

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act	)	GN Docket No. 09-47
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act	)	GN Docket No. 09-137
	)	
To: The Commission		

**COMMENTS OF CTIA–THE WIRELESS ASSOCIATION®  
ON NBP PUBLIC NOTICE #25**

CTIA–The Wireless Association® (“CTIA”) submits the following comments on NBP Public Notice #25 inquiring into the relevant policy questions to be raised in a Notice of Inquiry (“NOI”) on the market-led transition in technology and services from the circuit-switched public switched telephone network (“PSTN”) to an Internet protocol (“IP”) based communications landscape.<sup>1</sup> For the reasons discussed below, CTIA urges the Commission to carefully consider a number of issues that could impact the move to more efficient all-IP networks.

---

<sup>1</sup> *Comment Sought on Transition from Circuit-Switched Network to All-IP Network, NBP Public Notice #25*, GN Docket Nos. 09-47, 09-51, and 09-137, Public Notice, DA 09-2517 (rel. Dec. 1, 2009) (“Public Notice”).

## I. INTRODUCTION

The Commission is correct that networks are transitioning from circuit-switched to IP-based technologies, and that IP networks are a “growing platform over which the consumer accesses a multitude of services, including voice, data, and video in an integrated way across applications and providers.”<sup>2</sup>

There is no question that this shift is real. As CTIA has observed on a number of occasions, U.S. consumers are demonstrating an overwhelming demand for broadband and mobility. In 1997, there were approximately 55 million wireless telephone subscribers.<sup>3</sup> Since that time, consumers have continued to rapidly adopt mobile wireless services. According to CTIA’s Semi-Annual Survey, by mid-2009 the number of wireless subscribers in the U.S. stood at 276.6 million.<sup>4</sup> Moreover, by the first half of 2009, more than one in five American households (22.7%) used wireless phone service as their only phone service, while another 14.7% of households received all or almost all of their calls on their wireless phones even though they have landline service.<sup>5</sup>

Wireless providers are aggressively deploying technology to provide IP-based services. Wireless carriers already are providing not only mobile voice but also mobile broadband

---

<sup>2</sup> Public Notice at 1.

<sup>3</sup> *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Third Annual CMRS Competition Report*, 13 FCC Rcd 19,746 app. B, at B-2 (1998).

<sup>4</sup> See June 2009 CTIA Semi-Annual Wireless Industry Survey, available at <http://www.ctia.org/advocacy/research/index.cfm/aid/10316> (last accessed Oct. 21, 2009) (“*CTIA Survey Summary*”).

<sup>5</sup> United States Centers for Disease Control and Prevention, National Center for Health Statistics, “Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-June 2009,” (rel. December 16, 2009), available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless200912.htm>.

services, and consumers are rapidly adopting these new services. The Commission's data show that, since 2005, mobile wireless providers have been the fastest-growing providers of both high-speed lines (over 200 kbps in at least one direction) and advanced service lines (over 200 kbps in both directions).<sup>6</sup> With more than 59 million high speed subscribers, mobile wireless broadband accounted for 45% of all broadband connection in the United States as of June 2008, according to the FCC's latest "High-Speed Services for Internet Access" report. In fact, by June 2009 3G subscribership in the U.S. had risen to more than 103 million subscribers according to the Informa Telecom & Media Group's World Cellular Information System ("WCIS") database.<sup>7</sup> Data from the Pew Internet & American Life Project earlier this year revealed that, as of April 2009, 69 percent of adults had used mobile devices for non-voice activities, and 51 percent of adults had logged onto the Internet wirelessly.<sup>8</sup>

As Chairman Genachowski has observed, "[t]o be the global leader in innovation 10 years from now, we need to lead the world in wireless broadband."<sup>9</sup> To do so, the Commission must ensure that its regulatory structures are ready for the mobile broadband future. In these comments, CTIA proposes certain specific areas for reform that should be included in the Commission's discussion of how to prepare for the transition to an all-IP world in the context of a National Broadband Plan. As the Commission moves forward with the National Broadband

---

<sup>6</sup> HIGH-SPEED SERVICES FOR INTERNET ACCESS: STATUS AS OF JUNE 30, 2008, Industry Analysis and Technology Division, WTB (August 2009) at tbls. 1-2.

