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

In the Matter of )  
 )  
Framework for Broadband Internet Service ) GN Docket No. 10-127  
 )

T-Mobile USA, Inc. (“T-Mobile”) submits these reply comments in response to comments filed regarding the Notice of Inquiry (“*NOI*”) released on June 17, 2010 in the above-captioned proceeding.<sup>1</sup>

**INTRODUCTION AND SUMMARY**

The comments support T-Mobile’s view that the Federal Communications Commission (“Commission”) should defer making any decision to reclassify the transmission or connectivity component of wireless broadband as a telecommunications service. First, the comments point out significant differences – in terms of technology, market competition, innovation, business practice, and stages of technological and business plan development – between wireless and wireline broadband. These differences require an alternative, less regulatory approach for wireless broadband. Second, most consumers currently view wireless broadband as distinct from wireline broadband and deserving of less regulation. Third, increased regulation of wireless broadband at this crucial stage could thwart promising Commission initiatives in a number of areas where robust wireless broadband is critical (including health care, education, energy and the environment, disabilities access, civic engagement and public safety) and could slow job

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<sup>1</sup> *Framework for Broadband Internet Services*, Notice of Inquiry, FCC 10-114, GN Docket No. 10-27 (rel. June 17, 2010) (“*NOI*”).

growth and investment. Fourth, because of the unique technological issues associated with the management of wireless broadband networks, wireless broadband is the optimal candidate for an alternative voluntary, consensus-driven technical advisory-based approach for resolving network management issues.

## **I. THE COMMENTS HIGHLIGHT SIGNIFICANT DIFFERENCES BETWEEN WIRELESS AND WIRELINE BROADBAND THAT JUSTIFY CONTINUED REGULATORY RESTRAINT FOR WIRELESS**

T-Mobile agrees that the Commission should regulate similar services in a consistent and uniform manner.<sup>2</sup> However, contrary to the claims of a few commenters,<sup>3</sup> the record demonstrates that wireless and wireline broadband Internet services are not similar services.<sup>4</sup> Even public interest commenters concede that “wireless access *cannot* currently be considered a substitute for wired access”<sup>5</sup> and note the Commission’s own conclusion in the National Broadband Plan (“NBP”)<sup>6</sup> that “wireless broadband (whether fixed or mobile) is not an effective

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<sup>2</sup> See, e.g., Comments of Cablevision Systems Corporation at 38 (“Cablevision Comments”) (no basis “for treating the same service” differently); Comments of Bright House Networks, LLC at 15 (“Bright House Comments”) (supporting fair and uniform application of rules).

<sup>3</sup> See, e.g., Comments of The National Cable & Television Association at 84; Cablevision Comments at 37-39; Bright House Comments at 13-14.

<sup>4</sup> See, e.g., Comments of MetroPCS Communications, Inc. at 38-39 (“MetroPCS Comments”); Comments of CTIA – The Wireless Association® at 54-66 (“CTIA Comments”); Comments of Qualcomm Incorporated at 1-3 (“Qualcomm Comments”); Comments of Sprint Nextel Corporation at 20-21 (“Sprint Nextel Comments”); Comments of Verizon and Verizon Wireless at 77-78 (“Verizon Comments”); Comments of Leap Wireless International, Inc. and Cricket Communications at 6 (“Leap Comments”); Comments of Samsung Telecommunications America, LLC at 5-6 (“Samsung Comments”); Comments of Computer & Communications Industry Association at 24-25 (“CCIA Comments”); Comments of Clearwire Corporation at 7 (“Clearwire Comments”).

<sup>5</sup> Comments of Center for Media Justice, Consumers Union, Media Access Project, and New America Foundation at 20 (“Public Interest Comments”) (emphasis in original).

<sup>6</sup> See Federal Communications Commission, *Connecting America: The National Broadband Plan* (rel. Mar. 16, 2010), available at [www.broadband.gov](http://www.broadband.gov) (“NBP”).

substitute for high-speed wireline service and ‘may not be an effective substitute in the foreseeable future.’”<sup>7</sup>

### **A. Network Management Flexibility is Critical for Wireless Networks Due to Unique Characteristics that Constrain Capacity**

The essential input for any wireless network – spectrum – is a finite resource that limits providers’ ability to expand capacity.<sup>8</sup> Cell site capacity is dynamically shared among users and applications (*e.g.*, voice and data), with usage patterns that are often impossible to predict due to the mobility of users.<sup>9</sup> Communication paths are also subject to unpredictable external factors, both natural and manmade, that can create interference and reduce capacity.<sup>10</sup> These challenges do not exist for wireline networks, despite attempts by some cable commenters to blur the distinction.<sup>11</sup>

The unique characteristics of wireless networks militate against imposing a more burdensome and constraining “Third Way” regulatory framework on wireless broadband. As Qualcomm notes, “maintaining [mobile wireless] providers’ network management flexibility is

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<sup>7</sup> Comments of Free Press at 121 (“Free Press Comments”) (citing NBP at 37); *see also* Comments of Center for Democracy and Technology at 18 (“CDT Comments”) (acknowledging technical distinctions between wireless and wireline broadband).

