

**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
)	

**REPLY COMMENTS
OF
AKAMAI TECHNOLOGIES, INC.**

Melanie Haratunian
*Senior Vice President, General Counsel &
Corporate Secretary*

Brian W. Evans
Assistant General Counsel

AKAMAI TECHNOLOGIES, INC.
8 Cambridge Center
Cambridge, MA 02142
Voice: (650) 627-5472

April 26, 2010

TABLE OF CONTENTS

I.	SUMMARY AND INTRODUCTION	1
II.	THE COMMISSION SHOULD USE EXTREME CAUTION IN THIS AREA, IN ORDER TO PERMIT ONGOING INTERNET INNOVATION AND DEVELOPMENT.	4
III.	AKAMAI'S SERVICES ARE OUTSIDE THE SCOPE OF THE PROPOSED RULES AND APPEAR TO BE OUTSIDE THE COMMISSION'S AUTHORITY.	7
IV.	COMMISSION ACTION ON MANAGED OR SPECIALIZED SERVICES IS NOT WARRANTED AT PRESENT.....	10
V.	CONCLUSION.....	11

**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
)	

**REPLY COMMENTS
OF
AKAMAI TECHNOLOGIES, INC.**

I. SUMMARY AND INTRODUCTION.

Akamai Technologies, Inc. (“Akamai”), by its counsel, replies to initial comments filed regarding the above-captioned notice of proposed rulemaking (“*Notice*”).¹

The initial record in this proceeding reflects consensus that the Internet should operate in an open manner, as it has functioned throughout its existence.² However, substantial issues exist over the extent of the Commission’s authority to impose regulations to govern the behavior of Internet service providers.³ Moreover, there are

¹ See *Preserving the Open Internet; Broadband Industry Practices*, Notice of Proposed Rulemaking, 24 FCC Rcd 13064 (2009) (the “*Notice*”). Akamai filed initial comments regarding the *Notice*. See Comments of Akamai, GN Docket No. 09-191, WC Docket No. 07-52 (Jan. 14, 2010) (“Akamai Comments”). Hereinafter, all comments filed on or about January 14, 2010 regarding the *Notice* are short-cited.

² See, e.g., Akamai Comments at 1-2; Verizon Comments at 12; Comcast Comments at 1-2; AT&T Comments at 5-6; Free Press Comments at 2; Center for Democracy & Technology Comments at 4. Akamai is a pioneering Internet company, providing content delivery and related services to customers on the Internet since 1999.

³ See *Comcast Corp. v. FCC*, No. 08-1291, slip op. (D.C. Cir. Apr. 6, 2010) (“*Comcast Decision*”) available at <http://pacer.cadc.uscourts.gov/common/opinions/201004.htm> (last visited Apr. 26, 2010)

major differences in the record as to whether the Commission should adopt such regulations, assuming *arguendo* that it has authority, and, if so, how broadly should those regulations apply and what behavior should be governed. Proponents of open Internet regulations express concern that network operators – especially the “broadband Internet access service providers” defined in the *Notice’s Proposed Rules*⁴ – may act to disadvantage Internet applications that compete with their offerings, thereby restricting consumers’ Internet choices and access.⁵ Network operators and other opponents of open Internet regulation question the need for such regulations and express concern that the proposed regulations will prevent the providers from managing their networks and from providing new applications and services.⁶

As one of the many unregulated companies that help enterprises deliver Internet applications and content more efficiently to end users, Akamai understands the multiple viewpoints expressed in the record. Akamai’s customers are enterprises, ranging from the smallest of entrepreneurs to some of the largest companies in the world, that use Akamai’s content delivery services⁷ to accelerate the delivery of their websites’ content

(vacating *Formal Compl. of Free Press & Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications*, 23 FCC Rcd 13028 (2008)).

⁴ See *Notice*, 24 FCC Rcd at 13128, App. A, Proposed Rules §§ 8.1-8.23 (“*Proposed Rules*”).

⁵ See, e.g., Netflix Comments at 5-7; NASUCA Comments at 12-15; Google Comments at 18-22.

⁶ See, e.g., Cox Comments at 12-18; USTelecom Comments at 46-52; Comcast Comments at 37-43.

