

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

In the Matter of)	
)	
Preserving the Open Internet)	GN Docket No. 09-191
)	
Broadband Industry Practices)	WC Docket No. 07-52
)	

COMMENTS OF GLOBAL CROSSING NORTH AMERICA, INC.

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Table of Contents

Introduction and Summary 1

Discussion 2

I. There are Serious Questions about the Commission’s Authority to Regulate
Broadband Network Practices..... 2

II. The *NPRM* Is Not Narrowly Tailored to Avoid Interfering with Competitive
Markets 5

III. The Proposed Non-Discrimination Rule and Exemption for “Managed” or
“Specialized” Services Undermines the Commission’s Stated Objectives 8

IV. The Commission Should Act Cautiously Given the Global Nature of the Internet..... 10

V. The Commission Should Focus on Voluntary Mechanisms for Facilitating
Industry Transition to Next-Generation Peering Arrangements 12

Conclusion 13

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Global Crossing North America, Inc. (“Global Crossing”) hereby files these comments in response to the *Notice of Proposed Rulemaking* adopted by the Commission on October 22, 2009 (“*NPRM*”). Global Crossing appreciates this opportunity to comment on the *NPRM*, and believes that it can provide a useful and unique perspective on the Commission’s proposed rules. Global Crossing is a Tier 1 Internet backbone operator, with a core network that connects more than 300 cities and 30 countries worldwide, and delivers services to more than 500 major cities, 50 countries, and 5 continents around the globe. Global Crossing also offers a full range of managed data and voice products, including VoIP services, to more than 40 percent of the Fortune 500, as well as 700 carriers, mobile operators, and ISPs. Global Crossing’s services are global in scale, linking the world’s enterprises, governments, and carriers with customers, employees, and partners worldwide in a secure environment that is ideally suited for IP-based business applications, allowing e-commerce to thrive.

INTRODUCTION AND SUMMARY

In the *NPRM*, the Commission proposes to regulate the network practices of facilities-based broadband Internet access service providers (“ISPs”), largely in response to the assertion that ISPs may be able to block or discriminate against certain types of network traffic. While the

NPRM ostensibly seeks to maintain an open Internet, in fact the *NPRM* threatens to undermine that openness, and the competitive markets and innovation that have allowed the Internet to serve the public so well to date. First, the *NPRM* does not clearly establish the Commission’s authority to adopt the proposed rules, or specify any limiting principle for such authority if it does exist. Second, the proposed rules are overly broad, insofar as they could be construed to reach network operators and content, application and service (“CAS”) providers that are subject to competitive and structural constraints limiting their ability and incentives to discriminate against traffic. Third, the *NPRM* proposes to exempt “managed” or “specialized” services from the rules, in a manner that would discriminate against competitive CAS providers, reentrench incumbent interests, and compromise the open Internet that the Commission is attempting to maintain. Fourth, the *NPRM* does not pay adequate attention to the potential global repercussions of the Commission’s actions, which could result in the balkanization of the global Internet and undermine the many benefits that have flowed therefrom. Accordingly, Global Crossing urges the Commission to avoid imposing prescriptive regulations at this time, and instead to focus on voluntary mechanisms to assist industry to adapt to changes in the Internet—such as a working group to facilitate next-generation peering arrangements.

DISCUSSION

I. THERE ARE SERIOUS QUESTIONS ABOUT THE COMMISSION’S AUTHORITY TO REGULATE BROADBAND NETWORK PRACTICES

It is axiomatic that any Commission action must be consistent with the scope of authority granted to the Commission by Congress. Here, there are serious questions about whether the Commission’s proposed rules are within the scope of that authority.

In the *NPRM*, the Commission asserts that it may “exercise jurisdiction under the Act to regulate the network practices of facilities-based broadband Internet access service providers.”¹ Notably, though, the Commission has no explicit authority to regulate the Internet—a fact that the Commission itself implicitly acknowledges.² Instead, the *NPRM* relies on the Commission’s “ancillary” jurisdiction under Title I of the Act.³ However, the *NPRM* does not clearly establish that the regulation of broadband practices would fall within such jurisdiction. More specifically, the Commission does not demonstrate that such regulation would be within the scope of the Commission’s general jurisdictional grant under Title I, and does not identify any “statutorily mandated responsibility” that would be “reasonably ancillary” to such regulation.⁴

Consequently, the *NPRM* does nothing to illuminate the basis of the Commission’s “ancillary” authority with respect to broadband practices. Further, the *NPRM* establishes no clear limiting principle with respect to the Commission’s potential “ancillary” jurisdiction over the Internet. Even assuming that the Commission were justified in claiming *some* authority to

¹ *NPRM* ¶ 83.

