

September 10, 2014

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

VIA ECFS

RE: ***Ex Parte Submission; In the Matter of Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services; WT Docket No. 05-265***

Dear Ms. Dortch:

On September 8, 2014 Chairman Wheeler presented at the Competitive Carriers Association. He was interviewed onstage by CCA President Steve Berry and one of the topics was this proceeding. Press reports indicate the Chairman encouraged Berry and CCA members to file complaints if they think existing rules are not being followed.

Worldcall Interconnect, Inc. (WCX) submitted reply comments in this proceeding on August 20, 2014. On pages 1-3 WCX indicated that a complaint may be filed as between WCX and AT&T Mobility to obtain roaming terms. The purpose of this *ex parte* filing is to notify the Commission that on September 8, 2014, WCX did in fact file a formal complaint with the Enforcement Bureau against AT&T Mobility. WCX seeks resolution of specific issues and promulgation of an effective and enforceable roaming agreement. WCX also sought interim terms, as allowed by the rules. The main body of the public version of the complaint and the non-confidential Declarations in support are attached.

Sincerely,

/s/

W. Scott McCollough

Attachment

**REDACTED ACCORDING TO TERMS OF NONDISCLOSURE AGREEMENT –  
AVAILABLE FOR PUBLIC INSPECTION**

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In the Matter of	)	
	)	
WORLDCALL INTERCONNECT, INC.	)	
a/k/a EVOLVE BROADBAND,	)	
Complainant	)	File No. _____
	)	
v.	)	
	)	
AT&T MOBILITY LLC	)	
Defendant	)	

**COMPLAINT**

MATTHEW A. HENRY  
[henry@dotlaw.biz](mailto:henry@dotlaw.biz)  
W. SCOTT McCOLLOUGH  
[wsmc@dotlaw.biz](mailto:wsmc@dotlaw.biz)  
McCOLLOUGH|HENRY PC  
1250 S. Capital of Texas Hwy Bldg 2-235  
West Lake Hills TX 78746  
512.888.1112 (V)  
512.692.2522 (FAX)  
Counsel for Complainant

## EXECUTIVE SUMMARY

Worldcall Interconnect, Inc. a/k/a Evolve Broadband (“WCX”) files this complaint in order to secure commercially reasonable terms for roaming. WCX’s 499 Filer ID Number is 827150, and its Registration Number (CORESID) is 0017249558 (see Rule 1.721(a)(15)).

The Complaint charges AT&T Mobility LLC with violations of 47 U.S.C. §§157(a), 201, 202, 254, 301, 332 and 1302 as well as FCC rule 20.12. This case involves AT&T’s obligation to provide “data roaming” on “commercially reasonable” terms under FCC rule 20.12(e), and AT&T’s rule 20.12(d) obligation to provide “automatic roaming” on reasonable and not unreasonably discriminatory terms and conditions, pursuant to Sections 201 and 202. WCX requests appropriate findings and conclusions and the promulgation of a set of prospective binding roaming terms in an interim and prospective basis. WCX does not seek damages.

Defendant has refused to offer and/or agree to terms that meet the “commercially reasonable” standard for data roaming services. Defendant has also refused to offer and/or agree to terms and conditions that meet the just, reasonable and nondiscriminatory standard for “automatic roaming” to support WCX’s “real-time, two-way switched voice or data service[s] that [are] interconnected with the public switched network and utilize[] an in-network switching facility that enables the carrier to re-use frequencies and accomplish seamless hand-offs of subscriber calls” and WCX’s ability to provide “push-to-talk and[/or] text-messaging service.”<sup>1</sup>

The Complaint details how AT&T Mobility has refused to agree to commercially reasonable<sup>2</sup> terms, conditions or prices offered by WCX and has insisted on using contract terms,

---

<sup>1</sup> WCX does not at present offer interconnected “push-to-talk” service, but may choose to do so in the future either directly or in concert with an application service provider partner. WCX does offer interconnected text-messaging.

<sup>2</sup> This case is governed in part by Rule 20.12(e) because it involves non-interconnected data roaming. AT&T will be providing LTE-based data roaming, but WCX also offers and will support interconnected voice and data service and text-messaging to its customers while they are roaming on AT&T’s LTE network. Therefore Rule 20.12(a)(2) and (d), which require “reasonable and not unreasonably discriminatory terms and conditions” also apply at least in part.

conditions and prices which are not commercially reasonable and are unreasonable in many respects. Specifically, the prices are not reasonable, and the terms and conditions are so restrictive that they create a barrier to entry. They also functionally prevent innovation in new service offerings and uses and would choke off small, rural providers' ability to design, obtain and deploy unique or use-specific mobile stations to support Machine-to-Machine ("M2M") and/or "Internet of Things" solutions that are needed and desired by rural customers. The Complaint seeks appropriate declarations to that effect, and a prescription of commercially reasonable rates and terms using Complainant's agreement. The Complaint also seeks interim relief.

The main body of the Complaint is entirely public. Certain attachments and other materials supplied to meet the requirements of Rule 1.721(a) are redacted and submitted under seal in order to protect materials AT&T Mobility has claimed are confidential under the nondisclosure agreement between the parties.

**TABLE OF CONTENTS**

EXECUTIVE SUMMARY .....2

TABLE OF CONTENTS.....4

COMPLAINT .....6

I. The Parties .....6

II. Background.....7

III. History of Negotiations Between the Parties .....15

IV. Substantive Violations .....21

V. WCX’s Proposed Terms Conditions and Prices Are Commercially Reasonable.....23

VI. AT&T Mobility’s Proposed Terms Conditions and Prices Are Not Commercially Reasonable .....33

    A. AT&T’s Proposed Terms relating to billing, audits and suspension during dispute resolution are commercially unreasonable and lack measurement criteria; any prohibition on FCC resolution of disputes is commercially unreasonable .....34

        i. Dispute resolution .....34

        ii. Suspension during dispute resolution .....35

        iii. Auditing .....36

    B. Any implicit build-out requirements in addition to and more demanding than those reflected in the FCC’s rule-based build-out requirements are commercially unreasonable .....37

    C. No service and use restrictions on WCX roaming-enabled services .....38

    D. Any AT&T surveillance of WCX users’ content or applications through service awareness would be commercially unreasonable .....41

