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

In the Matter of	)	
	)	
Protecting and Promoting the Open Internet	)	GN Docket No. 14-28
	)	
Framework for Broadband Internet Service	)	GN Docket No. 10-127
	)	

REPLY COMMENTS OF SPRINT CORPORATION

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Sprint Corporation ("Sprint") respectfully submits these Reply Comments in response to the Federal Communications Commission's ("FCC" or "Commission") latest Notice of Proposed Rulemaking[1] and Public Notice[2] seeking to answer the "fundamental question" of "[w]hat is the right public policy to ensure that the Internet remains open."[3]

I. INTRODUCTION AND EXECUTIVE SUMMARY

Today's savvy consumers demand robust broadband networks from their mobile service providers—networks that enable stable, consistent, and unfettered access to the Internet, the newest content, and feature-rich applications, such as video streaming, mobile video telephony, and cloud services. Sprint is committed to providing this experience to its customers and has long supported the FCC's goal of Internet openness.

Chairman Wheeler has astutely recognized that competition is an effective tool for ensuring Internet openness. Maintaining competition in mobile broadband market drives Internet openness and supplants the need for new substantive rules on mobile carriers. Today's mobile

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[1] *Protecting and Promoting the Open Internet*, Notice of Proposed Rulemaking, GN Docket No. 14-28, FCC 14-61, 29 FCC Rcd. 5561 (rel. May 15, 2014) ("*2014 Open Internet NPRM*").

[2] *Framework for Broadband Internet Service*, Public Notice, GN Docket No. 10-127, DA 14-748 (rel. May 30, 2014).

[3] *2014 Open Internet NPRM* ¶ 2.

broadband consumers have greater choices in providers than consumers of fixed broadband services, and the coverage and devices available to mobile broadband consumers continues to grow. This competition, however, is not guaranteed. Protecting competition where it already exists and encouraging even greater competition are fundamental facets of the Chairman's recently announced policy goals for the broadband market. Thus, consistent with the Chairman's agenda for broadband competition and to further drive the Commission's goal of Internet openness, the Commission should act now to improve competition in the mobile broadband market rather than imposing more stringent open Internet rules. In particular, the FCC should address special access reform, data roaming obligations, and access to spectrum.

As the FCC correctly determined in 2010, mobile broadband providers continue to face significantly different challenges than fixed broadband providers. Although the industry has evolved since 2010 and investments continue to be made by mobile broadband providers, the fundamental challenges of mobile broadband still exist. These challenges include, but are not limited to, spectrum scarcity and spectrum utility differences (including limited access to low-band spectrum that provides outstanding coverage cost advantages, both outdoors and for in-building coverage), weather, geography, user mobility, population density, and evolving technologies. To address these challenges and ensure consumers reap the greatest benefits from mobile broadband services, mobile providers must have the necessary flexibility to manage their networks in ways that maximize consumers' access to the content and applications they desire. Carriers must also have the flexibility to differentiate themselves in the market by offering pricing plans, such as Sprint's unlimited plans, that may require more aggressive network capacity management to sustain. Accordingly, the FCC should once again adopt the substance of

its 2010 rules with minimal modifications to implement the light regulatory touch that was previously applied to mobile broadband.[4]

Specifically, the Commission should first maintain its current transparency rule. There is no evidence in the record to suggest that the existing disclosure requirements are inadequate, and the proposed changes are likely to do more harm than good. Providing more detailed consumer disclosures is likely to cause consumer confusion and fail to enhance consumer decision making. Nor would edge providers see a benefit from "enhanced" disclosures because providers already have access to information enabling them to make full use of mobile broadband networks. Meanwhile, mobile broadband providers, such as Sprint, would be forced to comply with a significant new regulatory burden that provides little to no public benefit.

Likewise, the FCC should apply only a limited no-blocking requirement on mobile broadband services and refrain from applying the commercial reasonableness rule to mobile broadband services. The rules that the Commission adopted in 2010 have fostered unprecedented innovation and investment while preserving competition. Providing mobile broadband providers with continued flexibility has already yielded openness, investment, and innovation in the competitive—but challenging to manage—world of mobile broadband networks.

II. SPRINT IS A LONGSTANDING ADVOCATE OF INTERNET OPENNESS

Sprint has long supported the FCC's efforts to ensure customers have unfettered access to an open Internet environment and argued in favor of policies that ensure openness.[5] Sprint was

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[4] *Preserving the Open Internet & Broadband Industry Practices*, Report & Order, FCC 10-201, 25 FCC Rcd 17,905, ¶ 95 (2010) ("*2010 Open Internet Order*").

[5] *See, e.g.*, Comments of Sprint Nextel Corp. at 1, GN Docket No. 09-191 & WC Docket No. 07-54 (filed Jan. 14, 2010) ("2010 Comments of Sprint Nextel Corp."); Comments of Sprint Nextel Corp. at 2, WC

among the first to "walk the open Internet walk," allowing "customers to use non-Sprint-branded devices on its network" and supporting third-party developers since the 1990's.[6] Sprint sponsors numerous initiatives to enable developers and edge providers to access information for innovative solutions, including Sprint's Developer Program, Open Solutions Conferences, Research and Technology Lab in Burlingame, California, Startup Accelerator in Kansas City, and many other programs.[7] Sprint also embraces technological diversity, offering smartphones from ten manufacturers and running four different operating systems.

