

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC**

In the Matter of)	
)	
Reexamination of Roaming Obligations of)	WT Docket No 05-265
Commercial Mobile Radio Service Providers and)	
Other Providers of Mobile Data Services)	

COMMENTS OF CLEARWIRE CORPORATION

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June 14, 2010

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INTRODUCTION

Clearwire responds to the Commission's Notice of Proposed Rulemaking soliciting comments on whether to extend automatic roaming obligations to certain mobile data services, including mobile broadband Internet access.¹ Since the Commission last sought comment on a proposed data roaming rule, much has changed in the mobile broadband landscape. Consumer demand for wireless broadband services appears virtually limitless. Smartphones are becoming ubiquitous. Clearwire's own experience shows that usage of wireless broadband accelerates beyond even aggressive predictions when consumers have access to a high-speed, high-capacity 4G platform. As data displaces voice as the primary medium by which Americans communicate, the importance of supporting network providers' ability to enhance customer choice and permit efficient and effective network deployments will only increase. It therefore is critical to satisfy consumers' expectations that they will have access to a full portfolio of voice and data services when they are outside their broadband service provider's network footprint.

Clearwire recommends that the Commission explicitly extend to all mobile broadband Internet access providers the ability to obtain automatic data roaming on a non-discriminatory basis upon reasonable request. Since the Commission last examined this question, the need for an automatic data roaming rule has become more obvious as evidence mounts of anti-competitive behavior in response to requests for data roaming.² Given the similarities between the voice roaming and 3G data roaming markets, and the market failures they share in common

¹ *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Order on Reconsideration and Second Further Notice of Proposed Rulemaking, WT Docket No. 05-265, (rel. Apr. 21, 2010) (*Data Roaming FNPRM*).

² *See, e.g.*, Comments of MTA Wireless, Inc., WT Docket No. 05-265 (fil. Oct. 29, 2007) at 3-4; Comments of Rural Cellular Association, WT Docket No. 05-265 (fil. Oct. 29, 2007) at 4.

with regard to roaming, the Commission cannot expect that market forces alone will result in sufficiently reasonable access to data roaming when regulatory intervention was necessary to protect the voice roaming market. Consequently, the status of today's existing data marketplace suggests that basic rules of the road regarding the standards governing the establishment of roaming agreements among carriers will be necessary for data too. As new, advanced data platforms are eventually deployed, particularly those of dominant CMRS providers,³ the Commission will need to ensure that this incumbent market dominance does not compromise the Commission's goal of promoting network choice and a rich broadband experience for consumers wherever they travel.⁴ Clearwire therefore believes that the time is ripe for the Commission to create certainty with regard to carriers' rights to non-discriminatory access to data roaming, including upon the advanced mobile broadband platforms planned for the future.

Once the Commission affirmatively answers the question of whether an automatic data roaming rule should be established, the next question is how guest and host networks should interact with each other. As the only facilities-based provider of wireless 4G services today, Clearwire acknowledges that neither it nor the Commission can fully anticipate the issues that may arise with regard to data roaming as new, non-CMRS carriers such as Clearwire deploy broadband data services. For example, the Commission should not assume that data roaming—especially with non-CMRS broadband providers—will precisely mirror the legacy processes put in place for CMRS voice services. In addition, as multiple 4G networks are deployed, the voice-centric roaming issues of the past may in hindsight look relatively straightforward when

³ AT&T and Verizon Wireless have announced plans to launch their 4G broadband networks in the next year to two years. See <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26835>; <https://news.vzw.com/LTE/Overview.html>.

⁴ See e.g., Letter to Chairman Julius Genachowski, Chairman, Federal Communications Commission, from SouthernLinc Wireless, LEAP Wireless, RCA, RTG, Corr Wireless, NTELOS, *et al.*, WT Docket No. 05-265 (filed Jul. 28, 2009) at 2.

compared to the data roaming world of the future where carriers will likely seek to deploy multi-mode handsets and secure agreements with a technologically diverse array of roaming partners.