VII. AT&T Mobility’s Roaming Prices Do Not Comply with CMRS Rules and Are Not Commercially Reasonable .....42

VIII. Prayer for Relief.....43

IX. Attachments: Other Requirements of Section 1.721 of the Rules

    A. 1.721(a)(5) Statement .....44

    B. Request for Confidential Treatment.....45

    C. Declarations (Confidential and Not For Public Inspection in Part).....48

        1. Declaration of Lowell Feldman and Exhibits (For Public Inspection).....49

        2. Declaration of Martyn Roetter (For Public Inspection).....155

        3. Declaration of Martyn Roetter (Confidential and Not for Public Inspection).....185

D.	1.721(a)(6) Proposed Findings of Fact, Conclusions of Law, and Legal Analysis (Confidential and Not For Public Inspection in Part) .....	212
E.	1.721(a)(7) Statement of Relief Sought .....	286
F.	1.721(a)(8) Certification of Settlement Efforts and Notice of Intent to File .....	287
G.	1.721(a)(9) Statement of No Other Similar Pending Action Between the Parties.....	292
H.	1.721(a)(10) Information Designations (persons and documents) .....	293
I.	1.721(a)(11) Copies of Relevant Materials (Confidential and Not For Public Inspection) .....	300
J.	1.721(a)(13) Sworn Declaration on Payment of Fees.....	886
X.	Proposed Discovery (Confidential and Not For Public Inspection) .....	887
XI.	Certificate of Service .....	906

## COMPLAINT

To: The Commission

Complainant Worldcall Interconnect, Inc. a/k/a Evolve Broadband (“WCX”) hereby submits this complaint seeking commercially reasonable roaming terms. WCX asserts that AT&T Mobility LLC has violated 47 U.S.C. 157(a), 201, 202, 254, 301, 332 and 1302 as well as FCC rule 20.12(a)(2), (d) and (e), and shows as follows:

### **I. The Parties**

1. Complainant Worldcall Interconnect, Inc. a/k/a Evolve Broadband (“WCX” or “Complainant”) is a Texas corporation headquartered at 1250 South Capital of Texas Highway, Bldg. 2-235, West Lake Hills, TX 78746. WCX’s phone number is 512.888.2311. WCX provides wireless mobile services in certain portions of Texas using its licensed 700MHz frequencies, and has regulatory permission to provide wireless services using 3650 frequency as well on a nationwide basis, although economic and technical issues currently prevent widespread and seamless use of this capability.

2. Complainants’ counsel are Matthew A. Henry and W. Scott McCollough, McColloughHenry PC, 1250 South Capital of Texas Highway, Bldg. 2-235, West Lake Hills, TX 78746, phone number 512.888.1112.

3. Defendant AT&T Mobility LLC (“AT&T,” “AT&T Mobility” or “Defendant”) is a limited liability company organized under the laws of Delaware. AT&T Mobility is headquartered at 1025 Lenox Park Blvd, Atlanta Georgia 30319; Defendant is being served by providing a true and correct copy to AT&T Mobility’s FCC-registered agent for service of process, Anisa Latif, 1120 20th Street NW, Suite 1000, Washington DC 20036. Ms. Latif’s phone number is 202.457.3068, and her email is [anisa.a.latif@att.com](mailto:anisa.a.latif@att.com). Complainant is also

concurrently serving AT&T Mobility's outside counsel by overnight delivery addressed to David Lawson, Sidley Austin LLP, 1501 K Street, N.W., Washington, DC 20005, 202.736.8088. Mr. Lawson's email is [dlawson@sidley.com](mailto:dlawson@sidley.com).

## II. Background

4. Wireless providers have been required to provide roaming to other carriers for over 30 years.<sup>3</sup> This requirement is not unique to “cellular.” Any provider offering “real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the provider to re-use frequencies and accomplish seamless hand-offs of subscriber calls” must offer automatic roaming.<sup>4</sup> The terms and conditions for voice and data “interconnected” services roaming (including push-to-talk and text-messaging) are subject to Title II, and must be just, reasonable and nondiscriminatory.<sup>5</sup> “Broadband Data” services are at this time not considered to be “interconnected” or subject to Title II. Thus while a provider must still offer roaming to allow other providers to supply non-interconnected “data” services, the roaming terms, conditions and prices are presently subject to a lesser “commercially reasonable” standard.<sup>6</sup>

5. The differing legal standards applicable to roaming for “interconnected” services and roaming for non-interconnected “data”<sup>7</sup> service obscures the fact that small, rural providers do

---

<sup>3</sup> See, e.g., *Inquiry into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems*, Report and Order, 86 FCC 2d 469 at ¶ 75 (1981).

<sup>4</sup> 47 C.F.R. §20.12(a)(2).

<sup>5</sup> 47 C.F.R. §20.12(a)(d); *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, First Report and Order, 22 FCC Rcd 15817 (2007); *In re Reexamination of Roaming Obligations of Providers*, 25 FCC Rcd. 4181 (2010).

<sup>6</sup> 47 C.F.R. §20.12(e); *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Second Report and Order, 26 FCC Rcd 5411 (2011) (“*Data Roaming Order*”).

<sup>7</sup> Roaming for “interconnected” data service is subject to Title II, so “data roaming” offerings are common carrier; it is just “non-interconnected” broadband data roaming that is outside of Title II. For ease of use, however, all further references to “data” roaming are meant to be only for “broadband data” roaming, *i.e.*, support for services presently not deemed to be “interconnected” or subject to Title II.

not have extensive home area footprints or a nationwide network, yet they must have the ability to support their users when they travel about and want to enjoy the full suite of capabilities within their wireless service, both “non-interconnected” broadband data and interconnected voice and data capabilities. The practical problem is compounded when (like WCX) the small rural provider uses new technology that offers “interconnected” voice and data services (including push-to-talk and/or text-messaging) via broadband technologies (here using an LTE interface) rather than over legacy narrowband methods. For example, WCX uses new technology, called Voice over Long Term Evolution (VoLTE), a developing standard which incorporates the advancements of Voice over Internet Protocol (“VoIP”) into a managed LTE data network. The voice capability is “interconnected.” WCX also offers “interconnected” data and text-messaging to customers, but these offerings are technically supported through IP-based higher-layer “applications.” When a WCX user uses a WCX-supported interconnected voice, data or text-messaging service while roaming AT&T will not (and should not) be aware that this is occurring. To AT&T it will look like regular non-interconnected broadband data. The question therefore arises: do both legal standards simultaneously apply, and how can the differences between them be resolved on an issue by issue basis?