While Sprint believes that its commitment to Internet openness surpasses industry norms, many mobile broadband providers have historically set themselves apart by embracing openness to a much larger extent than wireline providers. For instance, many mobile providers, including Sprint, are signatories to the CTIA's Consumer Code for Wireless Services. Among other requirements, signatories must disclose to customers all terms and conditions of service and additional information to assist them in making decisions about mobile broadband Internet access.[8] Similarly, many mobile broadband providers recently volunteered to permit customers to unlock their mobile devices for use on competing networks.[9]

Docket No. 07-52 (filed June 15, 2007) (supporting the Commission's goal of "ensuring that consumers continue to obtain the access they desire").

[6] 2010 Comments of Sprint Nextel Corp. at 7.

[7] *See* 2010 Sprint Comments at 7-8; Sprint, Press Release, *Ten startups launch into Sprint Mobile Health Accelerator powered by Techstars in Kansas City* (Mar. 12, 2014), *available at* http://newsroom.sprint.com/news-releases/ten-startups-launch-into-sprint-mobile-health-accelerator-powered-by-techstars-in-kansas-city.htm; Sprint, Press Release, *Pushing Speed Boundaries* (Feb. 4, 2014), *available at* http://newsroom.sprint.com/blogs/sprint-perspectives/pushing-speed-boundaries.htm.

[8] *Consumer Code for Wireless Service*, CTIA—THE WIRELESS ASSOCIATION, http://www.ctia.org/policy-initiaves/voluntary-guidelines/consumer-code-for-wireless-service (last visited Sept. 3, 2014).

[9] *See* Letter from Steve Largent, President and CEO of CTIA, to FCC Commissioners (Dec. 12, 2013), *available at* http://www.ctia.org/docs/default-source/fcc-filings/ctia-letter-on-unlocking.pdf.

Mobile providers also facilitate access to the mobile device ecosystem by supporting app stores, which in turn allow customers of virtually any mobile broadband provider to access millions of apps from developers worldwide. Additionally mobile broadband providers support open-source operating systems, as evidenced by more than half the active devices in the U.S. using some version of the Android operating system.

At the end of the day, consumers expect and demand openness from their mobile broadband service provider. Sprint's longstanding approach has been to meet this consumer demand and proactively seek out ways to further the mobile broadband experience for its customers. Providers who do not keep pace with consumer demand for Internet openness will inevitably suffer and may not survive.

III. THE RECORD DEMONSTRATES THAT MOBILE AND FIXED BROADBAND SERVICES REQUIRE DIFFERENT TREATMENT

A. The Mobile Broadband Industry Gives Consumers a Choice of Providers

1. Competition in the Market for Mobile Broadband Services Provides Substantial Consumer Protections

Ensuring competition is the key to promoting openness, investment, and innovation in broadband Internet access services. As Chairman Wheeler has recognized, competition is "one of the most effective tools for ensuring Internet openness."[10] Competition and efforts to ensure a level playing field in the mobile broadband services space have driven—and will continue to drive —Internet openness.[11]

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[10] Remarks of Tom Wheeler, Chairman, FCC, Nat'l Cable & Telecommc'ns Ass'n (Apr. 30, 2014), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0430/DOC-326852A1.pdf.

[11] *See e.g.*, Comments of T-Mobile USA, Inc. at 12, GN Docket Nos. 14-28 & 10-127 (filed July 18, 2014) ("[T]he mobile broadband marketplace is competitive, and providers vie to meet consumers' demands for access to the content and applications of their choice. Carriers that do not keep pace with customer demands simply cannot survive.") ("T-Mobile Comments"); Comments of AT&T Servs., Inc. at 19-25, GN Docket Nos. 14-28 & 10-127 (filed July 15, 2014) (explaining how "investment and

Today, "consumers have more choices for mobile broadband than for fixed (particularly fixed wireline) broadband,"[12] and mobile broadband adoption rates continue to rise. In June 2013, there were 70 million fixed and 93 million mobile connections with download speeds at or above 3 megabits per second (Mbps) and upload speeds at or above 768 kilobits per second (kbps), as compared to 57 million fixed and 43 million mobile connections a year earlier.[13] More than 97% of the US population is served by more than one mobile broadband provider, with nearly 70% having a choice of five or more.[14]

Americans clearly have many choices in mobile broadband providers. As Commissioner Pai noted, this country has "twice as many mobile broadband subscribers than any other country in the world" and 4G LTE "now covers 86 percent of Americans" compared to Europe's coverage of only 27%.[15] Sprint's data network alone covers 277 million Americans, more than 254 million of which have 4G LTE coverage.[16] And, as the nation's third-largest mobile carrier

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innovation have been extraordinarily strong in the mobile wireless ecosystem, both before the 2010 rules and after") ("AT&T Comments").

[12] *2010 Open Internet Order* ¶ 95.

[13] *Internet Access Services: Status as of June 30, 2013*, FCC, INDUSTRY ANALYSIS & TECHNOLOGY DIVISION, WIRELINE COMPETITION BUREAU, FCC, at 1 (June 2014), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0625/DOC-327829A1.pdf ("*Access Services Status Report*").

[14] *Primer on State Efforts to Reform Telecommunications*, ADVANCED COMMUNICATIONS LAW & POLICY INSTITUTE, NEW YORK LAW SCHOOL (Aug. 2012).

[15] Remarks of Ajit Pai, Commissioner, FCC, *Reforming Communications Policy in the Digital Age: A View from the FCC*, Washington, D.C., at 3 (June 25, 2014), *available at* http://www.fcc.gov/document/comm-pai-remarks-reforming-communications-policy-digital-age. *See also* Comments of T-Mobile USA, Inc. at 3, GN Docket Nos. 14-28 & 10-127 (filed July 18, 2014) ("T-Mobile Comments"); Comments of AT&T Servs., Inc. at 20, GN Docket Nos. 14-28 & 10-127 (filed July 15, 2014) ("AT&T Comments").