⁷ Although Akamai and its competitors are often referred to as “content delivery networks” or “CDNs,” Akamai does not own or operate transmission facilities like traditional network operators. Rather, Akamai helps its customers meet the challenges of promptly and securely delivering content over the Internet by enabling these customers

and applications to end users. Akamai's business depends on end users having unrestricted access to its customers' websites. At the same time, Akamai is well aware of the challenges that network operators face in carrying ever-increasing volumes of Internet traffic to end users. Especially in light of the *Comcast Decision*, as the Commission considers Internet openness as well as U.S. broadband development going forward, it should avoid taking regulatory actions that could limit or discourage innovation, development, and investment within the Internet itself.⁸

Because Akamai neither owns transmission facilities nor offers Internet access service to consumers, it cannot be equated with the broadband Internet access service providers that are the subject of the *Proposed Rules*. It is not clear from the record that the approach in the *Notice* is the best way to proceed. However, if the Commission were to decide to adopt regulations in this area, they should apply at most to those broadband Internet access service providers that, as the record indicates,⁹ may have the greatest ability and incentive to engage in blocking and discriminatory practices.

to distribute Web content via Akamai servers that are located close to end users at the Internet Edge, rather than by relying on the customer's origin server.

⁸ See *Joint Statement on Broadband*, GN Docket No. 10-66, FCC 10-42 (Mar. 16, 2010) at 1 ("Continuous private sector investment in wired and wireless networks and technologies, and competition among providers, are critical to ensure vitality and innovation in the broadband ecosystem and to encourage new products and services that benefit American consumers and businesses of every size."). See also *Connecting America: The National Broadband Plan*, FCC Omnibus Broadband Initiative (Mar. 16, 2010) ("*National Broadband Plan*") at 37 ("Today, innovations like broadband and others like it drive the creation of a wide variety of products and services. The competitive forces that sparked these breakthroughs need to be nurtured, so that the United States can continue to reap the benefits of its unrivaled culture of innovation."), available at <http://www.broadband.gov/plan/4-broadband-competition-and-innovation-policy/> (last visited Apr. 26, 2010).

⁹ See, e.g., Google Comments at 19-20, 29-32; Free Press Comments at 15-23; Open Internet Coalition Comments at 23-25, 46, 71-72. In contrast, there is no indication from the record of any need to impose regulations on companies like Akamai.

Akamai also offers services that, among other things, permit enterprise customers to efficiently operate Internet based applications. These services pose none of the policy or competitive issues that the *Notice* raised in its discussion of “managed or specialized services.”¹⁰ Like many enterprise-focused service providers, Akamai markets some of these services as “managed services,” and did so long before the Commission issued the *Notice*. However, these Akamai services rely on an open and public Internet and do not “supplant or otherwise negatively affect” the traditional open Internet.¹¹ Accordingly, the Commission should not consider regulating them.

II. THE COMMISSION SHOULD USE EXTREME CAUTION IN THIS AREA, IN ORDER TO PERMIT ONGOING INTERNET INNOVATION AND DEVELOPMENT.

The *Comcast Decision* raises serious questions about the Commission’s authority “to regulate an Internet service provider’s network management practices.”¹² Even if the Commission were able to assert jurisdiction successfully, which is far from obvious, any rules governing the open Internet should apply, at most, to “providers of broadband Internet access services” (or “broadband Internet access service providers”) as defined in the *Proposed Rules*.¹³ By controlling consumers’ critical last-mile infrastructure,

¹⁰ See *Notice*, 24 FCC Rcd at 13116-117, ¶¶ 148-153.

¹¹ See *id.* at 13116, ¶ 149.

¹² See *Comcast Decision*, slip op. at 3.