6. Any carrier that wishes to innovate in the emerging markets known as Machine-to-Machine (“M2M”), and “Internet of Things” must also have access to support their customers throughout the nation. Roaming is imperative, an absolute prerequisite to a small rural provider’s ability to attract and retain customers at all. A roaming agreement with AT&T Mobility is a fundamental “must-have” for any small rural provider that offers GSM or LTE-based service. WCX is solely LTE-based, so its options are limited to LTE networks using compatible technology and frequencies. The terms, conditions and prices must be sustainable –

notwithstanding the legal fictions or niceties involved – and the small, rural provider must be in position to offer service on terms that are comparable to those offered by the larger nationwide providers. If the rural provider wants to support innovative services it must not be subject to prohibitive and expensive terms and conditions imposed by the underlying roaming agreement. The terms, conditions and prices must allow the rural provider to offer nationwide, innovative and cutting-edge services, or else their services will not be purchased by those residing in or having a significant connection to the small provider's home area.

7. For example, the small rural provider must be able to offer a full suite, all-coverage service to technology developers that want to use wireless-based M2M or “Internet of Things” capabilities for mobile stations and devices wherever they may be – inside the home area or not. The main driver for most of these innovative services is the relatively newfound ability of independent “non-carrier” technology companies to program, design and build hardware and software into devices which have some element of “openness” to them. For example, the marketplace for “mobile apps” (short for “application software”) is currently vibrant and competitive. Google and Apple permissively allow independent and small developer communities to create apps that can be downloaded by users. A “hit” app is automatically available for use in a ubiquitous marketplace covering not only the nation but also most of the world. Imagine a scenario if the exclusively available “market” for each “mobile app” (which is but one example of the “Internet of Things”) is solely the home area of a single small rural carrier. It would be a non-starter.

8. M2M and “Internet of Things” projects involve multiple connected devices per each individual user or company. The ones existing today and many more yet to be imagined are designed and developed by innovative entrepreneurial companies and individuals. What these

new services and capabilities represent and how they interact have the potential to dramatically impact agricultural, environmental, medical, educational and shipping industries among others.

9. Application and device developers reasonably assume (1) an open and flexible nationwide (and worldwide) environment for their product and its method of collecting, processing and using data; (2) the capability or device can be used in a ubiquitous fashion and on any underlying transmission network; and (3) will often have a cost per month per device measured in pennies or a fraction of pennies.

10. Large incumbent providers, however, have the incentive to slow technological advancement and throttle applications or services that they do not control, and cannot successfully rent-seek or otherwise directly monetize other than from the revenue garnered from incremental broadband usage.

11. WCX proposes to use the RWA Model Agreement as the contract terms between AT&T and WCX. This agreement is explicitly permissive for M2M and “Internet of Things” innovations, and allows WCX, as a Roaming Partner of AT&T, to rely on AT&T’s ubiquitous network for servicing WCX’s customers. It guarantees AT&T a prevailing retail price for use of AT&T’s network when a WCX user roams on the AT&T Network, which means AT&T will in fact earn more profits from WCX roaming than AT&T obtains from its own retail customers.

12. This is compared to AT&T’s proposals which, *inter alia*, (1) effectively bar WCX’s market entry as a provider of roaming-capable M2M or “Internet of Things” devices and services; (2) prevent WCX from providing mobile service to residential or business customers residing in WCX’s licensed area when they commute to work locations or schools located in AT&T’s licensed area (3) require exorbitant and punitive fees, deposits and billing terms; and, (4) allow AT&T to unilaterally cancel WCX’s roaming arrangement at AT&T’s whim. The

result of AT&T's terms, if adopted, is that unless a carrier already has a ubiquitous network, it simply may not participate in these new markets as an innovator. AT&T's terms would force users in rural areas to use a national carrier such as AT&T rather than a home-based provider with ties to their community.

13. AT&T Mobility has every incentive to make its smaller competitors less attractive to customers by reducing those customers' ability to roam if they do not sign on as AT&T Mobility retail customers. Were it not for Section 20.12 of the Commission's rules requiring it to provide roaming, AT&T Mobility would have no reason to offer roaming to WCX, and in fact has every incentive to deny roaming on any terms, much less on reasonable terms.

14. In today's wireless service marketplace, it is not competitively feasible for a carrier to charge customers for roaming, as it was years ago when roaming charges were in the 25 and 30 cent per minute range. To be competitive, a carrier must offer nationwide domestic roaming that has no additional incremental fee, or in the case of M2M and "Internet of Things" is no more than the prevailing retail rate for in-home usage. This means that the home carrier must absorb the cost of roaming charges imposed by other carriers if those charges exceed the incremental cost of supplying usage on the home network.

15. Broadband data is not interconnected, is not CMRS and is not Title II. This is so because it is not "interconnected with the public switched network" given that it does not rely on traditional numbering resources. See FCC rule 20.3, definitions of "Automatic roaming," "Commercial mobile data service," "Commercial mobile radio service," "Interconnected," "Interconnected service," and "Public switched network." Rule 20.12(e) requires roaming for data service on commercially reasonable terms. Although we have the policies and goals expressed in ¶¶13-15 and the "tests" set out in ¶¶68 and ¶86 of the *Data Roaming Order*, the

Commission has not applied them in a publicly-released contested proceeding, so we still do not have much practical guidance on specific terms, conditions and prices that are or are not commercially reasonable. Nor has the Commission provided a legal definition of “commercially reasonable.” WCX believes and asserts the Commission should concur with the courts’ interpretation of that term. They have looked to the Black’s definition, and sometimes the Uniform Commercial Code. The general consensus is that “commercially reasonable” (1) has both objective and subjective components; (2) requires a case-by-case and fact-specific inquiry; (3) contracts that require undefined “commercially reasonable” conduct do not automatically and reflexively incorporate “industry standards” without further factual evaluation of the parties’ circumstances and the consequences of compliance with those standards;<sup>8</sup> and (4) whether something is or is not “commercially reasonable” is ultimately a question of fact.<sup>9</sup>

