits-all regulation. Rather, a flexible, market-based approach has been critical to the development of services that allow providers to address consumers' evolving needs.[14] To replace this flexible approach with rigid rules would destroy a well-functioning market, chill investment, and shift costs from large content providers—and ultimately their users—to an ISP's entire subscriber base.

Players in the Internet ecosystem use a variety of agreements to interconnect networks. Verizon, for example, has hundreds of agreements involving the exchange of U.S. Internet traffic with our backbone and last-mile networks, including agreements for Internet access, transit, peering, colocation, hosting, and content distribution. Today, the majority of traffic destined for our end-user subscribers is delivered to Verizon over paid, direct connections with CDNs and large content providers, not over connections with our traditional settlement-free peers. Payment is but one of a host of key terms that are negotiated and tailored to the needs of the interconnecting parties. These terms include the locations of the initial interconnection points, the number of ports at each interconnection point, the bandwidth per port, traffic volume forecasts and volume commitments, the allocation of traffic among particular interconnection locations, the procedures for augmenting capacity at existing interconnection points, and the procedures for adding new interconnection points. The agreements may also address the protocol for exchanging traffic at interconnection points, how the traffic should be routed to the other party's network (e.g., whether to use "hot potato" or "cold potato" routing), whether the agreed-upon interconnection points are the exclusive means of exchanging traffic between the parties' networks, and the circumstances, if any, under which the parties send traffic through third-party networks. Internet interconnection arrangements can also provide for important coordination and information exchange between the parties on traffic forecasts, traffic monitoring, and operational issues that may arise, such as scheduled outages and emergency maintenance.[15]

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[13] As explained in our Reply Comments; *see* Verizon Reply Comments, at 60-64.

[14] *See* Arthur D. Little, *The Future of the Internet: Innovation and Investment in IP Interconnection* 31-40 (May 2014) (explaining how regulators have decided to avoid interfering with the "productive equilibrium that is developing so well in the Internet ecosystem").

[15] *See, e.g.*, Dan Rayburn, *How Transit Works, What It Costs & Why It's So Important*, Streaming Media (Feb. 24, 2014), *available at* http://blog.streamingmedia.com/2014/02/transit-works-costs-important.html; Verizon Comments at Ex. 2, Declaration of Andres V. Lerner,

These agreements, which are voluntarily negotiated by sophisticated entities, have provided, and continue to provide, flexibility for new and innovative interconnection arrangements that accommodate new business models and changes in end users' preferences. To take just one example, recent years have seen end users significantly increase their demand for streaming video. In response, providers developed new delivery and interconnection arrangements that use CDNs, transit providers, paid peering services, and caching services, among others. Nationwide regulation of interconnection agreements, such as through mandatory zero-cost interconnection, would deal a knockout blow to these individually-tailored solutions.

Additionally, expanding net neutrality rules to prohibit paid interconnection agreements could chill investment in broadband infrastructure. Broadband providers have invested billions of dollars in the right kinds of facilities, in the right places, to ensure that interconnectors can obtain individualized solutions for their traffic-delivery needs—all resulting in a high-quality Internet experience for end users. But the benefits of this planning and coordination between parties exchanging traffic would be lost if broadband providers were required, as some seem to suggest, to add capacity any time an interconnection partner begins to experience congestion. Because content providers and interconnectors can and do readily shift traffic among the many alternative delivery networks and interconnection arrangements, broadband providers would end up playing a game of whack-a-mole to ensure that facilities were in place to meet shifting sources of traffic. This whack-a-mole scenario would significantly risk stranding capital and wasting resources, all without a meaningful improvement in user experience. These new risks would decrease broadband providers' incentives to invest in broadband infrastructure.

