Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Broadband Industry Practices	)	WC Docket No. 07-52

COMMENTS OF
THE WIRELESS COMMUNICATIONS ASSOCIATION INTERNATIONAL, INC.

The Wireless Communications Association International, Inc. ("WCA") hereby submits its comments on the Commission's *Notice of Inquiry* ("*NOI*") in the above-captioned proceeding.[1]

As the trade association of the wireless broadband industry, WCA has a direct and immediate interest in the Commission's inquiry into "the nature of the market for broadband" and the network management practices of broadband service providers.[2] As the Commission is well aware, WCA's members are investing billions of dollars in deployment of new wireless broadband services that will compete directly with cable modem, DSL and wireless incumbents. The progress the wireless broadband industry has made to date (and the success it is poised to achieve in the future) is attributable in no small part to the Commission's commitment to the core principles of technological neutrality and reliance on competitive forces, not government

[1] FCC 07-31 (rel. Apr. 16, 2007) ["*NOI*"].

[2] *Id.* at ¶ 1. WCA's membership includes a wide variety of wireless broadband system operators, equipment manufacturers and consultants who provide or support the provision of wireless broadband service in, *inter alia*, the licensed 700 MHz, 2.3 GHz, 2.5 GHz, 3.6 GHz, 28 GHz and 39 GHz bands, and the unlicensed 902-928 MHz, 2.4 GHz, 5 GHz and 60 MHz bands. As such, many of WCA's members fall squarely within the categories of entities that are the focus of the *NOI*. *See id.* at ¶ 8 ("We seek a fuller understanding of the behavior of broadband market participants today, including network platform providers, broadband Internet access service providers, other broadband transmission providers, Internet service providers, Internet backbone providers, content and application service providers, and others."). WCA also is a member of NETcompetition.org, an "e-forum" of service providers
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mandates, to maximize benefits to consumers. Hence, while WCA certainly does not oppose the Commission's effort to gather additional data about broadband practices, it is essential that the agency continue to preserve its deregulatory model and not be redirected down a path towards unnecessary and unproductive regulation designed to promote vague concepts of "net neutrality."

Above all else, it is imperative that wireless broadband providers remain free to manage their own networks in whatever manner they believe will maximize spectral efficiency and provide optimum value to their customers. The key point here is that wireless broadband is a *shared* medium, in that all users of a wireless broadband network share a limited amount bandwidth simultaneously. As a result, the actual speeds experienced by any one wireless broadband subscriber will constantly vary according to the amount of traffic created by other users of the shared spectrum resource at any given time. Network management, then, is a vehicle for moderating what otherwise would be unacceptable swings in performance – it permits a wireless broadband provider to optimize the performance of applications that have different bandwidth requirements, and, therefore, enables the provider to satisfy customer expectations as to how those applications should perform. Conversely, the absence of network management leaves a provider's quality of service subject to the vagaries of how many users are sharing the spectrum resource at a given time. That result invariably leads to customer dissatisfaction and, eventually, defections to other providers.[3]

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and trade associations created to promote debate about "net neutrality" regulation and its potential impact on the broadband industry and consumers.

[3] *See, e.g.*, Opposition of CTIA re: *Skype Communications S.A.R.L.*, RM-11361 at (v) (filed Apr. 30, 2007) ("The U.S. mobile wireless industry's success has been made possible, in part, by an environment of minimal regulatory intervention that has allowed licensees to manage their spectral environment and maximize innovation and efficiency both in the network and in handsets at network edges. This level of oversight is so critical because mobile wireless services are radio-based – utilizing a shared and finite resource that can be degraded by a single consumer's harmful use.") ["CTIA Opposition"].

The challenge of maintaining quality of service for VoIP is a case in point. It is well known that latency – the delay in packet delivery – is a major issue for providers of VoIP service. Even a slight delay in packet delivery can prevent VoIP callers from having a working conversation (*e.g.*, the delay in one party's receipt of what the other party is saying causes the parties to interrupt each other).[4] Consumers understandably find this unacceptable, as they expect VoIP calls to have the same quality of service as conventional calls made over a circuit switched network where sharing is not an issue. At the same time, latency is less relevant for other applications that are not as dependent on "real time" performance. For example, a wireless broadband user who downloads a spreadsheet or word-processing file is not as likely to be troubled by somewhat greater latency – the fact that the user's download might be slower than usual generally does not affect the user's ability to utilize the downloaded material thereafter. Hence, to satisfy the performance expectations of its customers, a wireless broadband provider must have the flexibility to manage its shared bandwidth in a manner that affords higher priority to applications that require low latency and lower priority to less latency-sensitive applications.[5]

Any loss of this network management flexibility due to net neutrality regulation would undermine the Commission's broader effort to promote broadband (wireless or otherwise) as a vehicle for new services that compete directly with traditional switched telephony and cable

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[4] *See, e.g., Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, 17 FCC Rcd 4798, 4818 n. 126 (2002) ("Applications such as video streaming, IP telephony, and video-conferencing are extremely bandwidth-and delay-sensitive, imposing unique QoS demands on the underlying network that carry them.").