¹³ See *Proposed Rules* § 8.3 (defining “broadband Internet access service” as “[a]ny communication service by wire or radio that provides broadband Internet access directly to the public, or such classes of users as to be effectively available directly to the public.”). “Broadband Internet access,” in turn, means:

Internet Protocol [“IP”] data transmission service between an end user and the Internet. For purposes of this definition, dial-up access requiring an end user to initiate a call across the public switched telephone network to establish a connection shall not constitute broadband Internet access.

broadband Internet access service providers such as cable companies (“cablecos”) and incumbent local exchange carriers (“ILECs”) ¹⁴ can effectively determine whether end users reach the Internet at all. As Akamai demonstrated in its initial comments, Akamai and its competitors are not broadband Internet access service providers.¹⁵

Overbroad rules or vague rules that cause regulatory uncertainty could stifle innovation, development, and investment in the Internet, harming consumers and businesses that rely on the Internet for multiple purposes.¹⁶ Assuming *arguendo* that the Commission has authority to impose the *Proposed Rules* on broadband Internet access service providers, the record does not demonstrate conclusively whether the approach in the *Notice* is needed to address the fundamental issues of preserving today’s open Internet while promoting innovation and investment. However, focusing the *Proposed Rules* on providers of broadband Internet access service is one means of reducing the risk that the Commission’s actions could have unintended negative consequences for other portions of the Internet or other Internet participants.

Because much of the Internet, including the operations of Akamai and its competitors, has developed successfully far outside the Commission’s authority, the

See id.

¹⁴ These reply comments address only wired physical transmission providers, not wireless providers, because of the unique technical and market characteristics of wireless broadband service.

¹⁵ See Akamai Comments at 10, 14.

¹⁶ Thus, for example, the Commission should not pursue suggestions to regulate aspects of the Internet that have developed successfully without Commission intervention, such as specific protocols governing video streaming or server co-location agreements. See Jeffrey Gluek, Skyfire, *Perspective of a Mobile Application Developer & Entrepreneur*, FCC Workshop: Innovation, Investment, and the Open Internet, Cambridge MA (Jan. 13, 2010) at 5-6, available at <http://www.openinternet.gov/workshops/docs/ws-innovation-investment-and-the-open-internet/glueck.pdf> (last visited Apr. 26, 2010).

Commission should be especially careful to avoid adopting regulations that, while nominally promoting an “open Internet,” have unintended negative consequences for innovation and investment within the Internet itself. Internet openness obligations thus should not apply to “content, applications, and service providers in addition to broadband Internet access service providers.”¹⁷ Any attempt to assert such broad authority over the Internet would fail the jurisdictional tests of the *Comcast Decision*. Such a broad reach by the Commission would not advance broadband innovation consistent with the *National Broadband Plan*¹⁸ or implement the national policy of promoting competition and limiting Internet regulation expressed in Section 230(b)(2) of the Communications Act of 1934, as amended (the “Act”).¹⁹

Well before the D.C. Circuit released the *Comcast Decision*, there was discussion about reclassifying broadband Internet access service as a telecommunications service subject to regulation under Title II of the Act, rather than as an information service.²⁰ The apparent reason for this reclassification would be to shore up the Commission’s jurisdictional basis for adopting open Internet regulations.²¹ Such a reclassification, whether judicially sustainable or not, would not directly affect Akamai, which is not a broadband Internet access service provider to begin with. However, this reclassification,

¹⁷ See *Notice*, 24 FCC Rcd at 13103-104, ¶ 101.

¹⁸ See *National Broadband Plan* at 37.

¹⁹ See 47 U.S.C. § 230(b)(2).

²⁰ See *National Broadband Plan* at 337; Letter from William H. Johnson, Ass’t Gen. Counsel, Verizon, to Marlene H. Dortch, Sec’y, FCC, GN Docket 09-191 (Feb. 22, 2010) at 1; Hon. Robert M. McDowell, *The Best Broadband Plan for America: First, Do No Harm*, Free State Foundation Keynote (Jan. 29, 2010) at 8-13, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296081A1.pdf (last visited Apr. 26, 2010).

²¹ See *id.* at 9, 12-13.

even if narrowly and carefully made, could still have unintended negative consequences by increasing regulatory uncertainty over the scope of the Commission's Title II authority, which could chill investment and innovation. The Commission therefore should exercise extreme caution in this area.

III. AKAMAI'S SERVICES ARE OUTSIDE THE SCOPE OF THE PROPOSED RULES AND APPEAR TO BE OUTSIDE THE COMMISSION'S AUTHORITY.

The focus of the *Notice* and the comments in this proceeding is on whether new rules should apply to providers of last-mile broadband Internet access service. However, a few parties that oppose new rules appear to make a secondary argument that, if adopted, such rules should extend into the Internet beyond broadband Internet access service providers, apparently conflating providers of broadband Internet access service with other types of Internet companies.