16. A “commercially reasonable” contract provision must be fair to both sides and serve the overall public interest. It cannot unduly prejudice either one or the other. In our context, WCX and its customers must be able to actually use roaming, and the terms cannot unreasonably prevent WCX from competing in the market. AT&T of course should be fairly compensated and the arrangement cannot prejudice AT&T’s ability to provide retail service to its own customers. The ultimate goal should be a net benefit to society and the entire user base. The overarching policy should protect *competition* not individual *competitors*, and ensure that it serves the ultimate goals espoused in §151 of the Act: “to make available, so far as possible, to all the

---

<sup>8</sup> The *Open Internet NPRM* correctly asked about the impact industry standards and practices should have on the determination of commercial reasonableness. 29 F.C.C. Rcd 5608, ¶34 (“How, if at all, should the fact that conduct is an industry practice impact the application of the ‘commercially reasonable’ rule? What should be treated as an ‘industry practice’?”).

<sup>9</sup> *Metavante Corp. v. Emigrant Sav. Bank*, 619 F.3d 748, 763-766 (7th Cir. 2010); *L. W. Matteson, Inc. v. Severson Envtl. Servs.*, 831 F. Supp. 2d 608, 616-617 (W.D.N.Y. 2011); *Microboard Processing, Inc. v. Crestron Elec., Inc.*, 2011 U.S. Dist. LEXIS 33000 (D. Conn. Mar. 29, 2011), *adopting Microboard Processing, Inc. v. Crestron Elecs., Inc.*, 2011 U.S. Dist. LEXIS 33109, \*18-\*23 (D. Conn. Jan. 11, 2011); *LeMond Cycling, Inc. v. PTI Holding, Inc.*, 66 Fed. R. Evid. Serv. (Callaghan) 305, 2005 U.S. Dist. LEXIS 742 \*14-15 (D. Minn. Jan. 14, 2005).

people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, [and] for the purpose of promoting safety of life and property through the use of wire and radio communications.”

17. WCX submits that roaming terms that are financially, practically and operationally unsustainable to the small, rural carrier are not measurably different from having no roaming at all. As will be further explained below, WCX has offered commercially reasonable terms,<sup>10</sup> but AT&T Mobility has refused to accept those terms. Instead, AT&T has insisted on roaming terms that are demonstrably *not* commercially reasonable, are *not* reasonable and *are* unreasonably discriminatory, at least with regard to WCX. Indeed, AT&T’s terms are so unreasonable, onerous and adhesive that they are tantamount to a refusal to offer roaming at all.

18. FCC rule 20.12(a)(2) and (d) subject “real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the carrier to re-use frequencies and accomplish seamless hand-offs of subscriber calls,” and “push-to-talk and text-messaging service” to a more exacting standard. Under 20.12(a)(2) and (d) AT&T must offer “automatic roaming” that will allow “a roaming subscriber [] to originate or terminate a call in the host carrier’s service area without taking any special actions.” AT&T must make this offer “to any technologically compatible, facilities-based CMRS carrier on reasonable and not unreasonably discriminatory terms and conditions, pursuant to Sections 201 and 202.”

---

<sup>10</sup> To the extent the applicable test is just, reasonable and nondiscriminatory under Title II, WCX’s terms met that test as well.

19. WCX is a technologically compatible, facilities-based CMRS carrier. WCX offers “interconnected” voice and data. WCX offers text-messaging.<sup>11</sup> Under the recent “text to 911” decision,<sup>12</sup> WCX will have additional duties, including some fairly exacting geolocation responsibilities, for WCX’s text service. Further, WCX has new obligations to “over the top” (OTT) “interconnected” text providers in that WCX must now form a provider-customer relationship with the text provider<sup>13</sup> allowing “use of the wireless device’s native SMS application programming interface (API) after recognizing that the user is sending a text message to the text short code “911” and also “route over the CMRS network.”<sup>14</sup> WCX intends to enter arrangements with OTT application providers for basic text-messaging and other innovative applications and services that will in some instances require “real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the carrier to re-use frequencies and accomplish seamless hand-offs.” These “interconnected” services will cover more than 911 capability. They are subject to rule 20.12(d), not 20.12(e).

20. AT&T’s proposed terms must therefore also be assessed through a Title II “just, reasonable and nondiscriminatory” lens. Sections 201 and 202 apply. AT&T’s terms do not pass 201/202 muster. AT&T has violated §§201 and 202, along with rule 20.12(a)(2) and (d).

---

<sup>11</sup> WCX supports these “interconnected” services using LTE and broadband. WCX does not employ a separate narrowband channel. When AT&T’s LTE network supports use of these services it will see only “data.” Nonetheless, from a WCX perspective and under the statute and rules, they are still “interconnected” and covered under rule 20.12(d).

<sup>12</sup> *In the Matter of Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications Framework for Next Generation 911 Deployment*, FCC 14-11, PS Docket Nos. 11-153, 10-255, Second Report and Order and Third Further Notice of Proposed Rulemaking, \_\_ FCC Rcd \_\_ (August 8, 2014).

<sup>13</sup> The new FCC rules require WCX to allow “interconnected” text providers to make use of WCX’s network and WCX must allow access to wireless device APIs. This constitutes “resale” if one applies AT&T’s theory and definition. Therefore, insofar as AT&T’s proposed terms prohibit “resale” as defined by AT&T they are in conflict with the new rules.

<sup>14</sup> *Id.* ¶¶30, 42 and n. 119.

21. WCX will largely analyze the issues by applying the lower “commercially reasonable” standard, but WCX asserts, and does not waive, the contention that AT&T has rule 20.12(d) duties, must provide “automatic roaming” and its terms must also be reasonable and not unreasonably discriminatory pursuant to §§201 and 202, since WCX will be using roaming to provide “interconnected” voice and data services along with text-messaging.