[16] *Sprint LTE Coverage*, SPRINT, http://network.sprint.com (last accessed Sept. 3, 2014); *Sprint Reports Results for First Fiscal Quarter of 2014*, SPRINT, *available at* http://newsroom.sprint.com/news-releases/sprint-reports-results-for-first-fiscal-quarter-of-2014.htm (July 30, 2014).

in terms of subscribers, Sprint provides service to over 53 million customers.[17] Verizon and AT&T each have over 100 million customers,[18] and T-Mobile, the smallest nationwide carrier, provides service to 47 million Americans.[19]

Competition among mobile broadband providers has worked to allow consumers the option to switch providers at low cost.[20] For example, both Sprint and T-Mobile offer special deals for customers who want to change service providers that reduce or eliminate switching costs by buying out customer contracts and offering free or discounted devices.[21] Indeed, flexibility under the net neutrality rules has allowed Sprint and T-Mobile to offer a wide range of pricing options to consumers in an effort to differentiate themselves from Verizon and AT&T.

By contrast, consumers are much more limited in their choice for fixed broadband services. While competition for fixed broadband services may be possible in the future, competition exists in very few markets today.[22] Consumers by and large share this view.[23] In

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[17] *Sprint Reports Results for First Fiscal Quarter of 2014*, SPRINT, *available at* http://newsroom.sprint.com/news-releases/sprint-reports-results-for-first-fiscal-quarter-of-2014.htm (July 30, 2014).

[18] *See AT&T Inc. Financial Review 2013*, AT&T Online Annual Report, AT&T, http://www.att.com/gen/investor-relations?pid=9186 (citing 110 million AT&T mobile subscribers); *2013 Verizon 10k*, VERIZON, http://www.verizon.com/investor/annualreports.htm (citing 102.8 million Verizon mobile subscribers).

[19] *2013 Annual Report*, T-MOBILE (2013), *available at* http://investor.t-mobile.com/Cache/1500059458.PDF?Y=&O=PDF&D=&fid=1500059458&T=&iid=4091145.

[20] *See* Comments of Competitive Carriers Association, GN Docket No. 14-28, at 6 (filed July 16, 2014) ("CCA Comments").

[21] *See* Cyrus Sanati, *A Sprint Comeback?*, FORTUNE (Aug. 21, 2014), *available at* http://www.fortune.com/2014/08/21/sprint-disruptive-pricing/ (noting that T-Mobile's campaign helped increase the carrier's subscriber base by 1.5 million in the second quarter of 2014).

[22] Comments of Public Knowledge, Benton Foundation & Access Sonoma Broadband at 14-16, GN Docket Nos. 14-28, 10-127, 09-191 and WC Docket No. 07-52 (filed July 15, 2014) ("Public Knowledge Comments"); *Access Services Status Report* at 9, fig. 5(a).

[23] *See* Letter from Ron Wyden, Senator, United States Senate, to Marlene Dortch, Secretary, FCC at 2-3, GN Docket No. 14-28 (filed July 21, 2014); FCC, *Connecting America: The National Broadband Plan*, Rule and Order, DA 13-1113, at 21 (2010), *available at* http://www.fcc.gov/national-broadband-plan.

many areas of the country, consumers have zero, one, and occasionally two choices.[24] Even those consumers who do have more than one choice of fixed broadband provider face significant costs when they attempt to switch providers.[25] As the Commission continues to recognize, such overwhelming market power encourages practices that limit Internet openness.[26]

The advertising activities in mobile markets compared to fixed markets also highlight the competitive differences between the two markets. Mobile broadband providers regularly engage in marketing campaigns designed to lure customers away from other carriers, while similar advertising is notably rare among fixed broadband providers.[27] Moreover, there is competition and innovation in plan offerings for prepaid and postpaid mobile broadband customers precisely because consumers have and can meaningfully exercise their right to choose providers.

2. The FCC Should Act Now to Ensure Mobile Broadband Providers Can Compete on a Level Playing Field

Despite the generally competitive nature of the mobile broadband market, market distortions exist within the industry generally that must be addressed in order to preserve mobile broadband competition into the future. Wealth transfer and anti-competitive pricing policies of vertically integrated mobile carriers pose a threat to existing competition within the mobile broadband ecosystem and will disrupt the "'virtuous circle' of innovation, demand for Internet services, and deployment of broadband infrastructure" within the mobile industry if not

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[24] *Access Status Report* at 9.

[25] Public Knowledge Comments at 16-18; Comments of Consumers Union at 12-13, GN Docket Nos. 14-28 & 10-127 (filed July 15, 2014) ("Consumer Union Comments").

[26] *2014 Open Internet NPRM* ¶ 49.

[27] Sprint, *For a Limited Time, Customers Who Switch a Number to Sprint on a Framily Plan Can Save up to $650* (Apr. 4, 2014), *available at* http://newsroom.sprint.com/news-releases/for-a-limited-time-customers-who-switch-a-number-to-sprint-on-a-framilysm-plan-can-save-up-to-650.htm; T-Mobile, *Switch Carriers without Early Termination Fees*, http://www.t-mobile.com/offer/switch-carriers-no-early-termination-fee.html (last accessed Sept. 8, 2014).

addressed.[28] The FCC can best protect Internet openness on mobile broadband networks by ensuring that mobile broadband providers compete on an even footing. The Commission should level the playing field within the mobile broadband market when competitors face barriers that inhibit competition.