² For this reason, among others, the Commission traditionally, and properly, has taken a “hands-off” approach with respect to the regulation of the Internet.

³ *NPRM* ¶ 83. In order to exercise such jurisdiction, the Commission must show that “the Commission’s general jurisdictional grant under Title I covers the regulated subject” and that the proposed “regulations are reasonably ancillary to the Commission’s effective performance of its statutorily mandated responsibilities.” *Am. Library Ass’n v. FCC*, 406 F.3d 689, 691-92 (D.C. Cir. 2005) (invalidating rules adopted without explicit authority and in a manner “ancillary to nothing”).

⁴ While the Supreme Court has acknowledged that the Commission has some “ancillary” authority to regulate broadband Internet access services, *see NCTA v. Brand X Internet Servs.*, 545 U.S. 967 (2005), the traditional limits on that authority, as expressed in *Am. Library Ass’n v. FCC*, still apply. Notably, the statutory provisions cited by the Commission do not “mandate responsibilities.” Sections 230(b) and 706(a) of the Telecommunications Act of 1996, 47 U.S.C. §§ 230(b), 1302(a), merely establish aspirational policy objectives. Similarly, Section 201(b) of the Act, 47 U.S.C. § 201(b), governs the rates and practices of *telecommunications carriers* providing *telecommunications services*, but imposes no obvious responsibility with respect to non-common carrier, non-telecommunications broadband services.

regulate the Internet, presumably such authority would not be absolute; while some matters are “reasonably ancillary” to the Commission’s “statutorily mandated responsibilities,” others certainly are not. Yet, the *NPRM* draws no line between the two categories, and, indeed, makes no effort to demonstrate that the rules proposed therein fall on the right side of that line. Absent a recognition of the limits of Commission authority, there is a significant danger that any regulation of broadband practices would exceed those limits.

This danger is exacerbated by the convergent nature of the Internet, which makes it far more difficult for the Commission—along with industry and the general public—to distinguish between network infrastructure, as opposed to services, applications, and devices. The case for “ancillary” jurisdiction appears strongest with respect to network infrastructure, which supports the transmission of data by wire or radio.⁵ However, in the broadband world, networks, applications, and devices perform interchangeable functions,⁶ such that it would be extremely difficult to craft regulations that are narrowly tailored to reach broadband infrastructure without reaching broadband applications or devices. There is no principled rationale that would justify the regulation of *some* applications but not others, or keep the Commission from slipping down the slipperiest of slopes toward the regulation of *all* applications.

At a minimum, if the Commission does attempt to assert jurisdiction with respect to broadband practices, it should do so only after establishing a logically rigorous basis for exercising such jurisdiction, and specifying clearly the bounds of any “ancillary” jurisdiction it may choose to assert. Otherwise, any Commission action would be plagued by vagueness,

⁵ *Cf.* 47 U.S.C. § 151.

⁶ The Commission’s recent inquiry into Google Voice highlights the difficulty of distinguishing between an Internet application and a network-based service. As more sophisticated mobile devices come to market, these distinctions will become increasingly difficult and ultimately arbitrary.

compounding potential legal issues and further undermining the certainty and stability that is a prerequisite to the continuing development of the Internet. As the Commission explains in the *NPRM*, the openness and transparency of the Internet to date has facilitated technical and market innovation that has inured to the benefit of the public.⁷ The adoption of ill-defined rules at this point would serve only to stifle that innovation.

II. THE *NPRM* IS NOT NARROWLY TAILORED TO AVOID INTERFERING WITH COMPETITIVE MARKETS

The *NPRM* expresses concern that new technologies may “enable network operators to distinguish among different classes of traffic,” and thus control that traffic to the detriment of the public.⁸ In truth, though, only certain types of network operators *may* be able to exercise such control. In particular, the potential for such control exists only where a network operator owns “bottleneck” facilities interposed between CAS providers and end-user subscribers. Thus, as the *NPRM* acknowledges, an ISP directly serving an end-user subscriber—and controlling the “last-mile” facilities necessary to transmit data to that subscriber—could have the ability to “favor or disfavor any traffic destined for that subscriber.”⁹

Notwithstanding, the *NPRM* proposes rules broadly governing providers of “broadband Internet access”—a term defined to include “Internet Protocol transmission between an end user and the Internet,”¹⁰ and which could be construed to cover services offered by backbone providers to CAS providers (the “end users” of hosting and backbone services). Simply put, it is unnecessary and would be counterproductive for the Commission to paint with such a broad brush.