### **III. History of Negotiations Between the Parties**

22. WCX is a new entrant. It has no roaming agreements with any other provider. AT&T is the only potential roaming supplier that is currently technically compatible with WCX. WCX holds a lower B Block 700MHz license covering Cellular Market Area (“CMA”) 667. This CMA is adjacent to the CMAs covering Austin, Houston and San Antonio, Texas, where AT&T Mobility has deployed 4G Long Term Evolution (“LTE”) service using like licenses to what WCX uses in its CMA. WCX’s CMA area is also home to several research facilities associated with major universities, but is not metropolitan by any means. Indeed, most of the territory is “rural” under most accepted understandings of that term. AT&T’s licensed LTE areas basically surround WCX’s territory and include Austin, Houston and San Antonio. A large portion of the population commutes from within WCX’s licensed area to locations inside AT&T’s licensed area in order to go to schools and businesses, to work, learn, shop or to perform important tasks like obtaining medical care.

23. WCX has deployed LTE services in CMA 667 in Band 17. These could also be utilized by AT&T Mobility. In order for WCX to provide a service that is both competitive and commercially viable, it is essential that the company establish a roaming arrangement with AT&T Mobility if it chose to roam on WCX’s network.<sup>15</sup>

---

<sup>15</sup> *Data Roaming Order* at ¶15 (“[T]he availability of data roaming arrangements can be critical to providers remaining competitive in the mobile services marketplace. ... Even where providers have invested in and built out

24. In June 2011, shortly after the *Data Roaming Order* was released, WCX contacted AT&T Mobility to request an LTE data roaming agreement and the parties initiated negotiations. WCX had not yet constructed its network and did not provide services to any customers. During the course of negotiations, AT&T Mobility informed WCX that it had not yet created proposed Roaming Terms and Conditions. AT&T also stated it does not intend to roam on WCX's network, with the result that any agreement would not be used reciprocally by AT&T. AT&T's decision functionally turns any potential agreement into a one-way arrangement whereby WCX purchases roaming from AT&T Mobility. This differs from historical reciprocal roaming arrangements where the providers both roam on each other's network and compensate the other for roughly equal amounts of roaming. WCX does not dispute AT&T Mobility's right to make this business decision, but this choice has important consequences to the commercial reasonableness of AT&T Mobility's proffered terms.

25. The parties' initial negotiations ultimately broke down. Rather than pursue formal complaint relief at that time, WCX decided the better course of action was use its resources to eliminate several of AT&T Mobility's initial concerns: that WCX had not yet built out its network, had no customers and had not presented a proposed set of roaming terms.

26. WCX spent significant capital over the past two years and has now completed much of its build-out. WCX has surpassed the Commission's build-out requirements as outlined in Auction 73. The WCX Evolved Packet Core is in place, fourteen radio sites are installed and operational, and WCX is currently providing retail service from ten of them. WCX also has seven additional enodeB units in its staging area. However, WCX's ability to viably provide continued and additional retail services to more customers is tied directly to its ability to obtain commercially

---

broadband networks in a regional service territory, a service provider's inability to offer roaming easily can deter customers from subscribing.”).

reasonable roaming, and thus further expansion will occur on a slower schedule – or not at all – until WCX can obtain commercially reasonable roaming terms.

27. WCX has also secured tentative arrangements to provide innovative services to and in cooperation with several technology-intensive business and other advanced technology customers, but those are wholly contingent on having commercially reasonable and economically sustainable roaming terms with AT&T Mobility. New technology uses for M2M and Internet of Things must not be prohibited. WCX must not be prevented from innovating in ways that allow LTE Data to become a significant facilitator for connecting devices and delivering services. Data use restrictions cannot prevent WCX from serving as an attractive host carrier partner for these developing technology markets.

28. Some of the M2M applications and ideas may also hold proprietary technology and applications developed by non-carrier industry participants. One such industry participant is Amazon, which has developed and deployed specialized devices and applications on specialty phones and tablets. AT&T has a relationship with and considers Amazon to be an MVNO. While WCX probably does not presently have the horsepower to compete for a relationship with the likes of Amazon, that could change. But WCX can and should be able to support and grow its own type of MVNOs by working with them directly in a similar manner to how AT&T has historically worked with Amazon and others. AT&T's proposed terms would effectively prohibit WCX from having these relationships. AT&T's proposed terms certainly prevent WCX from ever being able to achieve the kind of status that would attract an Amazon. AT&T's terms are anticompetitive because they erect an insurmountable barrier to entry.

29. Another of AT&T's concerns was that WCX did not present its own commercially reasonable agreement. In 2013, WCX joined the Rural Wireless Association ("RWA"). WCX's

CEO was elected Chairman of the RWA's Roaming Committee and worked within the trade organization to build a consensus on a model commercially reasonable data roaming agreement. After over a year's worth of work and consultation with numerous carriers and stake holders at the RWA and after multiple drafts, the RWA formally adopted and approved the "RWA Model Agreement" in late June of 2014.<sup>16</sup> The RWA has already updated that initial agreement and will likely continue to take in additional feedback and will continue to update its agreement based upon its recently learned best practices. WCX proposes that the RWA Model Agreement serve as the contract embodying its requested relief: commercially reasonable<sup>17</sup> roaming terms, conditions and prices.

30. After the RWA formally approved the RWA Model Agreement but before it was publicly disclosed, WCX contacted AT&T Mobility on or about June 24, 2014 and informed AT&T Mobility of the changed circumstances related to WCX. WCX provided a copy of the then-current RWA Model Agreement to AT&T Mobility, specifically requested that the RWA Model Agreement be the roaming terms and conditions, informed AT&T Mobility that WCX has now built out its network to the FCC build out requirements and now has retail customers.

31. WCX requested that the parties pick back up on their prior negotiations and began by asking AT&T Mobility if they had changed their positions on the other "impasse issues" from the earlier negotiations. WCX delivered a complete set of proposed roaming terms on June 24, 2014. The RWA Model Agreement was subsequently updated. WCX delivered that document to AT&T on August 15, 2014. The current version of the RWA Model Agreement, which is the

---

<sup>16</sup> The model agreement is something of a living document, just like AT&T's template interconnection and roaming agreements and, indeed, all of its template contracts. Edits and improvements have been made, and this will likely continue.

<sup>17</sup> To the extent the applicable test is just, reasonable and nondiscriminatory under Title II, WCX's terms met that test as well and should be approved.

document WCX proposes for use and approval in this proceeding, is contained in Feldman Declaration Exhibit 1.