<sup>8</sup> *See, e.g.*, Leap Comments at 7.

<sup>9</sup> *See, e.g.*, Sprint Nextel Comments at 21.

<sup>10</sup> *See, e.g.*, Qualcomm Comments at 6 (“The realities of the RF environment introduce added complexity and variability . . . and require service providers to implement an increasing array of tools that allow providers to offer the best service to the greatest number of users.”).

<sup>11</sup> For example, Bright House makes light of wireless capacity constraints, arguing that “even a so-called ‘wireless’ service is only ‘wireless’ to the nearest antenna,” ignoring that regardless of the distance covered by the wireless link, it still creates a bottleneck that limits the amount of traffic that can be carried. *See* Bright House Comments at 13-14 and n.29. Likewise, the fact that Bright House and other cable providers offer Wi-Fi connectivity to their customers does not turn them into wireless broadband providers with the same network management flexibility needs as providers operating mobile networks. *See id.* at 14. For example, while Wi-Fi networks provide for some portability, their short-range nature does not allow for true mobility, which dramatically decreases complexity and avoids the problem of large, unpredictable numbers of users requesting service from any single access point. Moreover, residential Wi-Fi networks are usually secured, further reducing unpredictable usage patterns.

essential to supporting the exploding data demands of users” and to promoting innovative bandwidth conservation mechanisms.<sup>12</sup> “Operators must be able to offer choices to users and enable the scarce spectrum resources to be conserved via any number of reasonable economic and technical means,”<sup>13</sup> which could be limited if the Commission changes its existing “light touch” regulatory regime. Moreover, the proliferation of third-party smart device applications requires that mobile wireless broadband providers have the flexibility to ensure that such applications do not degrade the quality of the user experience or otherwise harm subscribers.<sup>14</sup> For these and similar reasons, Verizon and Google jointly concluded in their recent legislative framework proposal for ensuring an open Internet that wireless broadband should not be subject to the same net neutrality framework as wireline broadband, citing the “unique technical and operational characteristics of wireless networks, and the competitive and still-developing nature of wireless broadband services.”<sup>15</sup>

Under the Third Way approach, wireless broadband providers would become subject to the “non-discrimination” and “reasonable practices” obligations in Sections 201 and 202 of the Communications Act.<sup>16</sup> These provisions would limit providers’ network management options,

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<sup>12</sup> Qualcomm Comments at 4 (noting the need for flexibility in business plans, such as the ability to charge more for real-time applications, or to offer plans that allow only certain devices or otherwise provide consumers “only the wireless content and services they desire”).

<sup>13</sup> *Id.* at 5; *see also* Sprint Nextel Comments at 21 (stating that flexibility is also needed to protect consumers by denying “access to a content, application, or service provider” acting fraudulently or otherwise engaged in commercially harmful activity).

<sup>14</sup> *See, e.g.*, “BBC crafts malicious smartphone app to prove a point... we guess,” available at <http://www.engadget.com/2010/08/11/bbc-crafts-malicious-smartphone-app-to-prove-a-point-we-guess/> (last visited Aug. 11, 2010).

<sup>15</sup> *See* “Verizon-Google Legislative Framework Proposal,” available at <http://www.scribd.com/doc/35599242/Verizon-Google-Legislative-Framework-Proposal> (last visited Aug. 9, 2010) (“Verizon-Google Proposal”).

<sup>16</sup> The Commission may subject broadband providers to similarly ambiguous net neutrality rules. *See Preserving the Open Internet*, Notice of Proposed Rulemaking, 24 FCC Rcd 13064 (2009) (“*Open Internet NPRM*”).

either explicitly or as a result of providers' inability to determine in advance what would be acceptable as "reasonable network management." As Sprint Nextel and others expressed in the *Open Internet* proceeding, effective network management decisions, especially those related to network security, need to be made quickly given the fluid nature of wireless networks, as "providers as well as their customers cannot afford to wait while network engineers and company lawyers discuss what is, or is not, permitted."<sup>17</sup>

Despite the position of some commenters, merely taking into account the technological differences between wireless and wireline networks in the determination of what is reasonable network management is insufficient.<sup>18</sup> A regime of *post-hoc* analysis of what is "reasonable" would discourage providers from taking advantage of tools that could improve network performance for the vast majority of users. And, such a regime would also reduce innovation and consumer choice by ruling out certain new service options<sup>19</sup> in addition to chilling investment in wireless broadband.<sup>20</sup> Because effective network management is such a critical and challenging component in a successful wireless network, an across-the-board application of

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<sup>17</sup> Reply Comments of Sprint Nextel, GN Docket No. 09-191 at 26-27 (filed April 26, 2010); *see also* Reply Comments of T-Mobile USA, Inc., GN Docket No. 09-191 at 36 (filed April 26, 2010) ("T-Mobile Open Internet Comments") (new mandates "would likely have a chilling effect, causing providers to hesitate and consult lawyers at a time when their first priority should be protecting the network and their customers").