Clearwire therefore recommends that the Commission extend basic principles of non-discrimination to data roaming for all mobile broadband Internet access providers, including a requirement that automatic data roaming be provided to other carriers on a just, reasonable and non-discriminatory basis. The Commission should, however, be sensitive to the distinctions between voice-centric and data-centric networks; especially those associated with non-CMRS carriers, and not assume that roaming processes will be identical for both. Finally, Clearwire believes that the Commission will have a much clearer jurisdictional foundation for establishing an automatic data roaming obligation once it resolves its recently announced proceeding on the regulatory framework for broadband Internet access services.⁵ If, however, the Commission finds that it currently has jurisdiction over mobile broadband data services before completion of its legal framework proceeding, it should impose a general non-discrimination provision to guide automatic roaming obligations for all data roaming.

I. BACKGROUND

Clearwire operates open, Internet-Protocol (“IP”) 4G wireless broadband networks in markets across the United States and Europe. These networks provide communities with high-speed residential and mobile Internet access and interconnected voice over Internet protocol (VoIP) services. As of May 2010, Clearwire has over one million wireless broadband subscribers and is rapidly deploying 4G broadband wireless service that utilizes the WiMAX technology standard in new markets and converting its pre-WiMAX markets to the 4G standard.⁶

⁵ See *FCC Announces Tentative Agenda for FCC Open Meeting*, News Release (rel. May 27, 2010) announcing the Commission’s intention to initiate a Notice of Inquiry seeking comment on possible legal frameworks for broadband Internet access service.

By the end of 2010, Clearwire's 4G WiMAX network is expected to be available in more than 80 markets covering up to 120 million people.⁷

Since its inception, Clearwire has been committed to operating an open network that accommodates its subscribers' choice of devices and applications. Because WiMAX technology is based on an open technology platform, device manufacturers are free to design various WiMAX compliant devices that can be accommodated on the Clearwire network so long as the device is compatible with and not harmful to its WiMAX network. Furthermore, Clearwire encourages subscribers to download and use any software applications, content, or services they desire, subject only to reasonable network management practices and law enforcement and public safety considerations. Clearwire lets its customers make the critical decisions regarding what products, devices and applications they want to use with the company's service. Clearwire also offers customers the flexibility of dropping in and using its network on a short-term basis through a \$10 "day pass" that today can accommodate roaming by any consumer with a WiMAX compliant device such as a WiMAX embedded laptop, modem or PDA.

In addition to extending an open network philosophy to its customers, Clearwire has positioned itself as a "network of networks." Clearwire has not only launched its own successful CLEAR service, but also serves as the underlying 4G network of Sprint, Comcast and Time Warner Cable. These carriers couple Clearwire's 4G service with their own facilities-based

⁶ Clearwire provides 4G WiMAX service in 34 markets covering approximately 44 million people in places such as: Atlanta, GA; Baltimore, MD; Boise, ID; Chicago, IL; Las Vegas, NV; Philadelphia, PA; Charlotte, Raleigh, and Greensboro, NC; Honolulu and Maui, HI; Seattle and Bellingham, WA; Portland and Salem, OR; and Dallas/Ft. Worth, San Antonio, Austin, Abilene, Amarillo, Corpus Christi, Killeen/Temple, Lubbock, Midland/Odessa, Waco and Wichita Falls, TX; Houston TX; and Washington, DC.

⁷ Markets scheduled to launch in 2010 are: New York, NY; Boston, MA; and the San Francisco Bay Area.

offerings to provide consumers with a varied package of choices among 4G network providers and service packages in those markets where Clearwire has deployed its network. For example, Sprint recently launched the country's first tri-mode 3G/4G/WiFi handset by combining its facilities-based 3G services with Clearwire's 4G offerings. This device, the HTC EVO™, is the first 3G/4G phone, and includes features such as 4.3-inch screen, dual 8MP video camera, a front-facing 1.3MP camera, a HDMI output jack and a 1GHz processor. It has simultaneous voice and data capability in 4G or Wi-Fi coverage areas enabling Web surfing and more during conversation, and has a built-in mobile hotspot for up to eight Wi-Fi enabled devices.⁸ As evidenced by the launch of the HTC EVO™, Clearwire's innovative dual-pronged wholesale and retail strategy expands the company's reach to potential customers and is an efficient and effective way of achieving a multiplier effect with regard to the introduction of advanced wireless broadband competition to the marketplace.