32. The RWA Model Agreement, by design, relies on the current best practices of the GSMA<sup>18</sup> for Billing, Settlement, Physical Interconnection and Technical Testing and proposes to use the Current GSMA Appendices in whole during implementation. AT&T has not disclosed what parts of the GSMA Appendices it opposes and why.

33. AT&T Mobility refused to provide any answers regarding the remaining “impasse issues” and would not produce its “new” proposed terms until the parties executed a new NDA. The NDA was executed on July 28, 2014, and AT&T Mobility provided its term sheet and proposed contract on the July 29. AT&T’s July 29, 2014 terms mirror in all material respects the terms it had provided in the negotiations two years earlier. The parties exchanged a series of communications by email and phone between June 24 and August 1. It was apparent early on that many of the same substantive “impasse issues” (aside from WCX’s lack of build-out, WCX not having customers, and WCX not proffering its own terms) dividing the parties in 2012 remained. Further, it soon became clear that AT&T Mobility would not at all discuss or negotiate concerning the written terms and conditions (RWA Model) WCX provided on June 24. AT&T Mobility expressly so stated in writing on August 1.

34. WCX gave notice of intent to file a formal complaint on August 5, 2014. WCX invited AT&T Mobility to engage in good-faith settlement discussions wherein the parties could discuss,

---

<sup>18</sup> GSMA<sup>TM</sup> is the association of carriers that employ the Global System for Mobile Communications (GSM) standard, including those implementing LTE. The GSMA represents the interests of mobile operators worldwide. Spanning more than 220 countries, the GSMA unites nearly 800 of the world’s mobile operators with 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in industry sectors such as financial services, healthcare, media, transport and utilities. The GSMA also produces industry-leading events such as Mobile World Congress and Mobile Asia Expo. See <http://www.gsma.com>.

consider and negotiate over WCX's proposed agreement, in the context of a mutual willingness to compromise significantly in order to reach a negotiated settlement.

35. AT&T Mobility provided a timely reply to the Notice on August 8, 2014. The AT&T reply asserted that AT&T remains ready and willing to negotiate a commercially reasonable agreement with WCX. It did not, however, clearly and unequivocally represent that AT&T is willing to (1) engage in settlement discussions; (2) discuss, consider and negotiate over WCX's proposed agreement; or (3) compromise significantly on all of the substantive issues.

36. WCX responded on August 11, and noted the missing representations. WCX took the additional step of stating that it was willing to provide more time (until August 14) for a more detailed response, but notified AT&T that if that more detailed response did not unequivocally represent that AT&T is willing to (1) engage in settlement discussions; (2) discuss, consider and negotiate over WCX's proposed agreement; and (3) compromise significantly on all of the substantive issues then WCX would take that to mean that further efforts toward settlement would be fruitless.

37. AT&T provided what it said was its "more detailed response" on August 14, 2014. Once again, however, AT&T did not unequivocally represent that AT&T is willing to (1) engage in settlement discussions; (2) discuss, consider and negotiate over WCX's proposed agreement; and (3) compromise significantly on all of the substantive issues. Instead, AT&T refused to negotiate from the WCX proposed terms, reiterated that only its terms were on the table, offered no concessions and failed to indicate that it was even willing to compromise in any manner.

38. AT&T's August 14 response characterized the WCX agreement as the original offer, and claimed that AT&T's July 29 terms constituted a rejection of WCX's terms and a counter-offer. Although WCX disagrees with that characterization, WCX nonetheless took further additional

steps by replying to AT&T's notice on August 15, stating that WCX rejected AT&T's "counter-offer" and proffered the new and improved RWA model terms as a "counter" to AT&T's counter. WCX suggested that the parties conduct a telephonic meeting to determine whether any progress could be made toward settlement.

39. The parties scheduled and then conducted a conference call on August 19, 2014. AT&T suggested that the conversation begin with two primary issues of dispute: use restrictions and price. WCX concurred with that suggestion. During the conference the parties ultimately recognized that they have wholly dissonant views about the Commission's legal and policy principles for roaming, particularly with regard to price, whether roaming is a form of resale and other use restrictions. Both parties agreed that their positions and proposals on those topics were so fundamental and overarching that it made no sense to even discuss the other issues, or contract terms relating to them.

40. WCX hereby applies to the Commission for relief. WCX remains open to negotiation with AT&T during the pendency of this complaint, but after over three years and practically no movement from AT&T on the major impasse issues, WCX can wait no longer. WCX reasonably believes that the parties will not ever achieve a negotiated resolution absent Commission oversight. The parties disagree on the template that will be used, and the "impasse issues" still remain. WCX needs to have commercially-reasonable roaming terms, and therefore files this complaint. WCX requests prompt resolution by the Commission.

#### **IV. Substantive Violations.**

41. AT&T Mobility has committed the following acts in violation of 47 U.S.C. §§157(a), 201, 202, 254, 301, 332 and 1302 as well as FCC rule 20.12:

A. AT&T Mobility has failed to offer a roaming arrangement that contains commercially reasonable terms and conditions. AT&T Mobility's proffered term sheet

and “Domestic Roaming Agreement” contain numerous terms and conditions, including implicit terms not spelled out in the AT&T Mobility agreement that are individually and collectively not commercially reasonable. AT&T has violated §301 and Rule 20.12(e).

B. AT&T Mobility has failed to offer terms, conditions and prices for “automatic roaming” to support “interconnected voice and data” and text-messaging that are reasonable and not unreasonably discriminatory under §§201, 202 and 332 as well as Rule 20.12(a)(2) and (d).

C. AT&T Mobility has failed to accept WCX’s proposed terms, conditions and prices, which are commercially reasonable and meet the requirements of §301 and Rule 20.12(e).

D. AT&T Mobility has failed to accept reasonable and not unreasonably discriminatory terms, conditions and prices that would allow “automatic roaming” to support “interconnected voice and data” and text-messaging that meet the requirements of §§201, 202 and 332 as well as Rule 20.12(a)(2) and (d).

E. AT&T’s position and proposals jeopardize WCX’s ability to invest in further deployment of broadband, in violation of §1302.