<sup>18</sup> *See, e.g.*, Public Interest Comments at 20; CCIA Comments at 24; CDT Comments at 18.

<sup>19</sup> *See* Comments of AT&T Inc. at 112 ("AT&T Comments") ("even more than wireline broadband providers, wireless providers have invested in business ventures with application, search and content providers and various targeted machine-to-machine (M2M) operations that could be found to be legally or practically incompatible with Title II requirements").

<sup>20</sup> As AT&T notes, the 700 MHz C Block auction provides a vivid example of how such a regime can impact investor valuations. There, the common carrier-like open platform obligations imposed on the C Block resulted in a winning bid that was approximately 40% below what the spectrum would have been expected to sell for without the restriction. *See* AT&T Comments at 111 and n.190.

the Third Way approach would be viewed by investors as having a greater negative impact on wireless broadband services.<sup>21</sup>

### **B. Identifying a Severable Transmission Component is Not Tenable for Wireless Broadband Services**

Whatever the Commission’s putative factual justifications for identifying a severable transmission component of wireline broadband Internet service, doing so in the wireless broadband context is virtually impossible. “[W]ireless devices and their transmission and data processing capabilities are closely integrated within the wireless broadband network”<sup>22</sup> rather than being on the network “edge.”<sup>23</sup> Samsung notes that:

[Wireless] broadband-enabled features and services, including applications, are implemented and coordinated actively in both the network and the handset to ensure their performance and reliability. They cannot technically be separated as the Commission seems to imply.<sup>24</sup>

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<sup>21</sup> See Charles M. Davidson and Bret T. Swanson, Net Neutrality, Investment & Jobs: Assessing the Potential Impacts of the FCC’s Proposed Net Neutrality Rules on the Broadband Ecosystem, at 42-43 (June 2010), available at [http://www.nyls.edu/user\\_files/1/3/4/30/83/Davidson%20&%20Swanson%20-%20NN%20Economic%20Impact%20Paper%20-%20FINAL.pdf](http://www.nyls.edu/user_files/1/3/4/30/83/Davidson%20&%20Swanson%20-%20NN%20Economic%20Impact%20Paper%20-%20FINAL.pdf) (last visited Aug. 11, 2010) (“If wireless service providers ... see they will not be able to deploy the technologies and execute the business plans that make the network both user-friendly and financially viable, they will not be able to convince their investors to supply the necessary tens of billions of dollars of new risk capital.”).

<sup>22</sup> CTIA Comments at 55.

<sup>23</sup> See, e.g., Comments of The GSM Association, GN Docket No. 09-191 at 16 (filed Jan. 14, 2010) (“[U]nlike devices in the wireline broadband context, mobile phones are part of the mobile Internet network.”); Comments of the Telecommunications Industry Association, GN Docket No. 09-191 at 16 (Jan. 14, 2010) (“the handset is not outside the ‘edge’ of the network, but is an integrated part of the intelligent network itself”); T-Mobile Open Internet Comments (attached Declaration of Grant Castle at ¶ 11) (“In contrast to the wireline network, wireless networks are affected by the types of devices on the network and how they operate, because as devices communicate with the network, they consume network resources in ways that can be more or less efficient and that can affect other users more or less radically.”).

<sup>24</sup> Samsung Comments at 6.

Indeed, the Commission’s licensing scheme recognizes this integration of wireless devices with the network by establishing that the devices operate under the authority of the network operator, not the consumer.<sup>25</sup>

Wireless broadband transport and information/signaling structures are also heavily integrated. A technical analysis submitted by CTIA (“Marinho Paper”) concluded that:

3G and 4G wireless networks increasingly integrate the broadband transport function much more so than the cable and wireline network architectures. The proposed attempt to identify the “Internet connectivity component” of a wireless network (as compared to the rest of the Broadband Internet service) cannot be accomplished with today’s wireless networks or standards.<sup>26</sup>

The Marinho Paper explained that the network’s interactions with the mobile device and the user’s IP Content streams are all carried by IP data packets and that “[t]o separate them into multiple and redundant data packets would create significant inefficiency and disruptions and would ultimately impact the overall performance of the network.”<sup>27</sup>

Similarly, Verizon submitted a detailed technical declaration (“Verizon Declaration”) concluding that the architecture and operation of mobile broadband networks “demonstrate that it is impossible to separate the ‘transmission’ aspect of mobile broadband service from the information processing that is taking place over the wireless network.”<sup>28</sup>

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<sup>25</sup> See, e.g., 47 C.F.R. § 1.903(c) (subscribers’ authority for the operation of mobile stations “in included in the authorization held by the licensee providing service to them”); 47 C.F.R. § 22.3(b) (same).

