Maria L. Cattafesta
Senior Counsel
Government Affairs

Sprint Nextel
Suite 700
900 7th Street, NW
Washington, DC 20001

March 11, 2011

Via Electronic Submission
Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W., Room TW-A325
Washington, D.C. 20554

Re: ***Notice of Oral Ex Parte Communication***
Intercarrier Roaming, WT Docket No. 05-265

Dear Ms. Dortch:

This letter is to inform you that on March 10, 2011, Sprint Nextel Corporation ("Sprint"), through its representatives Charles W. McKee and Maria L. Cattafesta, met with Charles Mathias (Legal Advisor to Commissioner Baker) and Rafi Martina (Fellow, Office of Commissioner Baker) regarding the above-referenced proceeding.

Sprint reiterated its strong support for the Commission's extension of the current automatic roaming requirement to wireless data services, consistent with its prior filings in this docket. In particular, Sprint emphasized the importance of a just and reasonable roaming requirement subject to FCC enforcement to preserve competition in the data market and underscored the immediate need for such an obligation in light of the exponential rise in wireless broadband data usage. Sprint also stressed the importance of a data roaming requirement to support the growth of wireless machine-to-machine communications as discussed in Sprint's attached March 3, 2011 *ex parte* filing.

Pursuant to Section 1.1206 of the Commission's rules, this letter is being electronically filed with your office. Please let us know if you have any questions regarding this filing.

Respectfully submitted,

/s/ Maria L. Cattafesta
Maria L. Cattafesta

cc (*via* e-mail): Charles Mathias, Rafi Martina, Charles W. McKee

Attachment

Office: (703) 592-5110 Fax: (202) 585-1940 maria.cattafesta@sprint.com

Charles W. McKee
Vice President
Government Affairs - Federal & State Regulatory

Sprint Nextel Corporation
Suite 700
900 7th Street, NW
Washington, DC 20001

March 3, 2011

Via Electronic Submission
Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W., Room TW-A325
Washington, D.C. 20554

Re: ***Ex Parte Communication***
Intercarrier Roaming, WT Docket No. 05-265

Dear Ms. Dortch:

Sprint Nextel Corporation ("Sprint") urges the Federal Communications Commission ("Commission" or "FCC") to adopt an automatic data roaming obligation not only to preserve current voice and text message roaming protections, but also to provide the regulatory certainty necessary to support the ongoing transition of mobile wireless networks and services to data.

As the Commission has observed, the communications industry is transitioning away from a traditional circuit-switched, voice-centric environment towards an IP broadband, data-centric environment.[1] In the wireless market, several developments play a significant role in driving this transition forward (as described in greater detail below), including: (1) the upcoming launch of Voice over LTE ("VoLTE") service; (2) the rise of machine-to-machine communications ("M2M"); and (3) initiatives to accelerate IP broadband network deployment.

The current FCC roaming regulatory regime, however, is still rooted in the legacy circuit-switched voice environment. If the Commission fails to update its roaming policy and adopt a data roaming obligation that reflects this fundamental shift in the mobile marketplace, its current framework may not only become irrelevant, but may actually impede IP broadband deployment and innovation. Therefore, the Commission should adopt a data roaming obligation without delay to lay the regulatory foundation for the next evolutionary phase of the mobile wireless market. To be effective, however, any such obligation must: (1) include a just, reasonable and non-discriminatory terms and conditions standard subject to FCC enforcement mechanisms; and (2) be technology neutral (*e.g*, no distinctions between 3G and 4G data service).

---

[1] *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Fourteenth Report, 25 FCC Rcd 11407 (2010) ("*Wireless Competition Report*") at 5.

I. The Mobile Wireless Market is Rapidly Advancing Towards a Data-Centric Model.

A. VoLTE service will propel voice and data convergence forward and render the current voice and SMS/text message roaming obligation obsolete.