In addition to chilling investment, regulation of interconnection agreements would impose little more than a massive fee-shifting from large content providers onto broadband customers.[16] After all, if Netflix and other large content providers do not contribute to the costs of handling their disproportionate traffic volume,[17] then broadband providers—and their customers (including the majority who are not Netflix subscribers)—will have to bear the full cost instead. And if those large content providers and CDN providers have no incentive to work cooperatively to develop and

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Competition in Broadband and "Internet Openness," ¶¶ 57–60; Verizon Reply Comments at 63-64.

[16] Large content providers have advocated regulation of interconnection agreements for precisely this reason. *See, e.g.*, Fred Campbell, *Netflix Secretly Holds Subscribers Hostage to Gain Favorable FCC Internet Regulations*, CENTER FOR BOUNDLESS INNOVATION (Sept. 16, 2014), http://cbit.org/blog/2014/09/netflix-secretly-holds-subscribers-hostage-to-gain-favorable-fcc-internet-regulations/; Larry Downes, *How Netflix Poisoned The Net Neutrality Debate*, FORBES (Nov. 25, 2014), http://www.forbes.com/sites/larrydownes/2014/11/25/how-netflix-poisoned-the-net-neutrality-debate/.

[17] According to recent reports, Netflix consumes 35% of all broadband traffic in the United States and Canada. Gene Marks, *Netflix and YouTube Now Consume 50% Of The Internet As The Argument For Net Neutrality Weakens*, FORBES (November 24, 2014), http://www.forbes.com/sites/quickerbettertech/2014/11/24/netflix-and-youtube-now-consume-50-of-the-internet-as-the-argument-for-net-neutrality-weakens/.

implement interconnection arrangements in the most efficient manner, then the amount of cost that those customers have to bear will be inflated. There is no reason for the Commission to play favorites here, particularly because, as researchers at M.I.T. recently found, there is no "widespread congestion problem among the U.S. providers."[18] Most observed congestion has related to Netflix traffic, and "it would appear that all parties are moving toward adequate resolution."[19] Thus, Netflix's recent interconnection agreements with AT&T, Comcast, Time Warner Cable, and Verizon are not symptoms of a problem, but rather examples of the continued success of market-based arrangements in accommodating the explosive growth and evolution of the Internet.

A Final Rule That Regulated Interconnection Would Violate The Administrative Procedure Act.

The Notice of Proposed Rulemaking in this proceeding stated that the Commission's proposed rules would "reflect the scope of the *2010 Open Internet Order*, which applied to broadband provider conduct within its own network." *2014 NPRM*, ¶ 51 n.113. This foundational determination reflected the Commission's prior policy of treating Internet interconnection agreements as a separate issue from open Internet rules. *See id.*

Were the Commission to adopt a final rule that took precisely the *opposite* course—venturing beyond providers' conduct within their own networks and regulating, for the first time, interconnection agreements between networks—it would "pull" precisely the sort of "surprise switcheroo on regulated entities" that the D.C. Circuit has forbidden. *Allina Health Servs. v. Sebelius*, 746 F.3d 1102, 1108 (D.C. Cir. 2014) (quotation marks and citation omitted); *see also CSX Transp. v. Surface Transp. Bd.*, 584 F.3d 1076, 1081–82 (D.C. Cir. 2009); *Envtl. Integrity Project v. EPA*, 425 F.3d 992, 997 (D.C. Cir. 2005); *Int'l Union, United Mine Workers of Am. v. Mine Saf. & Health Admin.*, 407 F.3d 1250, 1261 (D.C. Cir. 2005); *Shell Oil Co. v. EPA*, 950 F.2d 741, 751 (D.C. Cir. 1991). The Administrative Procedure Act, consistent with the requirements of due process, requires that an agency's proposed rulemaking provide fair notice of the rule that the agency ultimately adopts. *See* 5 U.S.C. § 553(b)(3). "An agency may promulgate a rule that differs from a proposed rule," the D.C. Circuit has explained, but "only if the final rule is a 'logical outgrowth' of the proposed rule." *Allina Health Services*, 746 F.3d at 1107. In other words, an agency may not adopt a final rule that is "surprisingly distant" from its original proposal. *International Union*, 407 F.3d at 1260.