<sup>26</sup> See Marinho, J., “Wireless Transport Separation – Technical Facts” at 6 (July 15, 2010) (attachment to the CTIA Comments) (“Marinho Paper”). The Marinho Paper contains diagrams of the network architecture in GSM and CDMA networks that illustrate “the tight coupling of both transmission/transport and ‘computing functionality.’” *Id.* at 3.

<sup>27</sup> *Id.* at 4.

<sup>28</sup> See Joint Declaration of Jeannie H. Diefenderfer and Thomas K. Sawanobori at 11 (July 15, 2010) (Attachment B to the Verizon Comments) (“Verizon Declaration”). This declaration provides numerous examples of network components that integrate the transmission and information processing functions, such as the Home Agent component, which “stores assignments of IP addresses to devices for each session initiated by the customer and performs protocol conversion and translation from CDMA to IP,” in addition to playing a critical role in prioritizing traffic to ensure the appropriate quality of service,

Moreover, certain user applications are integrated with and dependent upon the mobile device and the broader wireless network. For example, geo-location applications rely on a GPS chip in the handset and, in some cases, information provided by the network through cell site triangulation.<sup>29</sup> And, when a customer activates Verizon Wireless's Parental Control feature, every Internet access request from the subscriber's child is processed by the company's servers to determine if it is consistent with the control setting selected by the parent.<sup>30</sup> Additionally, some websites and applications send information to the user in a format that is customized for viewing on mobile handsets based on information sent by the wireless device or network.<sup>31</sup> Because of the tight integration of information services and devices into the wireless broadband network, any attempt by the Commission to identify an "Internet connectivity service" as a separate telecommunications component of wireless broadband Internet service would be an artificial distinction, created without regard to how wireless broadband networks actually operate.

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depending on the nature of the traffic. *Id.* at 11. In addition, the Verizon Declaration discusses the use of the Wireless Application Protocol, which converts web pages into a form that can be used with the small screens and limited navigation controls of a mobile phone, noting that "the user's connection to a broadband network is integrated with the computer [the handset] that processes the information for screen display." *Id.* at 9.

<sup>29</sup> See "Geolocation 101: How It Works, the Apps, and Your Privacy," PC World (Mar. 29, 2010), available at [http://www.pcworld.com/article/192803/geolocation\\_101\\_how\\_it\\_works\\_the\\_apps\\_and\\_your\\_privacy.html](http://www.pcworld.com/article/192803/geolocation_101_how_it_works_the_apps_and_your_privacy.html).

<sup>30</sup> See Verizon Declaration at 12-13.

<sup>31</sup> Indeed, the existence of applications and websites developed specifically for use on wireless networks, including geo-location and mobile commerce applications, challenges the argument made by Scott Jordan that wireless networks are not justified in implementing different traffic management practices above the network layers, at OSI layers 4-7. See Jordan, S., "Do wireless networks merit different net neutrality than wired networks?" (unpublished manuscript submitted as *ex parte* presentation in GN Docket 09-191) at 14-15 (Mar. 22, 2010). The fact that there are observable differences in the functioning of mobile and non-mobile applications in OSI layer 7 (the application layer) highlights the flaw in Jordan's conclusion, as does the fact that some of the greatest cybersecurity vulnerabilities exist at the application and device levels, not at the network level. See Comments of AT&T Inc., PS Docket No. 10-93 at 4 (filed July 12, 2010).

### **C. The Robust Retail Competition Among Wireless Broadband Providers Renders Additional Regulation Unnecessary and Counterproductive**

The retail market for wireless broadband services is highly competitive. As of November 2009, an estimated 58% of the U.S. population had a choice of *at least four wireless* broadband providers, and 76% of Americans could choose between three.<sup>32</sup> And, this number is rapidly trending upward – the percentage of Americans with a choice of three mobile wireless broadband providers increased by 50% from May 2008 to November 2009.<sup>33</sup> With the majority of Americans having a choice between four or more different providers, wireless services “are subject to particularly intense and continually growing competition, with ongoing investment and innovation.”<sup>34</sup> Providers compete on price as well network reliability, coverage and capacity.<sup>35</sup> As Verizon notes, “even as speeds and capabilities have increased, wireless data plans have fallen in price both on an absolute scale and on a per-megabyte basis.”<sup>36</sup> Moreover, wireless providers are making massive investments in their networks to remain competitive. The NBP reported that wireless industry capital expenditures related to broadband is expected to be approximately \$12 billion in 2010, with increasing sums to be spent in subsequent years as providers roll out services capable of 4G speeds.<sup>37</sup>

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<sup>32</sup> See *Fourteenth Annual Report on Wireless Competition*, WT Docket No. 09-66, FCC 10-81 at ¶ 47 (rel. May 20, 2010) (“*2010 Wireless Competition Report*”).