Special access reform is one area that needs to be addressed to correct imbalances among mobile broadband services providers. Today, the majority of mobile broadband providers have no choice but to subsidize the infrastructure of their vertically integrated competitors in order to obtain the backhaul necessary to provision their competitive mobile broadband offerings.[29] Indeed, ILEC market power over bottleneck facilities has its most pernicious effect on the deployment of 3G and 4G broadband services because the additional capacity requirements of these services require more or larger backhaul facilities. The ILEC dominance of the special access market ensures that they will continue to control the cost imposed on new mobile broadband providers, regardless of the size of the facility.[30] In turn, inflated costs of special access services will limit the number of areas in which competitive mobile broadband deployment will be economically feasible. The costs that competitors must pay for adequate backhaul also will artificially increase costs to consumers.

The Commission should also immediately address the competitive issues that arise in the data roaming context. This issue is currently before the Commission and is ripe for action. Earlier this year, T-Mobile petitioned[31] the Commission to issue guidance and predictable

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[28] *2014 Open Internet NPRM* ¶ 23.

[29] Letter from Daniel Hess, CEO, Sprint, Julius Genochowski, Chairman, FCC, WC Docket No. 05-25 (filed Mar. 15, 2011).

[30] Comments of Sprint Nextel at 2, WC Docket No. 05-25 (filed Feb. 22, 2011).

[31] *See Petition for Expedited Declaratory Ruling of T-Mobile USA, Inc.*, WT Docket No. 05-265 (filed May 27, 2014); *see also Wireless Telecommunications Bureau Seeks Comment on Petition for Expedited*

enforcement criteria for determining whether the terms of a given data roaming agreement or proposal meet the "commercially reasonable" standard adopted in the Commission's *Data Roaming Order* and as set forth in Section 20.12(e) of the Commission's rules.[32] In that proceeding, Sprint explained that the current data roaming marketplace is unbalanced and skewed in favor of the two dominant wireless providers.[33] As with the exorbitant rates charged by incumbents in the special access market, the dominant wireless carriers likewise leverage their market power to demand excessive and anti-competitive data roaming rates.[34]

As Sprint has consistently advocated,[35] the Commission should continue to make additional spectrum, particularly low-band spectrum below 1 GHz, available on the broadest scale possible. Of particular importance is the need to ensure that all mobile broadband operators have reasonable opportunities to obtain low-band spectrum, which provides significant deployment and operational cost advantages for coverage in general and for coverage within buildings in particular. While the upcoming AWS-3 and 600 MHz Incentive Auctions are likely to provide important opportunities, the Commission also needs to identify additional spectrum that can made available, over time, to meet the ever-growing demand for mobile broadband data and to enable robust mobile broadband competition in the future.

Declaratory Ruling Filed by T-Mobile USA, Inc. Regarding Data Roaming Obligations, Public Notice, WT Docket No. 05-265, DA 14-798 (rel. June 10, 2014).

[32] *See* 47 C.F.R. §20.12(e)(2); *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and other Providers of Mobile Data Services*, Second Report and Order, 26 FCC Red. 5411, ¶ 86 (2011), *aff'd sub nom. Cellco P'ship v. FCC*, 700 F.3d 534 (D.C. Cir. 2012) ("*Data Roaming Order*").

[33] *See* Reply Comments of Sprint Corporation, WT Docket No. 05-265 (Aug. 20, 2014). *See also* Comments of Sprint Corporation, WT Docket No. 05-265 (July 10, 2014).

[34] *Id.* at 7-11.

[35] *See, e.g.* Comments of Sprint Nextel Corporation, GN Docket No. 12-268, at 2-4 (Jan. 25, 2013); Comments of Sprint Nextel Corporation, WC Docket No. 13-135, at 20-23 (June 17, 2013); Reply Comments of Sprint Nextel Corporation, GN Docket Nos. 09-157, 09-51, at 13-17 (Nov. 5, 2009).

Instead of allowing current market distortions to continue, the Commission should take immediate steps to ensure mobile broadband competition continues to flourish by enacting special access reform, ensuring that data roaming arrangements are commercially reasonable and addressing competitive access to spectrum, particularly low-band spectrum. Doing so will ensure competitive mobile broadband providers can continue to offer customers competitive options and an open mobile broadband experience. Chairman Wheeler's recently announced agenda for broadband competition commits to doing just this, stating that "where competition exists, the Commission will protect it" and "where greater competition can exist, we will encourage it."[36]

B. Substantial Technical Differences Exist Between Mobile Broadband and Fixed Broadband Services

1. Mobile Broadband Faces Unique Technical Challenges

The Commission has recognized repeatedly that mobile broadband providers face "operational constraints that fixed broadband networks do not typically encounter."[37] Mobile broadband services are confronted with a myriad of unique technical challenges that are not present on wireline broadband networks, including managing limited spectrum and network resources in a dynamic environment, addressing network issues associated with mobility, and integrating constantly advancing technological and network upgrades to address ever-evolving consumer demands.

Mobile broadband services depend on access to, and efficient use of, spectrum resources. Although government policy makers are undertaking laudable efforts to free up and auction

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[36] Remarks of Tom Wheeler, Chairman, FCC, at 1776 Headquarters, Washington, D.C. (Sept. 4, 2014).