The D.C. Circuit has been especially concerned about agencies that proposed to codify an existing practice—as the Commission has done here—and then adopted the opposite practice as a final rule. In *Allina Health Services*, for example, HHS proposed to clarify its interpretation of the Medicare statute, but ended up adopting the exact opposite interpretation in its final rule. 746 F.3d at 1106. The court invalidated the rule because "a reasonable member of the regulated class—even a good lawyer—[would not] anticipate that such a volte-face with enormous financial implications would follow from the Secretary's proposed rule." *Id.* at 1109. Similarly, in *Environmental*

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[18] M.I.T. Info. Policy Project, *Measuring Internet Congestion: A Preliminary Report*, at 2 (2014), https://ipp.mit.edu/sites/default/files/documents/Congestion-handout-final.pdf.

[19] *Id.*

Integrity Project, EPA "proposed to codify its interpretation of [the Clean Air Act] through an amendment of the regulatory text," but ended up adopting a "reinterpretation" of the statute. 425 F.3d at 997-98. "Whatever a 'logical outgrowth' of [a] proposal may include," the court held, "it certainly does not include the Agency's decision to repudiate its proposed interpretation and adopt its inverse." *Id.*

Here, having proposed a rule to preserve the limited scope of the *2010 Open Internet Order* by reaching only a broadband provider's conduct within its own network—a key working assumption of the entire rulemaking—the Commission does not have free reign to repudiate its proposal and adopt the inverse, especially when that opposite course would have enormous financial implications.

Nor did the Commission acquire a blank slate to adopt rules governing Internet interconnection agreements by inviting, elsewhere in the NPRM, general comment on broad questions surrounding interconnection. *See 2014 NPRM*, ¶ 59. The Commission expressed interest in gathering information about the potential evasion of open Internet rules through traffic exchange, but it provided no guidance on *how* new rules might affect existing interconnection arrangements. As a result, there is "no way that commenters here could have anticipated which 'particular aspects of [the agency's] proposal [were] open for consideration.'" *CSX Transportation*, 584 F.3d at 1082 (quoting *Envtl. Integrity Project*, 425 F.3d at 998). "Interested parties cannot be expected to divine the [agency's] unspoken thoughts." *Shell Oil*, 950 F.2d at 751. Moreover, the Commission did not explain the reasoning that would lead it to regulate Internet interconnection in one form or another. And if an NPRM "fails to provide an accurate picture of the reasoning that has led the agency to the proposed rule, interested parties will not be able to comment meaningfully upon the agency's proposals." *Conn. Light & Power Co. v. Nuc. Reg. Comm'n*, 673 F.2d 525, 530 (D.C. Cir. 1982).

The Commission may, of course, solicit information on any matter that it wishes. But it is not free "to justify *any* final rule it might be able to devise by whimsically picking and choosing within the four corners of a lengthy 'notice.'" *Environmental Integrity Project*, 425 F.3d at 998. That is doubly so where, as here, other parts of the *2014 NPRM* —and even the Statement of the Chairman himself—presumed that the scope of any final rules would not cover the area at issue. Accordingly, the Commission could not adopt Internet interconnection rules in the context of the current proceeding, where it has not given interested parties an opportunity to comment meaningfully on a specific Commission proposal and assure that the Commission has adequate information before regulating in this significant new area.

In Any Case, The Commission Cannot Lawfully Subject Interconnection To Title II Common Carriage.