<sup>33</sup> See *id.*

<sup>34</sup> Verizon Comments at 74.

<sup>35</sup> See CTIA Comments at 20 (citing national advertising campaigns by Verizon and AT&T touting the extent and quality of their 3G services, and noting that competition in the broader wireless services market, which includes broadband services, has driven prices down, with the average consumer bill falling 3.8 percent from year-to-year). See also T-Mobile Open Internet Comments at 14 (filed Jan. 14, 2010) (“Providers recognize that what sells is *more, better, and faster* access to the Internet and as much compelling content and applications as possible.”).

<sup>36</sup> Verizon Comments at 70 (citing data plan price reductions of the major providers).

<sup>37</sup> NBP at 40. Moreover, according to CTIA, more than \$285 billion in cumulative capital expenditures on wireless networks had been committed by the end of 2009. See CTIA Comments at 21.

The intense retail competition in the wireless broadband market has made providers extremely responsive to consumer demand by opening their systems, providing for VoIP, enabling access to Wi-Fi, allowing the unlocking of handsets, and permitting customers to use their own compatible devices and applications.<sup>38</sup> T-Mobile agrees with Qualcomm that, given this “vibrant and highly competitive market, there is absolutely no need to impose further regulatory burdens on this sector of the economy.”<sup>39</sup>

#### **D. Wireless Broadband Providers Have Already Taken Steps To Ensure Transparency by Disclosing Network Management Practices**

Wireless broadband providers have already taken steps to ensure that consumers have the information necessary to evaluate service offerings.<sup>40</sup> In addition, CTIA’s updated Consumer Code for Wireless Service, due to go into effect in January 2011, requires signatory companies, to disclose whether there are “network management practices that will have a material impact on the customer’s wireless data experience.”<sup>41</sup> Signatory providers will also disclose any data allowances offered in a service plan and whether there are any prohibitions on data service usage.<sup>42</sup> This voluntary self-regulation eliminates the need to further improve transparency with respect to wireless network management as a basis for reclassification.

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<sup>38</sup> In addition, the recent U.S. Copyright Office decision allowing consumers to unlock their mobile devices and download applications not approved by device makers is further evidence of an increasingly competitive dynamic. *See* Copyright Office, “Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies,” 75 Fed. Reg. 43825 (July 27, 2010).

<sup>39</sup> Qualcomm Comments at 8; *see also* Verizon Comments at 11 (noting that disastrous consequences on innovation and investment “would be all the more true if the Commission were to extend its proposal to the hypercompetitive wireless sector”).

<sup>40</sup> For example, T-Mobile discloses to customers that it may take certain actions to manage network performance, including temporarily reducing data throughput for customers who use more than 5GB of data during a billing cycle. *See* T-Mobile Terms and Conditions, [http://www.t-mobile.com/Templates/Popup.aspx?PAsset=Ftr\\_Ftr\\_TermsAndConditions&print=true](http://www.t-mobile.com/Templates/Popup.aspx?PAsset=Ftr_Ftr_TermsAndConditions&print=true) (July 18, 2010).

<sup>41</sup> CTIA, “Consumer Code for Wireless Service,” *available at* <http://files.ctia.org/pdf/ConsumerCode.pdf>.

<sup>42</sup> *Id.*

## II. CONSUMER ENGAGEMENT WITH WIRELESS BROADBAND SUPPORTS A MORE LIMITED REGULATORY FRAMEWORK

### A. Most Consumers Do Not View Wireless Broadband as a Substitute for Wireline Broadband

Despite unsupported assertions that many wireless broadband users have stopped using wireline broadband services,<sup>43</sup> the vast majority of wireless broadband consumers still do not see that service as a full substitute for wireline broadband. Charter and Bright House's arguments citing a 2008 Nielsen Mobile study about consumers merely considering "cutting the cord" are misleading as the same study refutes these claims, finding that 99% of approximately 1,300 mobile data card users maintained their home Internet service.<sup>44</sup> Thus, mobile data cards still "typically augment high-speed home Internet access."<sup>45</sup>

The NBP Consumer Survey also highlights consumer behavior indicating that wireless and wireline broadband services currently are not substitutes, finding that 94% of all mobile broadband users also have wireline broadband at home.<sup>46</sup> Based on this statistic, the NBP Consumer Survey concluded that "mobile broadband users are overwhelmingly home broadband users," and "mobile broadband is mainly a *supplementary* broadband access pathway."<sup>47</sup> Clearly, until more spectrum is available to deploy 4G higher bandwidth applications, wireless

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<sup>43</sup> Comments of Charter Communications, Inc. at n. 48 (citing no support for the assertion that, as of 2009, many data card users have swapped their wired Internet service for wireless); Bright House Comments at n. 35 (same).