⁷ *NPRM* ¶ 8.

⁸ *Id.* at ¶ 57.

⁹ *Id.*

¹⁰ *Id.* at App. C (proposed Section 8.3).

In contrast to facilities-based ISPs serving consumers, relationships between Internet backbone providers and their customers—namely CAS providers—are “many-to-many.” CAS providers typically can choose from a variety of hosting and routing options, with multiple backbone operators and hosting companies competing for their business. The Internet backbone services market remains vibrantly competitive as there are multiple suppliers, and customers are free to switch their backbone provider with nominal effort or cost. Under these circumstances, should an Internet backbone provider engage in practices that customers find undesirable, the customers would be free to take service from an Internet backbone service provider that does not engage in such practices. This freedom of choice is a far more powerful tool than regulation and should be the favored approach.¹¹

Moreover, Internet backbone providers have no economic incentive to engage in the types of conduct that the *NPRM* seeks to curtail. Backbone providers are fully compensated for the use of their network by their direct customers—namely, CAS providers. Whether the traffic generated by the customer is peer-to-peer, video, voice, data, or any combination thereof, the Internet backbone provider is indifferent. A bit is a bit and Internet backbone services are generally priced by the megabit. Internet backbone providers have no incentive to reduce their revenues by slowing or blocking traffic.¹²

¹¹ The same analysis can be applied to certain aspects of the enterprise market where enterprise customers enjoy multiple choices for Internet access from a variety of service providers.

¹² To the extent that facilities-based ISPs have any such incentive, it likely arises because they are unable to alter retail pricing structures to account for disproportionate usage by some customers, which places a burden on the entire network. Notably, intense public and political pressure has stymied efforts to experiment with consumption based billing. *See, e.g., Time Warner Cable Charts a New Course on Consumption Based Billing* (Apr. 16, 2009), available at <http://www.timewarnercable.com/corporate/announcements/cbb.html> (announcing abandonment of market trials). *See also* The Broadband Internet Fairness Act, H.R. 2902, 111th Cong. 2d Sess. (2009).

Further, the structure of the Internet helps to discipline backbone providers. As the *NPRM* acknowledges, “there are typically multiple paths for routing packets over the Internet.”¹³ Internet peering relationships (described in greater detail in Section V, below) ensure that traffic can follow any number of different paths across the Internet. Consequently, no one backbone provider may block or slow traffic. If any such attempt were made, the traffic could simply be routed around that backbone provider. In any event, given the number of competitive options available to CAS providers, backbone operators would have little incentive to even make such an attempt.

Given these competitive and structural checks, there is simply no need to regulate backbone and CAS providers, or other service providers subject to market competition. Moreover, such regulation would be counterproductive. Notably, the market for backbone and hosting services, which has served the public well for years, developed in the absence of regulation. Regulating this market now would serve only to distort its natural development, and could undermine the public interest benefits that the Internet has delivered to date, and is expected to deliver in the future.¹⁴

Perhaps the greatest danger of all lies in the fact that the Commission’s proposed rules come at a time when market participants continue to search for viable business models for the delivery of voice, video and data delivery services. For example, companies such as YouTube, Hulu, and cable operators (through “cable everywhere” initiatives) have adopted disparate—and

¹³ *NPRM* ¶ 73.

¹⁴ As discussed in Section III, below, this same logic suggests that the Commission should exempt certain managed services from the scope of the proposed rules, provided both facilities-based ISPs and CAS providers are able to take advantage of the exemption.

still tentative—approaches to the delivery of video content over the Internet.¹⁵ While it is too early to know if any of the models advanced so far will prove sustainable in the long run, it is not too early to realize that the proposed rules would foreclose many viable options. Moreover, convergence continues to shape, and reshape, business models and markets, as device manufacturers (*e.g.*, Apple) increasingly impact competition for transmission services, application providers (*e.g.*, Google) have entered the device space (*e.g.*, Nexus One), and markets are only now beginning to acknowledge the prospect that user-generated content will ultimately dwarf the volume of professionally-produced content.

Regulation at this time would disrupt the continuing development of broadband markets in significant but unknown ways, and potentially could undermine the numerous benefits produced by market competition to date. Given this risk, the Commission should avoid implicitly or explicitly picking “winners” or “losers.” As history has shown, such decisions are best left to the market, particularly given the complexity of the dynamics at play.