[37] *2010 Open Internet Order* ¶ 95; *accord 2014 Open Internet NPRM* ¶ 91.

significant amounts of new spectrum for mobile services, spectrum remains tightly limited.[38] Suggestions that mobile networks have completely outgrown the spectrum crunch are inaccurate.[39] Indeed, changing usage patterns and growing consumer desire for mobile access to high-bandwidth services have outpaced increased spectrum availability.[40]

For example, mobile data network operators have had to respond to exponential growth in mobile video demand by experimenting with network management techniques designed to optimize the video viewing experience while preserving network resources to ensure other users also have fair access to content. In particular, Sprint's video optimization network management is designed to improve page load times, reduce video stalling, and eliminate wasted data transmissions resulting from lack of coordination between applications, networks, and devices. With ever-growing demand for data, mobile broadband providers will need continued network management flexibility of an entirely different magnitude than fixed broadband providers.[41]

Network limitations also affect the ways in which mobile providers can market their services. Although mobile providers are constantly upgrading their networks to provide ever higher bandwidth, the many variables and limitations associated with mobile networks such as limited spectrum, multiple air interface technologies, and cell site congestion greatly affect the speed that a user will experience in any individual data session. Because of this speed variability and other challenges associated with managing mobile networks, mobile broadband providers

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[38] Letter from CTIA-The Wireless Association, Exhibit 1 at 4, *Protecting and Promoting the Open Internet*, GN Docket No. 14-28, *Framework for Broadband Internet Service*, GN Docket No. 10-127 (filed Sept. 4 2014) ("Reed & Tripathi Study").

[39] *See* Public Knowledge Comments at 25-26; Comments of Frontier Communications at 9, GN Dockets Nos. 14-28 & 10-127 (filed July 18, 2014) ("Frontier Comments") .

[40] Reed & Tripathi Study at 13.

[41] *Cf. 2014 Open Internet NPRM* ¶ 26 (noting that fixed broadband providers were able to improve physical infrastructure in response to the increased demands of streaming video).

market their services based on the quantity of data used rather than speed tiers. It is simply not currently practical for mobile providers to offer consumers plans based on differing speeds. Fixed broadband providers, on the other hand, are better able to predict network congestion and infrastructure issues and, therefore, can and do sell services based on speed.

But even were additional spectrum available to meet consumers' ever-escalating demands, mobile broadband services would have to contend with other challenges in managing their network that fixed broadband providers do not face to the same degree, such as challenges arising from weather, spectrum characteristics, geography, load, and congestion. Mobile broadband providers must also manage their networks to account for variations in the performance characteristics and capabilities of end-user devices; multiple, differing air interfaces; and variable power needs. These separate challenges often intersect, compounding one another. For example, weather may reduce the coverage radius of a given cell site while peak usage hours simultaneously create demand and congestion issues on the same site.

Mobility itself also creates unique network management challenges that providers of fixed broadband do not face. Mobile broadband providers must react as subscribers move (often unpredictably) between areas with different population densities and geography. For example, during public events and other gatherings, individual access points can easily be stretched beyond their spectrum and network resource capacities. Mobile broadband providers can and do manage their networks in situations like these in an ongoing effort to provide the most consistently reliable service for the greatest number of customers. But they need appropriate levels of flexibility to continue doing so.

Contrary to the assertions of some commenters,[42] the technical challenges for fixed and mobile are simply not equivalent. Fixed providers enjoy a point-to-point last hop to their end users, while mobile providers have a point-to-multipoint delivery system and must share resources. And while both mobile and fixed broadband providers can experience network strain on a node-by-node basis,[43] households do not roam from node-to-node on a minute-by-minute basis or converge on a single node during a popular community event. When congestion arises in fixed broadband networks, providers can lay more cable and build out infrastructure. However, spectrum limitations constrain the ability of mobile broadband providers simply build out more infrastructure. While build-out costs may limit fixed broadband to a certain extent, these costs do not compare to the costs borne by mobile providers for spectrum, build out, and backhaul.[44]

2. Wi-Fi Is Not a Substitute for Mobile Broadband Services and Should Be Treated Differently

A few parties wrongly assert that the spread of both private and public Wi-Fi networks, and the use of Wi-Fi for offloading traffic, justifies abolishing the distinction between fixed and mobile devices. Essentially, these parties imply that mobile services look like Wi-Fi services which, in turn, look like fixed wireline, so all three should be treated in the same way.[45] But this

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[42] Comments of CenturyLink at 23-24, GN Docket Nos. 14-28 & 10-127 (filed July 17, 2014) ("CenturyLink Comments"); Comments of National Cable & Telecommunications Association Comments at 72, GN Docket Nos. 14-28 & 10-127 (filed July 15, 2014) ("NCTA Comments"); Comments of Time Warner Cable, Inc. at 27, GN Docket Nos. 14-28 & 10-127 (filed July 15, 2014) ("TWC Comments").

[43] CenturyLink Comments at 24 n.236.

[44] Reed & Tripathi Study at 4.

[45] *See, e.g.*, Comments of the Open Technology Institute at the New America Foundation and Benton Foundation at 35-48, GN Docket Nos. 14-28 & 10-127 (filed July 17, 2014) ("New America Comments"); Comments of Comcast Corporation at 40-42, GN Docket Nos. 14-28 & 10-127 (filed July

superficial analysis elides key distinctions between mobile and Wi-Fi. Wi-Fi is nothing more than a different way to connect to a fixed broadband connection.[46] The two types of connections (fixed and mobile) are not only technologically distinct, but also operate under differing regulations and consumer perception. Essentially, an assertion that Wi-Fi is the same as the mobile broadband services provided by CMRS providers is analogous to saying that using a cordless phone attached to a POTS line is the same as having CMRS service.