<sup>44</sup> See Nielson Co., *Cord-Cutting Frontiers: Mobile Data Cards At Home* (Aug. 19, 2008) at [http://blog.nielsen.com/nielsenwire/online\\_mobile/cord-cutting-frontiers-mobile-data-cards-at-home/](http://blog.nielsen.com/nielsenwire/online_mobile/cord-cutting-frontiers-mobile-data-cards-at-home/) (last accessed Aug. 6, 2010).

<sup>45</sup> Market Research World, *Mobile Data Cards: Not Just For Business Travelers Anymore, Reports Nielsen Mobile*, at [http://www.marketresearchworld.net/index.php?option=com\\_content&task=view&id=2238&Itemid=77](http://www.marketresearchworld.net/index.php?option=com_content&task=view&id=2238&Itemid=77) (last accessed Aug. 6, 2010).

<sup>46</sup> John B. Horrigan, Ph.D., Federal Communications Commission, *Broadband Adoption and Use in America: OBI Working Paper Series No. 1*, at 24 (rel. Feb. 23, 2010).

<sup>47</sup> *Id.* (emphasis added); see also T-Mobile Comments at 9-10.

broadband is constrained from being a full substitute for wireline broadband. As a result, even considering regulation of network management for wireless is unwise.

**B. Consumers Do Not View the Transmission and Information Service Components of Wireless Broadband as Severable, and Any Attempt To Isolate the Components for Regulatory Purposes Would Be Transparently Artificial**

Any attempt by the Commission to define and extract the transmission component of wireless broadband Internet services would create a transparently artificial regulatory distinction divorced from the reality of how those services are marketed, purchased, and consumed.

Consumers do not view wireless broadband services in terms of transmission and non-transmission components.<sup>48</sup> Instead, when consumers purchase wireless broadband, they understand that they are purchasing an integrated suite of services and applications that, combined, enables them not only to access the Internet, but also to draft, store, send and receive e-mail and other messages; engage in social networking; create and share photos, videos, and other files; record notes; track investments; locate themselves (and other persons or places) on a map; and perform many other activities.<sup>49</sup> As the Commission recognized in the *Wireless Broadband Declaratory Ruling*, the use of the transmission component of a wireless broadband service “is part and parcel of the Internet access service’s information service capabilities,” and “an end user subscribing to wireless broadband Internet access service expects to receive (and pay for) a finished, functionally integrated service that provides access to the Internet, rather than receive (and pay for) two distinct services – Internet access service and a distinct transmission

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<sup>48</sup> *National Cable & Telecommunications Association, et al. v. Brand X Internet Services, et al.*, 545 U.S. 967, 990 (2005) (“*Brand X*”) (acknowledging that service offerings are commonly described by “what the consumer perceives to be the integrated finished product”).

<sup>49</sup> *See, e.g.*, Samsung Comments at 6 (“Broadband-enabled features and services are typically provided to, and perceived by, consumers as integrated handset features.”).

service.”<sup>50</sup> This statement remains true today.

Unlike the consumer experience with dial-up Internet, consumers do not have to seek out separate service providers to obtain information services and telecommunications.<sup>51</sup> Cisco recognizes that, “if anything, consumers are more apt to view Internet access as a single integrated offering today, because typical Internet users rely on facilities-based Internet Service Providers (“ISPs”) offering integrated services, not (as in 2002) on dial-up connections provided by an entity other than the ISP.”<sup>52</sup> Moreover, despite fierce retail wireless competition, consumers do not appear to be demanding severed wireless transmission components.<sup>53</sup> Thus, attempting to sever a transmission component out of the overall suite of services would ignore market realities and consumer perceptions.

### **C. Consumers Have Leverage Over Wireless Broadband Providers That Run Afoul of Consumer Expectations**

With so many options for wireless broadband services, consumers hold appreciable leverage over wireless service providers. Mobile subscribers regularly switch service

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<sup>50</sup> *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, 22 FCC Rcd 5901 at ¶ 31 (2007); *see also, e.g., Federal-State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd 11501 at ¶¶ 73-82 (stating that “Internet access providers do not offer a pure transmission path; they combine computer processing, information provision, and other computer-mediated offerings with data transport,” and that “the provision of Internet access service crucially involves information-processing elements . . . it offers end users information-service capabilities inextricably intertwined with data transport”); MetroPCS comments at 33 (stating that the transmission and information service components “are seen as one combined integrated service by consumers”).

<sup>51</sup> *See, e.g.,* MetroPCS comments at 33.