Verizon Wireless recently announced its plans to launch Voice over LTE ("VoLTE") service as soon as 2012.[2] Verizon has already placed voice calls over its commercial LTE network and showcased its VoLTE service with a live demonstration using a smartphone at the GSMA Mobile World Congress last month.[3] In addition to voice and video, text messages will also be transmitted over its LTE data network.[4] Furthermore, Verizon indicated that "[t]he goal is for this service to eventually replace the infrastructure that cell phones have relied on for more than a decade."[5] AT&T also has announced similar plans to deploy VoLTE as early as 2013.[6] As wireless analysts predict, "operators are going to want all of their traffic on their LTE and next-generation network, and that includes voice traffic."[7]

Unless the FCC adopts a data roaming obligation, the launch of VoLTE will adversely affect the ability of wireless service providers to maintain just and reasonable voice and text message roaming services for their customers. With respect to voice, the current roaming framework defines the voice roaming obligation as a "service that is interconnected with the

---

[2] Mark Milian, *Verizon Plans 4G Internet Calling Service*, CNN, Feb. 8, 2011, *available at* http://articles.cnn.com/2011-02-08/tech/verizon.volte_1_verizon-plans-verizon-wireless-long-term-evolution?_s=PM:TECH.

[3] *Verizon Wireless Announces World's First Successful Voice Over LTE Call On A Commercial LTE Network,* News Release, Verizon Wireless (Feb. 9, 2011) *available at* http://news.vzw.com/news/2011/02/pr2011-02-09f.html; *Ericsson, Verizon Wireless And Samsung Demonstrate Voice Over LTE,* News Release, Verizon Wireless (Feb. 14, 2011) *available at* http://news.vzw.com/news/2011/02/pr2011-02-14d.html. Johan Wibergh, Head of Ericsson's Business Unit Networks noted that "[t]oday's demonstrations are important because operators need to start making strategic decisions about how to maintain and develop their current voice and SMS businesses when launching LTE mobile broadband networks." *Id.* He added that "VoLTE allows operators to provide telecom grade voice services, along with enriched multimedia services." *Id.*

[4] *See Verizon Wireless Announces World's First Successful Voice Over LTE Call On A Commercial LTE Network,* News Release, Verizon Wireless (Feb. 9, 2011).

[5] Mark Milian, *Verizon Plans 4G Internet Calling Service*, CNN, Feb. 8, 2011.

[6] Elizabeth Woyke, *AT&T CEO Says Voice over LTE Coming in 2013*, Forbes, Feb. 15, 2011, *available at* http://blogs.forbes.com/elizabethwoyke/2011/02/15/att-cto-says-voice-over-lte-coming-in-2013/.

[7] Mark Milian, *Verizon Plans 4G Internet Calling Service*, CNN, Feb. 8, 2011. In addition, "[w]hen voice becomes yet another data application, like e-mail or web surfing, carriers can move towards a more data-centric revenue model, where customers may not be billed for voice minutes and data, but simply for the amount of data they consume." Jenna Wortham, *Verizon Demonstrates Voice-Over-LTE Service*, New York Times, Feb. 14, 2011, *available at* http://bits.blogs.nytimes.com/2011/02/14/verzion-demonstrates-voice-over-lte-service/.

public switched network."[8] Once voice service becomes "one of many applications running over fixed and mobile broadband networks" as the FCC envisions, however, it may no longer be linked to the traditional public switched network.[9] In that circumstance, the current voice roaming obligation would not apply to VoLTE and similar IP-based voice services and would eventually become irrelevant once the transition to data networks is complete. The text message roaming obligation also may be in jeopardy given that the original basis for imposing it is tied to traditional voice service.[10] Therefore, unless the FCC updates its roaming regime to reflect data-centric market developments, voice and text message roaming services will lose the just and reasonable protections that FCC's present roaming regime affords.

If the FCC chooses to adopt a data roaming obligation to preserve consumer access to both voice and text messaging roaming pursuant to a Title III jurisdictional path, VoLTE service is a prime example of data operating as the functional equivalent of voice. Voice services that run as an application over an LTE or other data network are touted as providing the same features and functionality of traditional voice service that runs over the public switched network. In fact, as legacy circuit-switched networks disappear, voice over IP data services like VoLTE will not merely serve as a functional equivalent, but as a wholesale replacement of legacy voice services.

In terms of timing, it is imperative that the FCC not wait until Verizon Wireless and AT&T launch VoLTE service before it adopts a data roaming requirement. The convergence of voice and data is not a theoretical notion, but a real phenomenon that is rapidly moving forward. Service providers are developing their strategies now to maximize the benefits of this industry transformation and need the regulatory certainty of a data roaming obligation to plan accordingly.