42. WCX hired an expert, Martyn Roetter, to review both WCX’s proposed contract and AT&T’s proposed contract and assess the extent to which each proposal adheres to the policies put forth by the FCC in the FCC’s Roaming Rule and the *Data Roaming Order*. Dr. Roetter has provided a public analysis of WCX’s terms. Dr. Roetter also evaluated AT&T’s as-yet confidential terms in a separate and confidential declaration.

43. WCX asserts that AT&T Mobility’s proposed agreement cannot be used as even the starting point for a contested set of contract terms. The AT&T Mobility template is embedded with explicit and implicit commercially unreasonable results and vague provisions that allow AT&T Mobility unconstrained discretion to unilaterally interpret the terms in ways harmful to WCX. The AT&T Mobility template cannot be adequately edited to remove all of the commercially unreasonable provisions. WCX requests that the FCC base its decision on the RWA Model Agreement rather than AT&T Mobility’s contract template.

**V. WCX's Proposed Terms Conditions and Prices Are Commercially Reasonable**

44. WCX's proposed agreement is the RWA Model Agreement. The RWA built a consensus among dozens of operators on standard terms and conditions including limitation of liability, notice, and term of agreement, among other things. Further, the RWA has committed to engage in industry best practices and to mature its terms in an open, public and transparent manner. Thus when and if problems are found in the RWA Model Agreement, they can be quickly addressed and fixed. These terms are technically sound and commercially reasonable.

45. WCX's proposed terms:

A. Are permissive of market entry and competition, and indeed necessary for market entry of a new local or regional wireless carrier, or for these carriers' efficient exploitation of a spectrum license in a new band, so as to support the policy of stimulating competition in the U.S. wireless market. Residential and business wireless customers today expect and demand mobility and ubiquitous nationwide (if not international) service. Operators with spectrum that covers limited geographic footprints are dependent on national roaming capability to attract customers from within their licensed areas and to justify the investments necessary to meet the obligations (including build out requirements) attached to their licenses, as well as to provide national coverage.

B. Do not impose any material constraints on the ability of the serving national carrier to provide service to its own customers and to compete, while allowing a reasonable profit margin on the roaming it supplies to the home carrier.

C. Include safeguards against arbitrage by the home carrier by requiring that the home carrier directly handle the majority of its customers' traffic.

D. Prevent either party from abrogating the operation of the roaming agreement at their sole discretion in ways that lead to unjustifiable harmful and potentially irreparable consequences for the other party.

E. Are consistent with the terms and conditions in roaming agreements between other operators that have been found to be mutually satisfactory.

46. One of the principal issues between the parties is whether there is some spot on a continuum beyond which "roaming" becomes "resale." AT&T Mobility's position is that roaming should be wholly incidental to a facility-based provider's services, and virtually all usage should be consumed on the provider's own network rather than through roaming. AT&T asserts that anything but very limited use is actually "backdoor resale." WCX agrees that

“roaming” should not be confused or conflated with “resale” and concurs with the FCC’s effort to instill proper incentives for carriers to invest in their own home networks. Roaming, however, is not resale; these are two distinctly different things. The principles articulated by the Commission cannot translate into an inflexible prohibition of, or punishment for, out-of-home-area roaming usage merely because it is significant. No purpose is served by imposing punishing rates or terms for significant roaming usage if the carrier has fully met all FCC build-out requirements for its licensed area and commits to further investments in that licensed area, but has only a limited geographic licensed spectral authorization footprint that is predominantly rural. “Mobile” service is inherently mobile and users expect to be able to fully use the service wherever they may be. If users engage in significant use when they are outside the provider’s home area, then it is still roaming, and is not resale. Roaming is always roaming and roaming use is always through the front door.

47. WCX’s licensed area is only 11,000 square miles and has a population of less than 400,000 people. Given this small footprint and the relatively low population within it, WCX cannot by itself build out a ubiquitous nationwide network and provide ubiquitous coverage for M2M and “Internet of Things” devices and applications. If the consumption can only occur within the WCX footprint, WCX is too small to entice application and device developers and manufacturers to collaboratively create new, exciting services and applications. On the other hand, if WCX can offer innovative services that work nationwide, and can help other small providers also deploy similar services to their own users while they are at home or while roaming, then WCX can materially advance competition and innovation, while having an impact that extends far outside of its footprint.

48. A provider cannot be “incented” to “invest” in a network outside its home area and in places where the provider has no licenses. Any provider that builds and operates radio networks where it has no licenses is going to be quickly hit with forfeitures and orders to desist. The principle concerning investment incentives can only apply within the home licensed area – where there will be little to no roaming in WCX’s case. WCX has already invested in its home area network and will continue to do so. No purpose is served by punishing roaming use outside of WCX’s licensed home area based on the “investment incentive” principle.

49. WCX has already exceeded the FCC’s build out requirements in its licensed home service area, and will continue to invest within that area. WCX’s terms do not contain implicit or explicit terms that require WCX to meet AT&T Mobility’s notions of an appropriate build out to the extent they exceed the FCC’s determinations on that issue. WCX’s terms do not contain implicit or explicit functional requirements that WCX build out in areas where it does not have licensed spectrum.

50. WCX’s terms contemplate provision of future Machine to Machine (“M2M”) and “Internet of Things” services that allow development of devices and applications that are symbiotic with the ability to connect to a ubiquitous network. Since AT&T controls the only ubiquitous LTE network compatible with WCX technology, significant roaming use is essential for WCX to enter and compete in this market to provide service to consumers and businesses that reside in, or conduct significant activities within, WCX’s licensed area.

51. WCX proposes a compromise-based<sup>19</sup> bright dividing line between acceptable “roaming” consumption and unacceptable roaming consumption.<sup>20</sup> WCX proposes to restrict roaming usage

---

<sup>19</sup> WCX does not agree that an increase from 50% roaming to 51% roaming magically transmutes into “resale.” To the contrary, WCX asserts that even greater than 90% roaming would not be resale given that the technical arrangement between the parties is entirely different from the technical means by which resale is conducted. WCX

to no more than 50% of the total data usage of all WCX accounts.<sup>21</sup> There should be no limitations to any individual account or the number of and types of devices associated with any individual account. M2M and “Internet of Things” services and applications should never be considered part of a prohibited or punished “Permanent Roamer” pool. WCX also asserts that the roaming terms and conditions should allow and encourage innovative uses that may or may not track the patterns of AT&T Mobility’s users or AT&T Mobility’s system-wide usage patterns. The services in issue are inherently mobile and WCX has a limited rural geographic area. WCX will most likely support different data usage patterns and volumes, because WCX’s users come from predominately rural areas. They need and expect nationwide coverage, but they do different things and use their wireless service in different ways than urban denizens.