Contrary to those arguments,²² Akamai and other CDNs cannot be equated with broadband Internet access service providers. Because the *Comcast Decision* calls into question the Commission's authority to regulate broadband Internet access providers, the Commission appears to have even less of a claim to authority over other types of Internet firms, like Akamai, that are not providers of broadband Internet access service.

As Akamai demonstrated in its initial comments, services offered to content providers by Akamai and other CDNs, with servers located on the Internet Edge, are far different from the last-mile broadband Internet access services offered to end users that

²² See, e.g., AT&T Comments at 28, 118; Time Warner Cable Comments at 21-22, 88-90; Verizon Comments at 2-3, 13-14, 37, 83, 134; Cisco Comments at 11-12. At least one party recognizes that Akamai and other CDNs would not be subject to the proposed rules, see ADTRAN Comments at 18.

are the subject of the *Comcast Decision* and the policy issues raised in the *Notice*.²³ Akamai itself is not a provider of broadband Internet access service because it does not offer IP data transmission service between end users and the Internet. Akamai does not operate at the physical transmission layer, like providers of broadband Internet access service to consumers. Unlike the cablecos and ILECs that have drawn the most scrutiny from the Commission in this proceeding, Akamai neither operates its own transmission facilities, nor does it control last-mile broadband access. In opposing new regulations, Time Warner Cable and AT&T completely overlook this fundamental difference between their operations and those of Akamai while appearing to argue, without justification, that if Time Warner and AT&T are to be regulated, the Commission should extend regulation broadly throughout the Internet to companies like Akamai.²⁴ Accordingly, the Commission should disregard the few unsupported comments in the record that attempt to lump together broadband Internet service providers and completely different content delivery companies like Akamai.

Moreover, some parties appear to assume wrongly that Akamai and its competitors serve only large, well-established customers. These parties appear to argue that open Internet regulations would disadvantage small businesses because such regulations would prevent broadband Internet access service providers from offering services to these businesses whose needs are allegedly not being met by Akamai and other similar market participants.²⁵ The premise of this argument is fallacious. Akamai's

²³ See Akamai Comments at 11-16.

²⁴ See, e.g., Time Warner Cable Comments at 21-22, 65, 89-90; AT&T Comments at 28, 117-118. Cf. Cisco Comments at 11-12.

²⁵ See, e.g., AT&T Comments at 35-36, 134, 222 n. 481; CONNECT Comments at 5. See also Letter from James W. Cicconi, Senior Executive V.P., External and

services, and those of its competitors, are available to even the smallest enterprises, and can help fledgling companies harness the power of the Internet to easily scale their online operations as their business grows without the need to invest in a costly hardware build-out.²⁶ Akamai customers – small and large enterprises alike – can and do utilize Akamai’s services to provide their end users with faster and more reliable access to the customers’ content and applications.²⁷ The Commission should not base its open Internet policies on erroneous arguments about the content delivery marketplace.²⁸

The practices of greatest concern in this proceeding – discrimination and blocking by providers of broadband Internet access services – *limit* end users’ ability to access the Internet. In contrast, Akamai caches its customers’ content on the Internet Edge and uses sophisticated techniques to retrieve and interact with dynamic content and applications from its customers’ origin servers so that end users can access what they seek more *quickly and efficiently*. Akamai’s services do not degrade any Internet user’s experience in order to service Akamai’s customers. Akamai accelerates and facilitates the delivery of its customers’ content and applications, without regard to the substance of the content. Akamai’s success depends on its ability to assure customers that end users can access the content and applications of their choice, without delay.

Legislative Affairs, AT&T, to Chairman Julius Genachowski, FCC, WC Docket No. 07-52, at 2-3 (Jan. 12, 2010). *Cf.* Information Technology and Innovation Foundation Comments at 19.

²⁶ Intense competition among content delivery providers has resulted in prices for content delivery services that have decreased substantially. *See, e.g.*, USTelecom Comments at 32-33 (describing the “collapsing price” of content distribution).

²⁷ *See* Clark, Lehr & Bauer Comments at 22 (“[W]e observe that many small providers of content do not host their own content, but contract with hosting services and content delivery networks (CDNs) to host their content, and this trend seems likely to accelerate with the emergence of large data centers and cloud computing.”).