From a technical standpoint, the two network types operate very differently. When a consumer "seamlessly" switches from a mobile connection to a Wi-Fi connection on a smart phone,[47] he or she will often be getting Internet from an entirely different company and experience a different level of service.[48] From a business standpoint, private Wi-Fi is dependent on, and attached to, a fixed broadband line purchased by a consumer. Even most "public" Wi-Fi networks are not really public.[49] Instead, fixed broadband providers offer them to expand the number of locations from where the customer can access the network connection that they are *already* paying for in their own home. For instance, no customer can use Comcast's "public" Wi-Fi without already paying for a fixed Comcast connection of the type on which their numerous Wi-Fi access points rely.[50]

15, 2014) ("Comcast Comments"); Comments of Cox Communications, Inc. at 9-11, GN Docket Nos. 14-28 & 10-127 (filed July 18, 2014) ("Cox Comments").

[46] While there are some systems that use mobile networks to provide Wi-Fi, such as hotspots, the overwhelming majority of Wi-Fi networks are fixed connection based, and mobile connection-based Wi-Fi does not provide the speeds or the overall data capacity that fixed connection-based Wi-Fi is able to provide. Accordingly, we use the term "Wi-Fi" to refer only to fixed-connection based Wi-Fi.

[47] New America Comments at 35-37.

[48] These circumstances belie Cox's assertion that differing regulatory regimes for the two connections is "simply unworkable." Cox Comments at 11.

[49] *Cf.* Comcast Comments at 40-42.

[50] *Id.*

Parties also speculate that consumer devices change seamlessly between different Wi-Fi connections and from Wi-Fi connections to mobile broadband networks and that consumers are oblivious to whether they are connected to a Wi-Fi connection or their mobile carrier's network.[51] Sprint disagrees. In Sprint's experience, mobile broadband customers are generally aware of the technological and operational differences between the different networks. For instance, they often turn off their device's ability to connect to Wi-Fi when they leave the house for various reasons, such as to save battery life or to avoid connecting to an unsecured Wi-Fi connection. On the other hand, consumers often turn on Wi-Fi to download large content or applications instead of using the mobile broadband network recognizing the difference in speed and cost of using mobile networks.

Finally, the FCC has chosen not to treat Wi-Fi as either equivalent to, or a substitute for, licensed-spectrum-based mobile broadband in other contexts. For instance, mobile broadband providers are more than a small-radius extension of a fixed network: they carry 911 and location obligations,[52] among others. The fact that a mobile broadband device happens to have the ability to use a consumer's fixed connection by accessing Wi-Fi does not diminish the unique nature of the mobile broadband connection that device uses for phone calls, texts, 911, and other functions that fixed networks cannot provide, even with a Wi-Fi attachment.

IV. EXPANSIVE OPEN INTERNET REGULATIONS SHOULD NOT BE IMPOSED ON MOBILE SERVICES

Sprint joins many commenters that urge the Commission to find that "technical, operational, and other differences . . . including differences relating to efficient use of

[51] New America Comments at 37 n.113.

[52] 47 C.F.R. § 22.921.

spectrum,"[53] along with competitive forces, justify addressing mobile broadband with a lighter regulatory touch.[54] Simply put, expansive open Internet regulations are less crucial for, and would be unnecessarily harmful to, mobile broadband providers in light of market forces that foster openness[55] and the unique challenges faced by mobile broadband providers that require significantly more flexibility in network management.[56] Mobile carriers should continue to have the ability to develop and sell innovative pricing plans to consumers and differentiate themselves in the market. This will be particularly important for carriers that must compete with the scale and cost advantages held by AT&T and Verizon. The Commission should, as it did in 2010, find that these circumstances warrant greater flexibility and a lighter touch in prescribing Open Internet rules.

A. The Existing Transparency Rule is Sufficient to Protect All Parties in the Internet Ecosystem and Should Not Be Expanded

Importantly, the FCC need not expand the current transparency requirements, which are effectively serving consumers today. Sprint recognizes that a carefully-crafted transparency rule can promote "competition, innovation, and high-quality services that drive consumer demand

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[53] *Protecting and Promoting the Open Internet*, Notice of Proposed Rule Making, FCC 14-61, 79 FR 37,448 01, ¶ 103 (2010) ("*2010 Open Internet Order*").

[54] Some commenters suggest that treating mobile and fixed broadband providers differently would "distort the marketplace against fixed broadband providers that are saddled with more regulations than their mobile broadband competitors." Frontier Comments at 2. *See also* CenturyLink Comments at 23-25. These commenters improperly compare two distinct markets that require two different regulatory approaches. As discussed above, competition among mobile services is the driving force behind the mobile broadband market's openness, while the fixed broadband market lacks sufficient competition in most areas to achieve the same result.

[55] *See supra* Part III; Comments of CTIA – The Wireless Association at 5-7, GN Docket Nos. 14-28 & 10-127 (filed July 18, 2014) ("CTIA Comments").

[56] *See supra* Part III. *See also* Comments of Akamai Technologies, Inc. at 11-12, GN Docket Nos. 14-28 & 10-127 (filed July 15, 2014) ("Akamai Comments"), CTIA Comments at 19; Comments of Cisco Systems, Inc. at 20-21, GN Docket Nos. GN Docket Nos. 14-28 & 10-127 (filed July 17, 2014) ; Comments of Alcatel-Lucent at 25, GN Docket Nos. 14-28 & 10-127 (filed July 15, 2014); Comments of Nokia at 3, 14, GN Docket Nos. 14-28 & 10-127 (filed July 15, 2014).

and broadband investment and deployment."[57] Sprint's current practices—and the Commission's current regulation—are sufficient to meet these goals.