B. Machine-to-machine ("M2M") communications demand seamless ubiquity, which requires the support of a data roaming obligation.

M2M communications are also driving the data-centric mobile wireless market forward. As the *National Broadband Plan* indicated, the emergence of new technologies is giving rise to the "Internet of Things" in which "billions of objects will be able to carry and exchange information with humans and with other objects, becoming more useful and versatile."[11] The

---

[8] 47 C.F.R. § 20.12(a)(2).

[9] *Connect America Fund,* WC Docket No. 10-90*, A National Broadband Plan for Our Future*, GN Docket No. 09-51*, Establishing Just and Reasonable Rates for Local Exchange Carriers,* WC Docket No. 07-135, *High-Cost Universal Service Support*, WC Docket No. 05-337, *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, *Lifeline and Link-Up*, WC Docket No. 03-109, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, ___ FCC Rcd ___, FCC 11-13 at ¶ 10 (rel. Feb. 9, 2011) (*USF/ICC Reform NPRM*).

[10] *See Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 15817 at ¶ 55 (2007).

[11] *Connecting America: The National Broadband Plan,* The Federal Communications Commission

wireless industry in particular is not only connecting people *via* handsets, but also machines to other machines.[12] Indeed, advanced wireless networks and M2M connectivity are beginning to revolutionize many industries by providing enhanced productivity, lower costs, and streamlined operations.[13] For example:

- ***Healthcare:*** M2M communications have served as a tremendous catalyst for the entire healthcare industry by igniting an expansion of advanced devices and applications for improving patient care. M2M communications provide new ways for health care providers to remotely monitor patients suffering from diabetes, cardiac arrhythmia and chronic diseases. There are GPS solutions for tracking dementia and Alzheimer's sufferers. In addition, there are a host of new technologies that put life-saving data, such as CT scans, test results and patient records, into the hands of medical staff, almost anytime, virtually anywhere.

- ***Fleet and Telematics:*** M2M communications improve overall fleet management and customer service by providing the ability to remotely locate, navigate and track the location of vehicles. The latest technology also helps monitor vehicle performance, maintain vehicle health, minimize out-of-service-time and improve driver safety.

- ***Public Safety:*** Emergency response personnel rely on instant access to critical information when responding to a wide variety of emergencies such as traffic accidents, land and water rescues, fires, or medical emergencies. M2M solutions aid in coordinating in-field resources and provide real-time access to critical applications such as patient information systems and medical diagnostics.

Given these significant benefits, it is not surprising that M2M communications are experiencing exponential growth. Data from Berg Insight show that, "the worldwide number of mobile network connections used for wireless M2M (machine-to-machine) communication reached 81.4 million at the end of 2010, up 46 percent year-on-year."[14] In addition, "in the next five years, the total number of wireless M2M connections is forecasted to grow at a compound annual growth rate (CAGR) of 32.0 percent to reach 294.1 million connections in 2015."[15] Berg

---

(March 2010) at 18, *available at* http://download.broadband.gov/plan/national-broadband-plan.pdf ("*National Broadband Plan*").

[12] *See id.*

[13] *See generally* Sprint M2M Solutions, *available at* http://m2m.sprint.com/m2m-solutions.aspx.

[14] *Berg Insight releases global wireless M2M subscriber data for 2010*, News Release, Berg Insight (Jan. 31, 2010) *available at* http://www.berginsight.com/News.aspx?m_m=6.

[15] *Machines account for 2.0 percent of mobile network connections worldwide*, News Release, Berg Insight (Dec. 22, 2010) *available at* http://www.berginsight.com/News.aspx?m_m=6.

Insight data also indicate that "M2M and connected devices is now one of the main drivers behind the growth in mobile subscribers in Europe and North America."[16]

Recognizing the importance of M2M communications as a driver of industry innovation and growth, Sprint is devoting significant resources to promote the development of M2M solutions. Sprint recently launched its M2M Collaboration Center, which provides a true "roll-up-your sleeves" workshop where partners and enterprise customers work side by side to develop commercially viable offerings based on M2M technology.[17] Along with Sprint business customers, the 30 inaugural members of the M2M Collaboration Center's partner ecosystem will be able to use the center as a working laboratory for wirelessly connecting devices as varied as routers, medical equipment, laptops, tablets, digital billboards, cameras, remote sensors, utility meters and appliances. AT&T and Verizon also have announced plans for similar collaborations to spur the development of new M2M applications and expand the M2M ecosystem.[18]

Effective M2M solutions, however, require ubiquitous data connectivity.[19] For example, an auto company purchasing embedded M2M telematics solutions for its vehicles, which are sold and driven nationwide, requires nationwide M2M service coverage. Likewise, a cardiac patient with an implanted heart monitor that delivers a shock to correct an abnormal rhythm requires that device to function reliably, regardless of where he or she may travel.