II. DISCUSSION

A. Clearwire Supports the Extension of Non-Discrimination Principles to Data Roaming to Enhance Broadband Deployment and Competition

Clearwire agrees with comments filed previously in this docket,⁹ urging the Commission to extend the obligation for carriers to accommodate reasonable requests for roaming agreements to broadband data services. As noted by SpectrumCo, an automatic roaming obligation for data services will likely enable the development of new wireless services and facilitate entry by

⁸ See "HTC EVO™ 4G Breaks Sales Records for Sprint on Launch Day; America's First 4G Phone is a Hit with Customers," June 8, 2010 at http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1436066.

⁹ See generally Comments of SpectrumCo LLC, WT Docket No. 05-265 (fil. Oct. 29, 2007) (SpectrumCo Comments); Comments of SouthernLinc Wireless, WT Docket No. 05-265 (fil. Oct. 29, 2007) (SouthernLinc Comments); Comments of MetroPCS Communications, Inc., WT Docket No. 05-265 (fil. October 29, 2007) (MetroPCS Comments), among others.

smaller players, who will be forced to meet customer expectations of seamless access to data services with the same regularity and ubiquity with which they have enjoyed access to voice services.¹⁰ Furthermore, in its *2007 Roaming Order*, the Commission determined that “most wireless customers expect to roam automatically on other carriers’ networks when they are out of their home service area . . . [and] that automatic roaming benefits mobile telephony subscribers by promoting seamless CMRS service around the country, and reducing inconsistent coverage and service qualities.”¹¹

Clearwire also agrees that an automatic roaming obligation for data services will support long-term facilities-based entry into the market, and the continued development of new and innovative data services, rather than cause smaller providers to “piggyback” on larger incumbent networks, thus chilling any possibility of continued build-out and innovation.¹² Facilities-based broadband providers have the proper incentives, per the build-out requirements of their licenses, to continue to robustly build-out their networks. They also have significant economic and business incentives to continue to deploy new services in order to remain competitive in the marketplace.¹³ As further noted in the record in 2007, new and smaller data providers must contain their business costs, which can be significantly reduced by eliminating the expense of roaming fees paid to incumbent network providers.¹⁴ This can only be accomplished by building out network facilities in these markets.

¹⁰ See SpectrumCo Comments at 2; MetroPCS Comments at 10.

¹¹ *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 15817 at ¶ 27 (2007)(*2007 Roaming Order*).

¹² See SouthernLine comments at 15; SpectrumCo Comments at 20; MetroPCS Comments at 10.

¹³ See *id.*

¹⁴ See SpectrumCo Comments at 20.

The extension of an automatic roaming requirement to data services should be relatively straightforward on existing CMRS platforms. Existing providers of CMRS, small and large, should be able to renegotiate and extend current automatic roaming agreements to include non-interconnected data services.¹⁵ Both previously existing agreements and the presence of current back-office and billing systems already built to accommodate automatic voice roaming requirements should make the imposition of an automatic data roaming requirement relatively seamless. In addition, as these CMRS platforms transition to 4G, it would make sense that agreements and systems in place for early generation data roaming will follow suit.

B. The Commission Should Accommodate the Development of Data-Centric Non-CMRS 4G Networks When Determining How Data Roaming Will Work Across Such Networks

Unlike the existing roaming framework for CMRS, there is no voice roaming predicate for new, non-CMRS data providers such as Clearwire that represent a breed of facilities-based wireless broadband carriers that originated as data-centric networks. As the Commission states in the *Data Roaming NPRM*, “mobile broadband services will increasingly be provided by entities that do not offer CMRS but that may nevertheless compete for mobile data service subscribers with companies that offer both mobile broadband and CMRS carriers.”¹⁶ It also notes that while 4G networks are still in an early stage of development, the Commission “expects that the availability of data roaming services will likely play a major role in the future

¹⁵ In the *2007 Roaming Order*, the Commission clarified that automatic roaming obligations currently extend to services that are real-time, two-way switched voice or data service that are interconnected with the public switched network and utilize an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls. Non-interconnected data services are those that are non-CMRS services and services classified as information services. *See id.* at 2, 4.