Sprint is committed to providing the transparency expected by customers and edge providers. Sprint's Open Internet Information webpage currently discloses to consumers and edge providers a wealth of information regarding its network management practices, performance characteristics, and commercial terms.[58] And other web pages and materials Sprint makes available provide greater details for those individuals or entities that require more technical information.[59]

In contrast to the very real benefits that the current regulatory framework and Sprint's current disclosures provide, the Commission's proposal to enhance the transparency rule would chill innovation and competition with little corresponding consumer or edge provider benefit. Moreover, providing expanded disclosures that are tailored to different audiences is likely to create consumer confusion without any additional benefit over the existing disclosure requirements. As an initial matter, Sprint agrees with the many commenters that point out that there is no evidence in the record suggesting that the currently required disclosures are insufficient to meet the Commission's goals.[60] And the proposed changes are likely to frustrate those goals. As the Commission has noted, "recent research suggests that consumers have difficulty understanding commonly used terms associated with the provision of broadband

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[57] *2014 Open Internet NPRM* ¶ 66.

[58] *Open Internet Information, Legal/Regulatory & Consumer Resources*, SPRINT, http://www.sprint.com/legal/open_internet_information.html (last accessed Sept 4, 2014).

[59] *Id.*

[60] *See, e.g.*, TWC Comments; Comments of NCTA-The Rural Broadband Association, GN Docket Nos. 14-28 & 10-127 (filed July 18, 2014) ("NTCA Comments"); CenturyLink Comments.

services."[61] Providing greater specificity generally begs for the inclusion of even more details. While Sprint customers range from primarily passive users to tech-savvy consumers, an attempt to simplify highly complex technical information into a format friendly to *any* subset of customers is likely to create more confusion than clarity.

Network management systems are too technical and situational to be effectively conveyed in a way that remains simple and accessible, while also being technically accurate and informative enough to assist consumers in evaluating their choices. This is particularly true for mobile broadband services, where variability in services resulting from spectrum availability, coverage, frequency, user device characteristics, user movement, weather, and other factors all contribute far more to the experience a user may have while using its mobile broadband service than any network management technique that may be applied. Under these circumstances, Sprint sees little hope that expanded disclosures would provide benefits to consumer decision making that would outweigh the significant confusion and opportunities for misguided reliance that such disclosures might introduce.

The Commission all but concedes that enhanced disclosures are unlikely to be useful for consumers and instead justifies its proposal by pointing to supposed benefits to edge providers.[62] But, as a practical matter, the Commission need not mandate Open Internet disclosures custom-tailored to edge providers to encourage "content, application, service, and device providers" to maintain Internet innovation. It is in Sprint's interests to ensure that its network plays host to the most innovative devices, technologies, and services. Other mobile broadband service providers similarly compete to host the most desirable devices and applications. As a result, Sprint and its

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[61] *2014 Open Internet NPRM* ¶ 63.

[62] *See id.*

competitors already provide information and services to assist device, application, and content providers in making use of their respective mobile broadband Internet access networks.[63]

Moreover, even though Sprint devotes significant resources to helping edge providers and developers use Sprint's network to its full potential, most providers seeking to use Sprint's network do not require Sprint's assistance or permission. All of the major operating systems, original equipment manufacturers, and app stores make available software development kits, numerous application programming interfaces, and comprehensive resources for developers seeking to create applications for mobile devices.[64] The simple reality is that virtually any application that is created in compliance with OEM methodologies and available through any major app store will operate as intended on corresponding Sprint mobile devices and with Sprint's broadband Internet access service.

The suggested enhanced disclosures would also create burdens that far outweigh the minimal (if any) contributions that the disclosure would provide to consumers. For example, the Commission suggested that providers could be required to "disclose meaningful information regarding the source, location, timing, speed, packet loss, and duration of network congestion."[65] For mobile broadband providers, such disclosure would require near-constant updates that likely would be of little actual use to customers. Policies requiring frequent changes to disclosures create significant burdens for providers of mobile broadband providers. In particular, it would require providers to reconcile any changes it makes to its network management policies against disclosure in multiple websites, for multiple brands, and often in multiple languages. Because of

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[63] *See supra* Part II (examples of Sprint programs and services).

[64] *See, e.g.*, *Apple Developer Tools*, APPLE, https://developer.apple.com/; *Developer Tools*, ANDROID, http://developer.android.com/tools/index.html.

[65] *2014 Open Internet NPRM* ¶ 83.

the realities of managing a mobile broadband Internet access network, Sprint's disclosures (which fulfill current Commission rules) already require consistent updating to keep pace with changes in network management practices. While Sprint is committed to making such updates, frequent updates impose a real burden and are unlikely to provide real, meaningful increases in consumer choice. The Commission should not add to such burden where doing so provides little to no consumer benefit.

As to the form of disclosures, Sprint agrees with the Commission that the disclosures must be made in a format that is useful to their intended audience. Sprint's current disclosures, in convenient question-and-answer format, achieve this goal, presenting complex technical issues in a way that is accessible to those not versed in technical language.[66] The mobile broadband industry today utilizes multiple plan structures, none of which are based on explicit descriptions of mobile speed (as it varies wildly) and may be based instead on data consumption. Plans such as these would be incompatible with a standardized label applied to all broadband Internet services, when many fixed broadband plans are based on speed.

In the past, the Commission has recognized that the numerous factors affecting the performance of mobile broadband complicate any effort to make specific technical disclosures to consumers.[67] If the FCC determines that the transparency rule requires changes—which it should not—Sprint urges the Commission to take into account the differences between mobile and fixed broadband providers in terms of business models, consumer uses, and technical properties when considering any such revisions.