Since the current roaming regime does not extend to wireless data services, and thus not to M2M data communications, the seamless ubiquity that M2M services demand is not guaranteed available. Consequently, without the assurance that widespread data roaming coverage is available for wireless M2M data services, key M2M stakeholders such as service providers, software developers, and equipment manufacturers may lose the incentive to propel M2M investment and innovation forward. Moreover, the lack of regulatory certainty will likely hinder additional advanced IP data network deployment needed to support such services. To ensure that its policies do not inadvertently impede M2M development and growth, the

---

[16] *Id.*

[17] *Sprint launches M2M Collaboration Center; 30 diverse industry leaders join as partners to assist businesses with M2M development*, News Release, Sprint (Oct. 26, 2010) *available at* http://newsroom.sprint.com/article_display.cfm?article_id=1700.

[18] *New Services Expand Customer Choice to Help Simplify and Reduce Costs of M2M Solutions for Business Customers*, News Release, AT&T (Feb. 14, 2011) *available at* http://www.corp.att.com/emea/insights/pr/eng/m2m_140211.html; *Vodafone, Verizon Wireless and nPhase Announce Strategic Alliance to Provide Global M2M Solutions*, News Release, Verizon Wireless (Feb. 15, 2010) *available at* http://news.vzw.com/news/2010/02/pr2010-02-13.html.

[19] AT&T's recent extension of its M2M global footprint "to increase wireless device connectivity worldwide" validates the importance of roaming to M2M communications. *AT&T Expands Machine-to-Machine Portfolio with New Capabilities Designed to Enhance Applications for Businesses,* News Release, AT&T (Feb. 14, 2011) *available at* http://www.corp.att.com/emea/insights/pr/eng/m2m_140211.html. AT&T understands that it is important for M2M service customers to "benefit from the ability to enable consistent operations regardless of location." *Id.*

Commission must update its roaming regime to accommodate wireless M2M communications by adopting a data roaming obligation.

C. A data roaming obligation is necessary to support the industry transition from circuit-switched to IP broadband networks.

The industry's transition from circuit-switched network architecture to IP-based broadband network architecture is also driving the expansion of the wireless data market. In the context of Universal Service Fund/Intercarrier Compensation ("USF/ICC") reform, the FCC determined that the current programs were designed for 20th century networks and market dynamics, and thus primarily support telephone service, not broadband.[20] Since those programs were established, however, "ubiquitous broadband infrastructure has become crucial to our nation's economic development and civic life."[21]

The FCC recognized that the disconnect between its outdated USF/ICC regulatory regime and the current demands of 21st century broadband communications has had a detrimental impact on the industry. For example:

- The ICC regime, which was "designed for a world of voice minutes . . . has had the effect of rewarding carriers for maintaining **outdated infrastructure** rather than migrating to Internet protocol (IP)-based networks."[22]

- "The record suggests that the current ICC system is **impeding the transition** to all-IP networks and **distorting carriers' incentives to invest** in new, efficient IP equipment."[23]

- Consequently, "the current rules actually disincentivize something necessary for our **global competitiveness**: the transition from analog circuit-switched networks to IP networks."[24]

- "Because the ICC system has not been reformed to reflect fundamental shifts in technology and competition in the last two decades, the current system results in **considerable instability** for carriers . . ."[25]

---

[20] *USF/ICC Reform NPRM* at ¶¶ 6, 8.

[21] *Id.* at ¶ 3.

[22] *Id.* at ¶ 6 (emphasis added).

[23] *Id.* at ¶ 40 (emphasis added).

[24] *Id.* at ¶ 6 (emphasis added).

[25] *Id.* at ¶ 41 (emphasis added).