III. THE PROPOSED NON-DISCRIMINATION RULE AND EXEMPTION FOR “MANAGED” OR “SPECIALIZED” SERVICES WOULD UNDERMINE THE COMMISSION’S STATED OBJECTIVES

In the *NPRM*, the Commission proposes to prohibit carriers from charging “a content, application or service provider for enhanced or prioritized access to the subscribers of the broadband Internet access service provider”¹⁶ Simply put, this sweeping pronouncement is overly broad; prioritized access is desirable—and, in some cases, essential—for the effective

¹⁵ Similarly, both legacy carriers (such as AT&T) and new entrants (such as Vonage and Skype) continue to explore options for providing voice and data services over the Internet. For example, AT&T recently suggested that it may have to alter its retail pricing plan for the iPhone in an effort to address disproportionate usage by a minority of its customers. *See, e.g.*, Matt Hamblen, *AT&T Moves Closer to Usage-Based Fees for Data*, CIO (Dec. 9, 2009), available at http://www.cio.com/article/510416/AT_T_Moves_Closer_to_Usage_Based_Fees_for_Data.

¹⁶ *NPRM* ¶ 106.

provision of specialized services such as telemedicine, distance education, video delivery, and other high-resolution applications and services. If broadband providers were forced to transmit data on a “best-efforts” basis in all cases, and CAS providers were prohibited from paying for a pre-determined service quality, it would be impossible to develop or implement high-quality, high-resolution content, applications and services. It simply is not technically or economically feasible to expect network operators to upgrade their networks so that “best efforts” delivery can support such applications absent massive subsidization from government sources. Consequently, adoption of the proposed rules would preclude the very service offerings that the Commission has acknowledged are exemplary of the promise of the Internet.

The *NPRM* compounds this problem by attempting to define a separate category of “managed” or “specialized” services that tentatively would not be subject to the proposed regulations.¹⁷ However, only facilities-based ISPs serving end-user subscribers would be able to offer such services; as described, these services would use “private network connections” with end-user premises, as opposed to the public Internet,¹⁸ and often would be “provided over the same networks used for broadband Internet *access* service”¹⁹ Consequently, CAS providers would be unable to provide high-quality, high-resolution services through the public Internet because the framework envisioned by the *NPRM* would not allow them to purchase prioritized transmission,²⁰ while facilities-based ISPs serving end-user subscribers would be able to offer such services as long as they are packaged as “managed” or “specialized” services. In drafting its proposed rules, the Commission could not have intended to provide facilities-based ISPs with

¹⁷ See, e.g., *id.* at ¶ 108.

¹⁸ *Id.* at ¶ 148 n.266.

¹⁹ *Id.* at ¶ 148 (emphasis supplied).

²⁰ See, e.g., *id.* at ¶ 104 (proposing to codify the “nondiscrimination” principle).

this degree of monopolistic market power, yet that would be the result of the proposed exemption.

When developing regulations, the Commission's first objective should be to do no harm. The proposed non-discrimination rule (as modified by the proposed exemption for "managed" or "specialized" services) fails to satisfy this objective, inasmuch as it is wholly distortive of the current Internet ecosystem and subverts the Commission's stated objectives. Simply put, "prioritization" is not necessarily a bad word, and should not be treated as such. Given the real resource constraints facing the telecommunications industry, prioritization is essential to the effective management of every network and every enterprise, as well as the proper provision of public safety communications services. It would be foolish to prohibit a practice that may in fact enable a more effective Internet.

IV. THE COMMISSION SHOULD ACT CAUTIOUSLY GIVEN THE GLOBAL NATURE OF THE INTERNET, AND THE POTENTIAL GLOBAL RAMIFICATIONS OF COMMISSION ACTION

As the Commission considers the adoption of the rules proposed in the *NPRM*, it should be mindful that the Internet is a global network, and that the Commission's actions could provide a basis (or excuse) for other countries to take action themselves. The result could be a patchwork of conflicting regulations that collectively limit the ability of the Internet to operate globally, while increasing tensions in global markets that rely upon electronic commerce.

While telephony networks are designed principally to serve localized areas, the Internet is inherently global in nature. Notably, while telephony networks traditionally have required service providers to establish access points in each country they serve, CAS providers can establish a global presence on the Internet through a single access point. Further, while domestic telephony traffic normally is transmitted through domestic telephone networks, such that foreign traffic would have no reason to pass through U.S. facilities, the U.S. is the center of the global

Internet in many respects. For example, it is impossible to operate a Tier 1 network without securing peering relationships with certain networks that essentially operate *only* in the U.S.—including (but not limited to) networks operated by Verizon, AT&T and Qwest.²¹ Consequently, regulation of *U.S.* network operations can have a significant impact on *global* network operations, while at the same time having a pronounced precedential impact on foreign and international regulation of the Internet.