<sup>52</sup> Comments of Cisco Systems Inc. at 6.

<sup>53</sup> *See, e.g.,* MetroPCS Comments at 33 (“Not only would most consumers be entirely uninterested in such a complicated arrangement, these types of arrangements simply are not offered in the marketplace.”); Samsung Comments at 6 (“Producing a handset with a stand-alone Internet access feature independent of the device’s applications could be particularly burdensome on product development, and would not necessarily be responsive to consumer needs and demands.”).

providers,<sup>54</sup> so providers must continuously update their broadband product lines and service offerings to reflect evolving consumer demand.<sup>55</sup> Moreover, as CTIA notes, wireless broadband consumers increasingly have “multiple points of contact” with members of the wireless ecosystem, including phone manufacturers.<sup>56</sup> These relationships increase the competitive pressure on providers to adopt practices that respond to consumer demands.

### **III. THE COMMENTS DEMONSTRATE THAT RECLASSIFICATION OF WIRELESS BROADBAND WOULD THWART IMPORTANT COMMISSION OBJECTIVES AND SLOW JOB GROWTH AND INVESTMENT**

The Commission has set an ambitious agenda for ensuring that broadband is deployed and used in a manner that provides wide-ranging public benefits for health care,<sup>57</sup> education,<sup>58</sup> energy and the environment,<sup>59</sup> disabilities access,<sup>60</sup> civic engagement,<sup>61</sup> public safety<sup>62</sup> and other important social and economic sectors. Touting the potentially “transformative” nature of broadband and stressing the central role to be played by wireless broadband in particular, the

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<sup>54</sup> *See, e.g.*, Verizon Comments, Attachment C at ¶ 61 (stating that “[m]ost wireless providers have been reporting churn rates in the range of 1.5% to 3.0% per month” and an implied annual churn rate of over 22%, indicating that “approximately 60 million subscribers leave their providers each year”).

<sup>55</sup> For example, wireless providers have introduced pro-rated ETFs; non-contract wireless plans; real-time, easy access to usage and billing information (on wireless devices and online); parental controls on wireless use by minors; dozens of new smartphones; and many other innovations to respond to consumers needs. *See, e.g.*, T-Mobile Comments at 11, 20.

<sup>56</sup> CTIA Comments at 17.

<sup>57</sup> *See* NBP at 197 (Chapter 10).

<sup>58</sup> *See id.* at 223 (Chapter 11)

<sup>59</sup> *See id.* at 245 (Chapter 12).

<sup>60</sup> *See id.* at 181(Chapter 9.5).

<sup>61</sup> *See id.* at 281 (Chapter 14).

<sup>62</sup> *See id.* at 311 (Chapter 16).

NBP proposed a number of ways to promote national purposes in these areas.<sup>63</sup> To its credit, the Commission has already begun to implement many of its NBP proposals.<sup>64</sup>

Notably, the Commission has also recognized that none of its wireless broadband priorities can be achieved without strong financial support from the private sector.<sup>65</sup> Achievement of the Commission's goals for wireless broadband requires ubiquitous or near-ubiquitous deployment and adoption,<sup>66</sup> which will not occur without extensive new private investment. Thus, the regulatory framework for wireless broadband must attract, rather than repel, private capital. T-Mobile and many other commenters have shown that reclassification could reduce private investment.<sup>67</sup> Commenters also make clear that a regulatory framework that

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<sup>63</sup> See *id.* at 29.

<sup>64</sup> See, e.g., *FCC, FDA Take Steps to Promote Innovation and Investment in Wireless Enabled Medical Devices*, FCC News Release (rel. Jul. 26, 2010) (announcing Joint FCC/FDA Statement of Principles and Memorandum of Understanding); *Federal Communications Commission (FCC) and Food and Drug Administration (FDA) to Hold Public Meeting on Regulatory Issues Arising from Health Care Devices that incorporate Radio Technology Wireless Communications Networks; Comments Sought*, Public Notice, DA-10-1071 (rel. Jun. 25, 2010); *Rural Healthcare Support Mechanism*, WC Docket No. 02-60, Notice of Proposed Rulemaking, FCC 10-125 (rel. Jul. 15, 2010); *Schools and Libraries Universal Service Support Mechanism, A National Broadband Plan for Our Future*, CC Docket No. 02-6, GN Docket No. 09-51, Notice of Proposed Rulemaking, FCC 10-83 (rel. May 20, 2010); *Advisory: May 18 Clean Technology Showcase* (May 17, 2010) (announcing a Commission technology exhibit focusing on “home energy management systems, smart appliances, smart electric meters, smart grid communications equipment, eco-friendly mobile handsets, green IT products, datacenter efficiency solutions, and much more.”); *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket No. 07-250, Policy Statement and Second Report and Order and Order and Further Notice of Proposed Rulemaking, FCC 10-145 (rel. Aug. 5, 2010); *White House, FCC and Commerce Department to Host Americans with Disabilities Act (ADA) Anniversary Event* (announcing technology showcase and launch of the Commission's new Accessibility and Innovation Forum) (rel. Jul. 14, 2010).