[5] *Id.* ("In order to deploy real time applications over IP networks with an acceptable level of quality, certain bandwidth, latency, and jitter requirements, known as Quality of Service ("QoS"), must be guaranteed and met in a fashion that allows multimedia traffic to coexist with traditional data traffic on the same network. . . QoS guarantees network bandwidth and availability for applications. Any real time media stream that crosses a DOCSIS cable modem-compatible access link needs to be given prioritized traffic management treatment in order to assure the best user-perceived quality end-to-end.").

television services. Like VoIP, the delivery of video programming over broadband for real-time viewing by consumers requires a quality of service that cannot be assured over wireless broadband networks absent network management. As recently noted by NTIA Administrator John M.R. Kneuer, broadband "is not a risk-free investment," and network operators will have to make a business case to investors to convince them to fund network investment.[6] Investors thus are unlikely to continue devoting resources to VoIP applications if they perceive that the Commission's rules are preventing wireless broadband network operators from managing their networks as necessary to ensure that VoIP is a viable alternative to switched telephony. The same is true with respect to Internet video – investors will be loathe to invest in that application if they perceive that broadband service providers are unable to ensure that the experience of watching television or movies over the Internet is comparable or superior to what cable television service or DBS has to offer. Again, consumers see no benefit from that result.[7]

None of this needs to happen. Although the Commission suggests that net neutrality regulation might be appropriate in cases of "market failure,"[8] in the case of wireless broadband

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[6] *See* Stanton, "Kneuer Denies U.S. Government Role in Private, Muni Investment Decisions," TR Daily, June 8, 2007, http://www.tr.com/newsletters/trd/ (accessed June 15, 2007).

[7] *See e.g.*, Ford, Koutsky and Spivak , "Wireless Net Neutrality: From *Carterfone* to Cable Boxes," at 13 (attached as Exhibit F to CTIA Opposition) ("[T]he current government policy of promoting network-to-network competition between wireless service providers on all possible levels, including technology and standards, is benefiting United States consumers. Restructuring the industry through the regulation that proponents of wireless net neutrality are urging, a manner that would sacrifice network-to-network competition for the sake of promoting a concept that proponents term 'openness,' could likely impact the quantity, quality and prices of wireless network services."); Comments of Verizon Wireless, RM-11361, at (iii) (filed April 30, 2007) ("If Skype's regime were imposed, the business of wireless network operators would shift dramatically, from the current model in which they sell wireless service plans and equipment associated with those plans, to a model in which they primarily offer subscribers access to a wireless network. In this model, wireless network operators would have a decreased incentive to develop new products or services, because they would primarily be in the business of providing airtime access for products chosen by the consumer, deterring investment away from network upgrades.").

[8] *See NOI* at ¶ 11 ("If the Commission were to promulgate rules in this area, what would be the challenges in tailoring the rules only to reach any identified market failures or other specific problems, and not to prevent policies that benefit consumers?").

no such failure exists – the market is vigorously competitive.[9] And, with the anticipated launch of portable and mobile services based on the IEEE 802.16e-2005 standard in the coming year, the wireless broadband market will only become more competitive.[10] Accordingly, it would make little economic sense for a wireless broadband provider to engage in network management practices that discriminate against the content that that market demands. Indeed, the highly competitive nature of the wireless broadband market inevitably drives operators toward network management practices that enhance the quality and reliability of their service, since that is what consumers want. As NTIA Administrator Kneuer put it, there are "huge market disincentives" for service providers to engage in discriminatory network management practices that do not serve consumers' best interests.[11]

Moreover, even if the record were otherwise, there remains the question of whether the Commission has statutory authority to impose "net neutrality" regulation on the wireless

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[9] *See, e.g.*, CTIA Opposition at 14, quoting Commissioner Robert M. McDowell, Before the Subcommittee on Telecommunications and the Internet Committee on Energy and Commerce, United States House of Representatives (Mar. 14, 2007) ("Wireless growth is rising rapidly due to robust competition and technological innovation... [A]dvanced technologies allow customers to use new multimedia phones to watch TV, download songs, receive information and access content, such as sports, news and weather, at broadband speeds."); Hahn, Litan & Singer, "The Economics of 'Wireless Net Neutrality'," at 10 (attached as Exhibit E to CTIA Opposition) ("By almost any measure, the U.S. wireless market is highly competitive. Consumer choices are expanding and prices are declining.") ["HLS Paper"].

[10] *See , e.g.*, Buskirk, "Sprint Says It Easily Will Exceed Buildout Requirements," *Communications Daily*, p. 9 (June 15, 2007) ("Sprint plans to launch WiMAX by year-end with a larger roll-out offering service to at least 100 million people by year-end 2008. The first computers with embedded WiMax chips are expected next year."); Sharma, "DirecTV, EchoStar Set Tie With Clearwire," *The Wall Street Journal*, p. B4 (June 15, 2007) ("Clearwire . . . uses a wireless technology similar to WiMAX. With more than 258,000 subscribers and reaching 39 U.S. Markets, Clearwire wants to make its service available to 125 million people in five years , up from about 10 million currently. Its partnership with the leading satellite-TV providers – which together have about 30 million subscribers – will give the company access to a big market as it deploys its network.").