In evaluating the proposed rules, the Commission should consider the effect that those rules will have around the world, and on the role of the United States as a major hub of global Internet traffic. The Commission also should consider the limits of its authority, in a legal and practical sense, with respect to activities outside of the United States, and how those limits will impact competitive markets within the United States. For example, even if the Commission's proposed rules were adopted, the Commission would have limited ability to target a facilities-based ISP violating those rules outside of the United States.

Similarly, the Commission should consider how the Internet ecosystem would be impacted if other countries were to adopt different rules. A patchwork of country-specific rules would undermine severely the ability of global operators to maintain a seamless global Internet platform, and the resulting balkanization of the Internet would compromise the global aspect that makes the Internet ecosystem so unique today. Given the prominent role of the United States in developing the Internet, Commission action in this area will carry extraordinary influence and provide other countries with an excuse to act themselves, potentially in a manner unfriendly to U.S. interests. The Commission should think carefully before opening this Pandora's box.

²¹ In fact, until very recently, the majority of global Internet traffic, regardless of the relevant country of origin and destination, was routed through the United States. *See, e.g.,* Indrajit Basu, *Global Internet Traffic Routes Around US Eroding Its Dominance* (Oct. 21, 2008), at <http://www.govtech.com/dc/articles/423106>.

V. THE COMMISSION SHOULD FOCUS ON VOLUNTARY MECHANISMS FOR FACILITATING INDUSTRY TRANSITION TO NEXT-GENERATION PEERING ARRANGEMENTS

The Commission has long recognized that interconnection is the key to the creation of functional, competitive markets for telecommunications services. For example, the Commission has recognized that its “decisions mandating expanded interconnection and collocation are fundamental to opening the interstate special access and switched transport markets to greater competition.”²² The Commission also has recognized that interconnection obligations “pave the way for the introduction of facilities-based competition with incumbent LECs.”²³

Similarly, interconnection has been essential to the creation of a dynamic Internet and dynamic markets for Internet content, applications, and services. In the Internet context, interconnection is achieved through “peering” arrangements, which link administratively separate networks on a voluntary basis. Peering arrangements normally serve the mutual benefit of the interconnected networks, resulting in, among other things: (i) reduced transit costs; (ii) increased redundancy; (iii) increased ability to handle large amounts of traffic (by distributing traffic across different routes); (iv) increased routing control; and (v) improved performance (by enabling traffic to bypass potential bottlenecks).

While peering arrangements have proven an effective mechanism for building and sustaining competition, these arrangements must adapt as parties develop content, applications, and services that rely on priority delivery. Among other things, network operators will need to develop new methods for forecasting and managing resulting traffic. Because no one, including

²² *Expanded Interconnection with Local Telephone Company Facilities*, Memorandum Opinion and Order, 9 FCC Rcd 5154, at ¶ 1 (1994).

²³ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, 11 FCC Rcd 15499, at ¶ 172 (1996).

the Commission, can anticipate how the markets for next-generation content, applications, and services—or the underlying technologies—will develop, and because the Commission has uncertain jurisdiction in this area, the Commission should not attempt to mandate the course of such development.

But the Commission can and should support the continued development of a competitive Internet ecosystem through voluntary mechanisms. For example, the Commission could establish a working group to explore issues associated with robust peering arrangements such as traffic forecasting and traffic management. The Commission already has established other advisory groups that could serve as models for such a working group.²⁴ These efforts should not be limited to the United States. Rather, the Commission should seek to partner with the international community to explore ways to preserve the global nature of the Internet.

CONCLUSION

For the reasons set forth herein, Global Crossing cannot support the adoption of the proposed rules. The Internet ecosystem is adapting to dynamic changes in the nature and volume of traffic, and the proposed rules could preclude operators from adopting the solutions necessary to adapt to those changes, while at the same time undermining the global nature of the Internet and the benefits that have flowed therefrom. These risks are particularly pronounced here because the Commission has been unable to articulate a clear basis for its authority or specify clear boundaries for that authority.

²⁴ For example, the Network Reliability and Interoperability Council (“NRIC”) has been tasked with providing “recommendations to the FCC and to the communications industry that, if implemented, shall under all reasonably foreseeable circumstances assure optimal reliability and interoperability of wireless, wireline, satellite, cable, and public data networks.” See Charter of the Network Reliability and Interoperability Council – VII, at 1 (amended Apr. 15, 2004), *available at* <http://www.nric.org/>.

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