<sup>65</sup> See, e.g., NBP at 3, 29-30; American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(k)(2)(D), 123 Stat. 115, 516 (2009).

<sup>66</sup> See, e.g., NBP at 9-11, 193.

<sup>67</sup> See T-Mobile Comments at 22-23; AT&T Comments at 2-4, 41-44 (noting nearly a dozen industry analysts' and others' warnings that reclassification could cause investment-detering uncertainty); Comments of Alcatel-Lucent at 9-10 (expressing concern that this proceeding could foster a regulatory environment that decreases and delays investment); Comments of the Telecommunications Industry Association at 12, 19; Verizon Comments at 12-13, 17-18. This evidence refutes the mere conjecture of some commenters that private investment would not be negatively affected. See, e.g., Free Press

discourages private investment would also retard the job creation potential of wireless broadband, further sapping its welfare-enhancing potential.<sup>68</sup>

#### **IV. A CONSENSUS-DRIVEN TECHNICAL ADVISORY GROUP WOULD BE A FAR MORE APPROPRIATE VEHICLE TO PROMOTE OPEN WIRELESS BROADBAND NETWORKS**

Several commenters have urged the Commission to rely upon a consensus-driven technical advisory group-based (“TAG”) approach for resolving network management disputes and issues rather than reclassification or increased regulation.<sup>69</sup> This TAG approach would work particularly well for wireless broadband networks in light of the unique and evolving attributes of the wireless ecosystem, including fundamental technical differences (discussed in Section I.A. above) such as scarce spectrum resources and the integration of devices and transport and data processing functions within the radio network.

In fact, T-Mobile is set to participate in the industry-driven Broadband Internet Technical Advisory Group (“BITAG”), overseen by Dale Hatfield, Adjunct Professor of the University of Colorado at Boulder. Founding members of BITAG include Google, Intel, Microsoft, Cisco, AT&T, Verizon, Comcast, Time Warner Cable, public interest groups, and others. The BITAG’s mission – to bring together engineers and technical experts to develop consensus on broadband network management practices or related technical issues affecting the users’ Internet experience – has been endorsed by open Internet proponents such as Public Knowledge, Media Access Project, and BitTorrent.

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Comments at 93-95 (suggesting that increased regulation broadband can actually stimulate investment); Comments of the Open Internet Coalition at 33-35.

<sup>68</sup> See Verizon Comments at 14-18; Qwest Comments at 2, 8-9.

<sup>69</sup> See, e.g., Verizon Comments at 27; AT&T Comments at 18; Comcast Corporation Comments at 16; Comments of the Free State Foundation at 5; CCIA Comments at 18; Comments of the Competitive Enterprise Institute at n.11.

The BITAG and other industry-based groups have far greater potential to generate lasting solutions to wireless network management problems than one-size-fits-all regulation, and they can react to new technology and practical developments as they occur rather than through administratively burdensome and lengthy rulemaking proceedings or complaint processes.<sup>70</sup> Such a consensus-driven alternative for wireless is also warranted because reclassification of wireless broadband is fraught with unique legal pitfalls and would be unnecessary in view of existing Commission authority.<sup>71</sup>

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<sup>70</sup> Verizon and Google suggest that disputes under their proposed net neutrality framework could be handled by “independent, widely-recognized Internet community governance initiatives, and the FCC would be directed to give appropriate deference to decisions or advisory opinions of such groups.” *See* Verizon-Google Proposal at 2.

<sup>71</sup> Commenters point out that Section 332 of the Communications Act poses a significant legal barrier to regulating mobile broadband as a telecommunications service, and also demonstrate that the Commission already has adequate authority to promote its key wireless broadband policy goals pursuant to existing Title I and Title III authority. *See* CTIA Comments at 67-69; AT&T Comments at 112-114.

**V. CONCLUSION**

For the reasons discussed above and in T-Mobile's Comments, the Commission should defer any decision reclassifying wireless broadband as a Title II service at this time.

Respectfully submitted,



Ari Q. Fitzgerald  
Michele C. Farquhar  
David L. Martin  
Mark W. Brennan

Thomas J. Sugrue  
Kathleen O'Brien Ham  
Sara F. Leibman  
Amy R. Wolverton

HOGAN LOVELLS  
555 Thirteenth Street, NW  
Washington, DC 20004  
(202) 637-5600

T-MOBILE USA, INC.  
401 Ninth Street, NW Suite 550  
Washington, DC 20005  
(202) 654-5900

*Attorneys for T-Mobile USA, Inc.*

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