²⁸ *See* Center for Democracy & Technology Comments at 25 n. 84.

The Commission should permit the services of Akamai and its content delivery competitors to develop freely, without regulation. Assuming that the Commission could establish jurisdiction over broadband Internet service providers, if the Commission were to decide to adopt regulations governing Internet openness, those regulations, like the *Proposed Rules*, should apply *at most* to broadband Internet access service providers, specifically cablecos and ILECs. The Commission should recognize that content and application delivery services like those of Akamai are used to improve traffic flow throughout the Internet – a “network of networks.”²⁹ In fact, by reducing “long distance” traffic across the Internet, Akamai’s services help relieve congestion throughout the Web, including traffic from non-Akamai customers that can travel more freely because of Akamai’s efficient delivery of its customers’ traffic.

IV. COMMISSION ACTION ON MANAGED OR SPECIALIZED SERVICES IS NOT WARRANTED AT PRESENT.

Commenters generally agree that the Commission’s discussion of “managed or specialized” services appears to focus on the creation of private, high speed networks or other offerings that will “supplant or otherwise negatively affect” the traditional open Internet.³⁰ In addition to content delivery services, Akamai provides a variety of services to enterprise customers that are designed to improve streaming video and other media,

²⁹ If the Commission nevertheless were to find that Akamai’s services are some form of network management, any such services would clearly constitute “reasonable network management practices” because of their ability to reduce or mitigate the effects of congestion throughout the Internet. *See* Akamai Comments at 16 n. 31. For example, if a broadband Internet access service provider incorporates Akamai’s services into its strategy for managing congestion on its network, the Commission should find that such activity by the provider would constitute “reasonable network management.” *Id.*

³⁰ *See, e.g.,* Center for Democracy & Technology Comments at 46-47, 48-49; Free Press Comments at 6, 104-112; Qwest Comments at 22-29; Sprint Comments at 38-39. *See also Notice*, 24 FCC Rcd at 13116, ¶149.

advanced websites, dynamic transactions, and a variety of online enterprise applications.³¹ Akamai has long described some of these services as “managed services,”³² which is a relatively widely used term in the Internet industry for services that a provider manages on behalf of a customer.³³ Akamai’s services pose none of the issues that the Commission raises in its discussion of “managed or specialized services.” Therefore, there is no reason for the Commission to even consider extending regulation to touch Akamai or similar Internet companies that provide such services. Because of the uncertain scope of this area³⁴ and the apparent lack of problems involving it, the Commission should not adopt any rules regarding managed services at this time.

V. CONCLUSION.

The Commission should be commended for its interest in Internet openness. However, the *Comcast Decision* obviously raises serious issues about the Commission’s authority to adopt regulations. As it considers its course in this area, the Commission should mitigate any potential negative effects of its actions on Internet innovation, development, and investment. Even if the Commission can establish its authority over

³¹ See Akamai Comments at 5-8.

³² See, e.g., *Akamai Investor Relations*, available at <http://www.akamai.com/html/investor/index.html> (last visited Apr. 26, 2010).

³³ See Free Press Comments at 104 n. 205 (“The use of the term ‘managed services’ in this context may be somewhat unfortunate, as the term already has a well established meaning in the enterprise IT markets, where it refers generally to services that could be self-provisioned by a client, but instead are provided by a service provider for a fee....”)

³⁴ The *Notice* describes “managed or specialized services” very broadly, as:
[IP]-based offerings (including voice and subscription video services, and certain business services provided to enterprise customers), often provided over the same networks used for broadband Internet access service, that have not been classified by the Commission.

See *id.*, 24 FCC Rcd at 13116, ¶ 148 (footnote omitted).

broadband Internet access service providers, the Commission should not seek to extend regulation to other services further in the Internet, including those provided by Akamai, and it should not seek to regulate managed or specialized services at this time.

Respectfully submitted,

Melanie Haratunian
*Senior Vice President, General Counsel &
Corporate Secretary*

/s/ Brian W. Evans
Brian W. Evans
Assistant General Counsel

AKAMAI TECHNOLOGIES, INC.
8 Cambridge Center
Cambridge, MA 02142
Voice: (650) 627-5472

April 26, 2010