¹⁶ *Data Roaming FNPRM* at ¶ 62.

development of the broadband data market.”¹⁷ While Clearwire shares the Commission’s view that data roaming will be just as important for the development of non-CMRS 4G broadband platforms as it was for CMRS, it believes that non-CMRS 4G platforms may accommodate roaming in ways that differ from legacy systems founded on a voice-centric model.

For example, Clearwire, a non-CMRS carrier, adheres to an open network, open platform business model that supports all technologically compatible devices. In addition, Clearwire already has extensive wholesale arrangements with its current CMRS and cable partners and is aggressively pursuing additional wholesale opportunities. It is too early to tell whether these arrangements, that are arguably functionally superior to existing automatic roaming arrangements, will be the norm or the exception for other non-CMRS 4G networks currently under development. In addition, non-CMRS 4G service providers do not have in place the voice-centric back office systems originally designed for automatic voice roaming, nor is it clear that such systems are necessary for networks founded on 4G data rather than voice, since only Clearwire’s 4G platform exists today. While Clearwire recommends that the Commission safeguard the development of non-CMRS 4G networks by extending the non-discrimination principles to all data roaming, it also urges the Commission to be sensitive to the differences between the evolution of voice-centric and data-centric networks. It should not assume that data-centric networks must mirror the processes put in place for voice to accommodate data roaming. Efficient and effective data roaming across data-centric networks may develop differently from the voice model, and the Commission should incorporate into any data roaming rule the flexibility to permit the development of these new advanced networks and processes.

¹⁷ *Id.* at ¶ 52.

C. The Commission Should Resolve its Legal Framework for Broadband Internet Access Services to Support a Data Roaming Obligation

Clearwire asserts that the initial question of how and when the Commission can make any determinations about imposing an automatic data roaming rule, particularly on non-CMRS 4G data providers, hinges on the resolution of its recently announced proceeding on the legal framework for broadband Internet access services.¹⁸ For instance, after completion of this proceeding, if the Commission successfully applies its proposed open Internet principles to broadband providers generally, these principles may be sufficient to establish building blocks for non-discriminatory behavior among competitors in data roaming arrangements.¹⁹ The Commission's proposed fifth principle of non-discrimination, which prohibits broadband Internet access service providers from discriminating against, or in favor of, any content, application, or service, subject to reasonable network management, may be found to apply to the negotiations and agreements of data roamers, establishing a baseline level of non-discriminatory behavior on all parties to such agreements.²⁰

In the meantime, if the Commission finds that it currently has jurisdiction over mobile broadband data services before completion of its legal framework proceeding, it should consider imposing a general non-discrimination provision to guide automatic roaming obligations for all data roaming, as it did in its *2007 Roaming Order*.²¹ Such a provision creates an enforcement

¹⁸ See *FCC Announces Tentative Agenda for June 17th Open Meeting*, News Release (rel. May 27, 2010).

¹⁹ See *Preserving the Open Internet; Broadband Industry Practices*, Notice of Proposed Rulemaking, GN Docket No. 09-191; WC Docket No. 07-52 24 FCC Rcd 13064 (2009) (*Net Neutrality NPRM*).

²⁰ The Commission's proposed principle states "[s]ubject to reasonable network management, a provider of broadband Internet access service must treat lawful content, applications, and services in a nondiscriminatory manner." *Net Neutrality NPRM* . at ¶ 104.

²¹ *Id.* at ¶ 23.

mechanism through which the Commission can police the marketplace for anticompetitive behavior. This will allow new non-CMRS 4G broadband market entrants and smaller players to have recourse when facing discriminatory practices by dominant market incumbents while still avoiding the potential for unintended consequences if prescriptive rules are placed upon a nascent technology and industry.

CONCLUSION

In conclusion, Clearwire recommends that the Commission explicitly extend to all mobile broadband Internet access providers the ability to obtain automatic data roaming on a non-discriminatory basis upon reasonable request. As new, advanced data platforms are eventually deployed, the Commission will need to ensure that incumbent market dominance does not compromise the Commission's goal of promoting network choice and a rich broadband experience for consumers. Clearwire therefore believes that the time is ripe for the Commission to create certainty with regard to carriers' rights to non-discriminatory access to data roaming, including upon the advanced mobile broadband platforms planned for the future. Clearwire respectfully submits the foregoing comments and asks that the Commission consider the views expressed herein.

Respectfully submitted,
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