The Commission recognized the urgent need for reform to forestall these harms and issued a comprehensive proposal to refocus and restructure the USF/ICC system in support of broadband deployment.[26] One of the Commission's main policy objectives for reform is to "accelerate the transition from circuit-switched to IP networks."[27] The Commission understood that, "[b]y providing a more certain glidepath for the transition to an all-IP future, intercarrier compensation reform will bring much needed predictability to the industry and investors, which will ultimately benefit consumers."[28]

Like the Commission's USF/ICC regime, its outdated roaming regime is another regulatory impediment to the accelerated IP network conversion. For example, since the current roaming obligation arguably applies only to the legacy circuit-switched voice service, a service provider requiring voice roaming is more apt to maintain outdated technologies to ensure it can secure baseline access to voice roaming. Consequently, the Commission's failure to modernize its roaming policies to incorporate data may actually create disincentives for broadband network investment. On the other hand, a data roaming obligation that gives service providers the assurance that they will have access to roaming for voice over IP and other data services will significantly increase market incentives to invest and migrate over to more efficient and cost-effective IP broadband networks.

II. A Meaningful Data Roaming Obligation is Necessary to Support These Industry Shifts.

To sustain this wireless data transformation, the industry needs an effective data roaming obligation, which: (a) includes a just, reasonable, and non-discriminatory standard subject to FCC enforcement mechanisms; and (b) is technology agnostic. As described in greater detail in its February 7, 2011 *ex parte* filing, Sprint reiterates that any data roaming obligation the Commission adopts must include a standard requiring just and reasonable rates and not unreasonably discriminatory terms coupled with a robust FCC mechanism to enforce it.

In addition, any data roaming obligation must be technology neutral (*e.g.*, one that does not distinguish between 3G and 4G data services). Technology distinctions are becoming increasingly irrelevant and artificial. Customers demand access to wireless data, regardless of the type of technology used to deliver it. Moreover, conflicting market views about which technologies are "4G" demonstrates the lack of industry consensus on certain technology classifications.

Furthermore, a technology agnostic data roaming requirement will help provide a future-proof platform for growth in innovative data services. For example, M2M applications should be developed based on the latest technology available. If a data roaming requirement is tied to a

---

[26] *See id.* at ¶¶ 40-1.

[27] *Id.* at ¶ 10.

[28] *Id.* at ¶ 41.

particular data technology and does not automatically extend to newer technologies, M2M developers (understanding the importance of seamless ubiquity) will more likely continue developing M2M applications utilizing old technology. Accordingly, a technology-specific data roaming obligation will impede rather than empower continuing advances in innovation.

Moreover, advances in network technology and design render particular technology distinctions irrelevant. The wireless industry is moving towards multi-modal base stations and chipsets that operate across multiple technologies, which will enable handsets and other devices to transmit over multiple frequencies and on multiple interfaces. For example, Sprint's Network Vision plan is expected to consolidate multiple network technologies into one, seamless network. Not only will it enhance service, create network flexibility and reduce operating costs, but also will improve environmental sustainability. A key element of the plan is implementing multimode base stations. Today, Sprint uses separate equipment to deploy services on 800 MHz spectrum, 1.9 GHz spectrum and, through its relationship with Clearwire, 2.5 GHz spectrum. Sprint will install new network equipment and software that brings together multiple spectrum bands on a single, multi-mode base station.[29]

Given rapid changes in technology and network design, any FCC data roaming requirement should not distinguish between 3G, 4G, or any other generation or type of technology. Rather, a technology neutral data roaming obligation will maintain the requisite flexibility to ensure just and reasonable access to data roaming automatically as technology continues to evolve now and into the future.

*****

Pursuant to Section 1.1206 of the Commission's rules, this letter is being electronically filed with your office. Please let us know if you have any questions regarding this filing.

Respectfully submitted,

/s/ Charles W. McKee

Charles W. McKee
Vice President
Government Affairs – Federal & State Regulatory

Maria L. Cattafesta
Senior Counsel
Government Affairs

[29] *Sprint Announces Network Vision – A Cutting Edge Network Evolution Plan With Partners Alcatel-Lucent, Ericsson and Samsung*, News Release, Sprint (Dec. 6, 2010) *available at* http://newsroom.sprint.com/news/sprint-announces-network-vision-network-evolution-plan.htm.