<sup>7</sup> *Id.* at tbl. 2.

<sup>8</sup> John Horrigan, Associate Director, Pew Internet & American Life Project, Data Memo, *Mobile Access to Data and Information 1* (March 2008), (available at <http://www.pewinternet.org/Press-Releases/2008/Mobile-Access-to-Data-and-Information.aspx>); Informa Telecom & Media Group, World Cellular Information System Database (last accessed Dec. 18, 2009).

<sup>9</sup> Prepared Remarks of Chairman Julius Genachowski, "Innovation in a Broadband World," The Innovation Economy Conference, Washington, DC (Dec. 1, 2009) at 7 (available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-294942A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-294942A1.pdf)).

Plan, it should ensure that it does not impede the transition of telecommunications and information networks to the most efficient network architecture.

## II. PROVIDING REGULATORY PARITY DURING THE TRANSITION

The Commission should ensure regulatory parity among providers during the transition from predominantly circuit-switched to IP networks. The Commission should explore how to ensure that neither circuit-switched nor IP-based providers are advantaged or disadvantaged by regulatory structures while the two types of networks operate concurrently and compete with one another.

For example, the Commission's current rules for Voice over Internet Protocol ("VoIP") providers subject "interconnected" VoIP providers – those that both originate and terminate voice calls on the PSTN (as a single service) – to many of the same obligations traditionally imposed on telecommunications carriers (*e.g.*, USF contributions, CALEA, E911, and TRS).<sup>10</sup>

---

<sup>10</sup> See 47 C.F.R. §§ 6.1(d) (disabilities access), 9.5 (911/E911), 43.11(a) (Form 477 reporting), 52.17(c) (NANPA contributions), 52.32(e) (LNPA contributions), 52.35 (number porting), 54.706(a)(18) (universal service), 64.601(b) (TRS fund/711 dialing), 63.60(a) (service discontinuance), and 64.2003(o) (CPNI); *IP-Enabled Services*, Report and Order, 24 FCC Rcd 6039 (2009) (service discontinuance); *Local Number Portability Porting Interval and Validation Requirements, Telephone Number Portability*, Report and Order and Further Notice of Proposed Rulemaking, 24 FCC Rcd 6084, ¶ 8 (2009) (LNP); *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice Over Internet Protocol (VoIP) Subscribership*, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 9691, ¶ 25 (2008) (Form 477); *Telephone Number Requirements for IP-Enabled Services Providers, et al.*, 22 FCC Rcd 19531 (2007) (LNP and LNPA/NANPA contributions); *Communications Assistance for Law Enforcement Act and Broadband Access and Services*, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 14989, ¶ 8 (2005), *aff'd American Council on Education v. FCC*, 451 F.3d 226 (D.C. Cir. 2006) (CALEA); *IP-Enabled Services, et al.*, Report and Order, 22 FCC Rcd 11275 (2007) (TRS and disabilities access); *Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information; IP-Enabled Services*, 22 FCC Rcd 6927, ¶ 54 (2007), *aff'd NCTA v. FCC*, 555 F.3d 996 (D.C. Cir. 2009) (CPNI); *Universal Service Contribution Methodology*, (continued on next page)

However, there are VoIP offerings that arguably are set up so as to avoid these FCC requirements. CTIA believes that the Commission must review the regulatory requirements of these services. Similarly, there are outstanding questions about how the current intercarrier compensation rules apply to traffic that originates or terminates on IP-based networks.<sup>11</sup> These and other issues raise fundamental questions about how to ensure that all players in the increasingly complex communications and broadband marketplace can compete on a level playing field to maximally benefit consumers.