[11] *See* Stanton, n. 6 *supra*; HLS Paper at 24-25 ("Like any network operator, a wireless operator has limited tools to manage its scarce resource. A wireless operator must manage network resources so that all customers sharing those resources receive a reasonable quality of service. Placing direct restrictions on usage can actually increase economic welfare when metering usage is costly. For example, restricting certain bandwidth-intensive applications, such as streaming video or audio, webcam posts, automated data feeds, or VoIP, can help ensure that all customers receive a
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broadband industry. In the *NOI*, the Commission declares that it has the ability under Title I of the Communications Act of 1934, as amended ("Communications Act"), to enforce the net neutrality principles it announced in its 2005 Internet Policy Statement.[12] Nothing in Title I, however, specifically grants the Commission such authority. Recognizing that, the Commission relies on *dicta* in the United States Supreme Court's decision in *National Cable & Telecomm Ass'n v. Brand X Internet Services* ("*Brand X*"),[13] in which the Court stated that the Commission "has jurisdiction to impose additional regulatory obligations under its Title I ancillary jurisdiction to regulate interstate and foreign communications."[14]

The flaw in this argument, however, is that Court had no occasion to discuss the scope of that authority, which is far narrower than the Commission appears to suggest. This is made clear by the decision of the United States Court of Appeals for the District of Columbia Circuit setting aside the Commission's "broadcast flag" rule. There, the Court held that the Commission's "ancillary jurisdiction is limited to circumstances where: (1) the Commission's general jurisdictional grant under Title I covers the subject of the regulations and (2) the regulations are reasonably ancillary to the Commission's effective performance of its statutorily mandated responsibilities."[15] The Court warned that "[g]reat caution is warranted here, because the disputed . . . regulations rest on no apparent statutory foundation and, thus, appear to be

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high quality of service on today's primary services – namely, wireless voice and data transmission.") (footnotes omitted).

[12] *See NOI* at ¶ 4.

[13] 545 U.S. 967 (2005).

[14] *NOI* at ¶ 4, *quoting Brand X* at 967; *see also id.*, *quoting Brand X* at 996 ("The Commission remains free to impose special regulatory duties on facilities-based ISPs under its Title I ancillary jurisdiction. In fact, it has invited comment on whether it can and should do so.").

[15] *American Library Association v. FCC*, 406 F.3d 689, 700 (D.C. Cir. 2005).

ancillary to nothing."[16] It could "find nothing in the statute, its legislative history, the applicable case law, or agency practice indicating that Congress meant to provide the sweeping authority the FCC now claims."[17] The *NOI* does nothing to address specifically these limits on the Commission's Title I jurisdication.

Finally, whatever ancillary authority the Commission might have here must be read in the context of Section 230 of the Communications Act. There, Congress found that the Internet and other interactive computer services "have flourished . . . with a minimum of government regulation"[18] and declared that the "policy of the United States" is "to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, *unfettered by Federal or State regulation.*"[19] Both the Commission and the courts have acknowledged that the statute reflects Congress's clear preference for a national policy that eliminates regulatory burdens on the Internet.[20] Arguably, unless and until Congress amends the statute, any imposition of net neutrality regulation on the wireless broadband industry would be impossible to square with Section 230's mandate that the Internet be "unfettered by Federal or State regulation."[21] Likewise, for the reasons discussed above, such regulation would directly conflict with Section 706(a) of the Telecommunications Act of 1996, in which Congress directed

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[16] *Id.* at 702.

[17] *Id.* at 704.

[18] 47 U.S.C. § 230(a)(4).

[19] *Id.*, § 230(b)(2) (emphasis added).

[20] *See Petition for Declaratory Ruling that pulver.com's Free World Dialup is Neither Telecommunications Nor a Telecommunications Service*, Memorandum Opinion and Order, 19 FCC Rcd 3312, 3318-19 (2004); *see also id.* at n. 66 and the cases cited therein.

[21] Tellingly, the Commission omits subsections (a)(4) and (b)(2) from its quotation of Section 230 in footnote 1 of the *NOI.*

the Commission to, *inter alia*, "remove barriers to [advanced telecommunications] infrastructure investment."[22]

In sum, WCA agrees with Commissioner McDowell that the Commission "must resist the temptation to impose regulations that are based merely on theory."[23] Clearly, the *facts* confirm that there is no need for or benefit from net neutrality regulation of the wireless broadband industry. Both the industry and consumers have reaped substantial rewards without it, and there is no reason for the Commission to reverse those gains by regulating the network management practices of wireless broadband operators where there plainly is no need to do so. WCA therefore urges the Commission to remain charted on its deregulatory course and reject any attempts to impose net neutrality regulation on the wireless broadband industry.

WHEREFORE, for the reasons set forth above, WCA requests that the Commission terminate this proceeding, at least insofar as it relates to providers of wireless broadband services, in accordance with the comments set forth above.

Respectfully submitted,

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[22] Telecommunications Act of 1996, § 706(a).

[23] *NOI*, Statement of Commissioner Robert M. McDowell.