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[66] As it did in 2010, Sprint reiterates its concern that utilizing a "one-size-fits-all model", such as the OIAC's standardized label, would have chilling effects on innovation in pricing and plan structure. 2010 Comments of Sprint Nextel Corp. at 15-18.

[67] Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 et al., Fourteenth Report, 25 FCC Rcd. 11,407 (2010).

B. The Commission Should Adopt Limited No-Blocking Requirements for Mobile Broadband Providers and Continue the Exemption for the Proposed Commercial Reasonableness Rule

As explained herein, Sprint has long been a champion of providing its mobile broadband customers with open access to the Internet. As Sprint's Open Internet Information website notes, "Sprint strives to deliver to its customers access to all the lawful, legitimate and non-infringing content that the Internet has to offer."[68] Non-vertically-integrated providers simply do not have any incentive to block, degrade, or discriminate in the provisioning of Internet access to their customers. And in the dynamic mobile market, unhappy customers can and do quickly vote with their feet. If the Commission were to prohibit integrated mobile broadband providers from distorting the market through unfair and coercive special access policies, the increased competitiveness on non-vertically integrated providers would further enhance consumers' abilities to "issue vote" based on Internet openness—thus reducing even further the incentives of vertically integrated providers to restrict openness.

As recognized by numerous commenters, the 2010 Open Internet Rules served the Commission and consumers well.[69] As the Commission previously identified, the one area in which mobile broadband service providers might have an incentive to block or degrade services or applications is when those services compete with the provider's own offerings. Accordingly, the Commission limited the no-blocking and nondiscrimination obligations applied to mobile broadband providers to those circumstances most likely to pose competitive threats, and

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[68] *Open Internet Information, Legal/Regulatory & Consumer Resources*, SPRINT, http://www.sprint.com/legal/open_internet_information.html (last accessed Sept 4, 2014).

[69] *See, e.g.*, CTIA Comments at 21; Akamai Comments at 9; T-Mobile Comments at 4-8.

prohibited mobile broadband providers from blocking applications that compete with their own voice or video telephony services.[70]

Further restrictions would result in Commission micromanagement of mobile broadband network operations, a particularly harmful approach given the congestion management issues mobile broadband providers face. They must be able to resolve capacity issues in the short term, while long term capital investments are made. In particular, if providers are unable to provide service that customers want—in other words, if Commission policies prevent them from having wide latitude in network management—they will lose the customer. Because providing the service quality necessary to retain customers is the primary incentive behind continued investment and expansion of mobile network, Commission policies that restrict mobile providers' ability to manage demand will reduce such investment.[71]

Decreased investment, in turn, would result in mobile providers being able to compete only on the basis of scale.[72] As Sprint has previously reported to the Commission, scale is already a problem that competitively disadvantages non-vertically-integrated wireless providers.[73] Sprint and T-Mobile, for example, continue to differentiate themselves by offering various flavors of unlimited data plans designed to relieve customers from the worry of charges that exceed data caps. To make offers of unlimited data quantities sustainable in the long run, however, mobile broadband providers need to have broad flexibility to manage capacity and throughput to ensure that network resources are available to all customers, particularly as demand for high-bandwidth applications places greater congestion burdens on mobile networks.

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[70] *2010 Open Internet Order* ¶ 22.

[71] Reed & Tripathi Study at 29.

[72] Reed & Tripathi Study at 18, 22.

[73] 2010 Comments of Sprint Nextel Corp.

Without this network management flexibility, mobile carriers competing with AT&T and Verizon might not be able to continue competing with these types of consumer friendly price plans.

Likewise, mobile broadband providers need not be subject to the commercial reasonableness rule. In 2010, the Commission determined that the anti-discrimination rule should not apply to mobile broadband providers. The Commission reasoned that differences in the mobile market justified non-application of the anti-discrimination rule. Namely, the FCC reasoned:

> Mobile broadband is an earlier-stage platform than fixed broadband, and it is rapidly evolving. . . . [M]obile broadband is an important Internet access platform that is helping drive broadband adoption, and data usage is growing rapidly. The mobile ecosystem is experiencing very rapid innovation and change, including an expanding array of smartphones, aircard modems, and other devices that enable Internet access; the emergence and rapid growth of dedicated-purpose mobile devices like e-readers; the development of mobile application ("app") stores and hundreds of thousands of mobile apps; and the evolution of new business models for mobile broadband providers, including usage-based pricing.[74]

Although mobile broadband usage has skyrocketed and mobile broadband providers have heavily invested in faster and larger networks to accommodate that use since 2010, the characteristics of the marketplace remain largely the same. It remains a growing, rapidly changing marketplace that should be allowed to continue to evolve.

Accordingly, Sprint supports the Commission in its stated intent "to adopt the same approach as the 2010 obligation" with respect to the no-blocking and competitive reasonableness rules.[75] This approach will ensure that customers of mobile broadband service have access to all the lawful web content they seek and to competitive telephony services, while still providing

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[74] *2010 Open Internet Order* ¶ 8.

[75] *2014 Open Internet NPRM* ¶ 105.

carriers with the flexibility and freedom to manage their networks and innovate without undue restriction.

V. CONCLUSION

Sprint urges the Commission to maintain the existing transparency rule, adopt limited no-blocking requirements, and refrain from applying the commercial reasonableness rule to mobile broadband services. This measured approach will best promote Internet openness in the mobile broadband marketplace.

Respectfully submitted,

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