### **III. ENSURING THAT THE OPEN INTERNET PROCEEDING DOES NOT IMPEDE THE TRANSITION**

As the Commission considers the transition of networks to IP (as well as the National Broadband Plan and the *Open Internet NPRM*),<sup>12</sup> it should be wary of the unintended consequences that can result from the imposition of network management restrictions on wireless networks, particularly as the level of sharing between services increases with the move to an all-IP network. As the Commission has acknowledged, wireless telecommunications and broadband Internet access services are part of a complex ecosystem in which everyone –

---

Report and Order and Notice of Proposed Rulemaking, 21 FCC Rcd 7518, ¶¶ 38-49 (2006), *aff'd in relevant part, Vonage Holdings Corp. v. FCC*, 489 F.3d 1232 (D.C. Cir. 2007) (universal service); *IP-Enabled Services; E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245 (2005), *aff'd, Nuvio Corp. v. FCC*, 473 F.3d 302 (D.C. Cir. 2006) (E911).

<sup>11</sup> See, e.g., *Pleading Cycle Established for Petition of the Embarq Local Operating Companies for Forbearance from Enforcement of Section 69.5(a) of the Commission's Rules, Section 251(b) of the Communications Act and Commission Orders on the ESP Exemption*, Public Notice, 23 FCC Rcd 348 (WCB 2008).

<sup>12</sup> *Preserving the Open Internet, Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Notice of Proposed Rulemaking, 24 FCC Rcd 13064 (2009) (“*Open Internet NPRM*”).

including consumers – benefit from increased investment by network providers.<sup>13</sup> Regulation of one area of this interdependent ecosystem will create impacts in other areas, and the Commission should be cognizant of the potential for the unintended consequence of providing a disincentive to the transition to IP-based networks.

The interdependence of the disparate components of the wireless ecosystem – and thus the potential for unintended consequences – has grown as the wireless marketplace has evolved beyond the traditional model of a single point of contact with the consumer. Wireless consumers have multiple points of contact with the wireless ecosystem depending on how individual consumers decide to make wireless broadband and other services a part of their lives. The relevance of net neutrality rules to the transition from circuit-switched to IP-based communications is clearest with regard to VoIP applications. As wireless providers transition to all-IP systems, VoIP – whether provided by the carrier or by a third-party application developer – will be packet data commingled with all other data requests on the network. However, because VoIP is sensitive to latency, carriers will need the flexibility to provide packet prioritization for VoIP in order to maintain quality of service. Moreover, absent this ability, carriers may delay IP network upgrade plans in order to be assured they can maintain quality voice service.

The rules proposed in the *Open Internet NPRM* would by their terms apply to providers of broadband Internet access services, but would not appear to impose similar restrictions on other entities in the wireless ecosystem, like app stores and developers – or on circuit-switched providers. This creates the potential for unintended consequences, which is magnified when

---

<sup>13</sup> See generally, e.g., *Fostering Innovation and Investment in the Wireless Communications Market, A National Broadband Plan For Our Future*, GN Dockets 09-157 and 09-51, Notice of Inquiry, FCC 09-66 (rel. Aug. 27, 2009).

both Internet traffic (which would be subject to openness regulations) and non-Internet traffic (which would not) are carried over the same medium from end-to-end – as is the case with wireless networks. And, despite the *Open Internet NPRM*'s stated concern about broadband network operators' conduct, most recent examples of actions that have or may raise questions at the Commission have not involved Internet service providers, but application providers and operating system developers. Prominent examples include:

- *Google Voice*: Google Voice has come under fire for blocking access to certain NPA-NXX exchanges because of high termination rates.<sup>14</sup>
- *Speakeasy*: Same as Google Voice.
- *Apple/Google*: Apple's failure to approve the Google Voice app for the iPhone app store resulted in a Letter of Inquiry from the Wireless Telecommunications Bureau.<sup>15</sup>
- *Apple/Palm iTunes*: Palm used Apple's unique USB device identifier so that iTunes will treat the Palm Pre as an iPod. The USB Forum largely supported Apple's efforts to stop Palm from doing so.<sup>16</sup>
- *News Corp./Google*: News Corp. is considering making all of its content pay content to prevent Google and others from giving it away.<sup>17</sup>

While CTIA believes that when it comes to net neutrality regulation the Commission should refrain from applying the rules to wireless broadband, it is important that the Commission carefully consider the potential for unintended consequences on the transition from circuit-switched to IP networks.