The Commission cannot under any circumstances lawfully impose Title II common-carriage requirements on interconnection, as some regulatory proponents propose.[20] Such requirements

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[20] *See, e.g.*, Comptel Comments, GN Dkt. No. 14-28, at 22 (July 15, 2014) (urging the Commission to use Sections 251 and 252 to regulate interconnection agreements); Level 3 Comments, GN Dkt. Nos. 14-28 & 09-191, at 1-2 (Mar. 21, 2014) (proposing that ISPs be required

apply only to "common carriers," that is, to telecommunications service providers already "engaged as a common carrier for hire." 47 U.S.C. § 153(11). But providers of CDN, transit, or other interconnection services do not offer those services on a common-carrier basis. And as the D.C. Circuit has explained, when a provider is not operating as a common carrier, the Commission cannot "relegate[ ]" that provider "to common carrier status" by imposing common-carriage regulation. *Cellco P'ship v. FCC*, 700 F.3d 534, 545 (D.C. Cir. 2012) (quoting *FCC v. Midwest Video Corp.*, 440 U.S. 689, 700–01 (1979)). The Commission does not have "unfettered discretion . . . to confer or not confer common-carrier status on a given entity depending upon the regulatory goals it seeks to achieve." *Nat'l Ass'n of Regulatory Util. Comm'rs v. FCC*, 525 F.2d 630, 644 (D.C. Cir. 1976) ("*NARUC I*").

Whether a particular service provider "is to be considered a common carrier or a private carrier turns on the particular practice" at issue. *Sw. Bell Tel. Co. v. FCC*, 19 F.3d 1475, 1481 (D.C. Cir. 1994). A provider is a private carrier, not a common carrier, when its "practice is to make individualized decisions, in particular cases, whether and on what terms to deal," and when it retains "considerable flexibility . . . to respond to the competitive forces at play" in the market. *Cellco*, 700 F.3d at 546, 548. In *NARUC I*, for example, the D.C. Circuit held that certain mobile-service providers were properly characterized as private carriers because the carriers expected "to negotiate with and select future clients on a highly individualized basis" that varied depending on operational compatibility or the extent to which the volume or timing of the potential client's traffic would place demands on the system. 525 F.2d at 643. And in *Southwestern Bell*, the court held that the petitioners' dark fiber services were private-carrier services because they were offered pursuant to "individually tailored arrangements" that lasted for variable periods of time. 19 F.3d at 1481.

Applying this well-established standard, interconnection is plainly offered on a private-carriage, not common-carriage, basis. Interconnection is provided based on "considerable flexibility . . . to respond to the competitive forces" of the market. *Cellco*, 700 F.3d at 548. Indeed, precisely because of the increasing need for flexibility and complexity in this highly competitive market, those engaging in interconnection expect to "negotiate with and select future clients on a highly individualized basis."[21] Like the "individually tailored arrangements" in *Southwestern Bell*, 19 F.3d at 1481, interconnection agreements take a wide range of forms[22] and depend on a great variety of factors, including the traffic volume, relative traffic flows, location, capacity, price, and distance of traffic that one provider delivers for another.[23] Even *proponents* of interconnection

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to offer free access to their customers and to offer CDN, transit, or other services on commercially reasonable terms); Netflix Comments, at 17 (proposing that ISPs be required to offer no-fee interconnection).

[21] *NARUC I*, 525 F.2d at 643. *See, e.g.*, Verizon Comments, at 72-73 (noting that, in order to remain competitive, interconnection service providers tailor agreements to each party's needs); Comcast Comments, GN Dkt. No. 14-28, at 36-37 (July 15, 2014) ("Comcast Comments").

[22] *See, e.g.*, NCTA Comments, GN Dkt. No. 14-28, at 80-81 (July 15, 2014).

[23] *See, e.g.*, Rayburn, *How Transit Works*; Comcast Comments, at 33-34; Verizon Comments, at 72-73.

regulation recognize that interconnection agreements are negotiated on an individualized basis.[24] Accordingly, the Commission could not impose common-carrier requirements on any aspect of these quintessentially private-carriage arrangements.

Sincerely,

William H. Johnson

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[24] *See, e.g.*, Level 3 Comments, GN Dkt. No. 14-28, at 14-15 (July 15, 2014) (discussing individually negotiated "bit-mile" interconnections); Netflix Comments, at 15 (discussing individually negotiated interconnection agreements with broadband providers).