---

<sup>14</sup> See Letter from Sharon Gillett, Chief, Wireline Competition Bureau, to Richard Whitt, Google, DA 09-2210 (rel. Oct. 9, 2009).

<sup>15</sup> See Letter from James Schlichting, Acting Chief, Wireless Telecommunications Bureau, to Catherine Novelli, Apple Inc., 24 FCC Rcd 10167 (2009).

<sup>16</sup> See, e.g., "Apple-Palm Wars: Apple Wins iTunes Syncing Battle," Fast Company (Sept. 23, 2009), available at <http://www.fastcompany.com/blog/kit-eaton/technomix/apple-palm-wars-apple-wins-itunes-syncing-battle>.

<sup>17</sup> See, e.g., "Murdoch Could Block Google Searches Entirely," The Guardian (Nov. 9, 2009), available at <http://www.guardian.co.uk/media/2009/nov/09/murdoch-google>.

#### IV. ACCOUNTING FOR THE IMPACT OF THE NETWORK TRANSITION ON UNIVERSAL SERVICE AND INTERCARRIER COMPENSATION

As the Commission considers the move to all-IP networks, CTIA again urges the Commission to take this opportunity to rationalize the universal service and intercarrier compensation regimes to better reflect the realities of today's communications marketplace and technology.<sup>18</sup> CTIA has argued consistently that the universal service and intercarrier compensation systems must be modernized to reflect current consumers' overwhelming preference for mobile broadband services over stand-alone fixed voice service.<sup>19</sup> The transition from circuit-switched to IP-based networks is a key element of this technological and marketplace change. Thus, it should be a part of the Commission's inquiry into this issue.

Indeed, the transition from circuit-switched to IP-based networks is already a significant factor in a number of pending Commission proceedings in the universal service and intercarrier compensation reform dockets. The primary example is, of course, the ongoing dispute regarding compensation for traffic that originates or terminates on IP networks.<sup>20</sup> Another example is the Coalition for Equity in Local Switching Support's petition to increase universal service payments for legacy circuit-switched equipment.<sup>21</sup> CTIA believes that these proceedings all touch on

---

<sup>18</sup> See *supra* Section I (demonstrating Americans' overwhelming demand for mobile and broadband services).

<sup>19</sup> See, e.g., CTIA Comments on NBP PN #19, GN Docket Nos. 09-47, 09-51, and 09-137 (filed Dec. 7, 2009).

<sup>20</sup> See, e.g., *Pleading Cycle Established for Petition of the Embarq Local Operating Companies for Forbearance from Enforcement of Section 69.5(a) of the Commission's Rules, Section 251(b) of the Communications Act and Commission Orders on the ESP Exemption*, Public Notice, 23 FCC Rcd 348 (WCB 2008).

<sup>21</sup> *High-Cost Universal Service Support; Coalition for Equity in Switching Support Petition for Clarification*, WC Docket No. 05-337, Order and Notice of Proposed Rulemaking, FCC 09-98 (rel. Oct. 9, 2009). See also CTIA Comments, WC Docket No. 05-337 (filed Nov. 24, 2009).

reforms that the Commission must consider as networks evolve to leave the switched world behind in favor of more efficient IP-based networks.

### **CONCLUSION**

CTIA lauds the Commission for its initiative in recognizing the need for a proceeding to consider the transition from circuit-switched to IP-based networks, and recommends that the proceeding address the matters discussed herein.

Respectfully submitted,

By: David J. Redl

David J. Redl,  
Director, Regulatory Affairs

Michael F. Altschul  
Senior Vice President, General Counsel

Christopher Guttman-McCabe  
Vice President, Regulatory Affairs

Scott K. Bergmann  
Assistant Vice President, Regulatory Affairs

**CTIA–The Wireless Association®**  
1400 16<sup>th</sup> Street, NW, Suite 600  
Washington, DC 20036  
(202) 785-0081  
[www.ctia.org](http://www.ctia.org)

December 22, 2009