52. While WCX can and will continue to invest in its licensed area, it is commercially unreasonable to punish WCX if WCX’s customers use their service while on the move and they happen to be outside of WCX’s licensed area in any significant measure. It is also commercially unreasonable to dis-incent developers of new technologies and uses from partnering with WCX when WCX desires to enable innovation by opening up its network, work with developers and promote new uses of technology in stark contrast to AT&T. In short, it is commercially

---

has proposed 50% as the maximum acceptable amount of out of home area roaming use merely for compromise purposes.

<sup>20</sup> This compromise is made in an effort to fully and unquestionably satisfy the Commission’s caution that providers should not “rely on roaming arrangements in place of network deployment as the **primary source** of their service provision.” See *Data Roaming Order* ¶ 21 (emphasis added). Again, WCX does not agree that roaming that exceeds 50% necessarily means the provider is using out of home area roaming as the “primary source” of service provision. The specific 50% value has purposefully been set lower than could easily be justifiable given the legal meaning of “primary.” Black’s Law Dictionary defines “Primary” to mean “first in order of time, or development, or in intention.” Even 90% could meet that test since users could not roam at all until *after* they contract with WCX to use home-based service, and WCX’s intention is to supply a significant amount of “primary” home-based service, with roaming being “supplemental.”

<sup>21</sup> RWA agreement sections 3, 4, 5 (characterizing roaming as a “supplement” to home-based service and requiring that the home provider “provide the majority of its customer’s mobile data services on its own Network”).

reasonable for WCX and its users to have significant (but not predominant) roaming usage associated with WCX service.

53. “Significant” roaming is not “resale.” If WCX helps innovate in the M2M market in agriculture, shipping or the medical field, it should be able to support its cultivated customers through roaming, and should expect not to pay AT&T more than full retail rates when the WCX-cultivated innovation succeeds nationwide. This may in fact result in one or more cultivated customers that independently develop technology and desire to be their own MVNO – much like Amazon has become a valuable MVNO partner of AT&T. WCX should be allowed to be the host carrier of that new MVNO.

54. AT&T asserts that roaming should only be “incidental” and it wants to severely limit the amount that would be allowed before there is a breach or AT&T can impose a penalty rate. AT&T claims that more than *de minimis* roaming usage is “resale.” Their proposed terms make clear they construe “incidental” to mean “occasional” or “minor” in volume and instance. This usage is inconsistent with the legal definition of “incidental”: “depending upon or appertaining to something else as primary.”<sup>22</sup> In the case at bar, all roaming would be incidental to the “primary” contracted home-based service between WCX and its user, because a WCX user cannot “roam” on AT&T’s network unless the user has a contract with WCX. Roaming is appurtenant to WCX’s service. “Significant” roaming is still “incidental” in the legal sense, and is not “primary” because home network usage would still constitute the majority of WCX’s traffic.

55. WCX’s proposals independently show that its desire is for “roaming” and not “resale.” Resale occurs when a provider obtains an entire finished (bundled) product from a vendor, and then “resells” that same finished (bundled) product to an end-use customer, either with or

---

<sup>22</sup> Black’s Law Dictionary, 4th Ed., p. 904.

without adding value, for profit.<sup>23</sup> “CMRS resale entails a reseller’s purchase of CMRS service provided by a facilities-based CMRS carrier in order to provide resold service within the same geographic market as the facilities-based CMRS provider”<sup>24</sup>

56. WCX’s proposal does not involve buying “minutes” from AT&T, with AT&T providing the underlying telecommunications functionality in a manner almost indistinguishable from its own retail service. In the CMRS realm, MNVOs are resellers because they purchase “airtime” and then resell it under their own brand.<sup>25</sup> WCX, however, is not proposing to “resell” AT&T “finished” data offerings. Instead, only a portion of AT&T’s capabilities would be used, specifically joint authentication, use of spectrum associated radio equipment and some measure of transport, and then the communications will be handed off to WCX for management, processing, delivery of service applications and direction. AT&T will not be providing the “service” be it M2M, voice, texting or Internet for WCX customers; that will be WCX’s job.

57. WCX is already offering data and other service in its home area using its own spectrum and facilities. The Commission has expressly recognized that when a provider is self-providing in the home area, then “roaming” cannot be equated to “resale.”<sup>26</sup> WCX’s proposal, by definition, cannot be resale. It is roaming.

---

<sup>23</sup> See *In the Matter of Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services*, First Report and Order, 11 FCC Rcd 18455, 18457, ¶3 (1996), citing *Resale and Shared Use of Common Carrier Services and Facilities*, 60 FCC2d 261, 263 (1976), reconsideration, 62 FCC2d 588 (1977), *aff’d sub nom. AT&T v. FCC*, 572 F.2d 17 (2d Cir.), *cert. denied*, 439 U.S. 875 (1978). (“3. We have defined resale as an activity in which one entity (the reseller) subscribes to the communications services or facilities of a facilities-based provider and then reoffers communications services to the public (with or without ‘adding value’) for profit”).

<sup>24</sup> *In the Matter of Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 15817, 15836, ¶51 (2007).

<sup>25</sup> *In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Tenth Report, 20 FCC Rcd 15908, 15920, ¶27 (2005) (“Resellers offer service to consumers by purchasing airtime at wholesale rates from facilities-based providers and reselling it at retail prices.”).

<sup>26</sup> *In the Matter of 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, 25 FCC Rcd 4181, 31223, ¶89 (2010) (“On the other hand, requiring a provider to offer a data service

58. The term “incidental” does not appear in the *Data Roaming Order* but the Commission has in the past used “incidental” in the broader legal sense rather than AT&T’s cramped meaning when addressing CMRS service. For example fixed wireless service was an authorized “incidental service” – and thus still CMRS – when it was “auxiliary” or “ancillary” to the “primary” mobile service.<sup>27</sup>

59. A large portion of the population in WCX’s home area commutes from within WCX’s licensed area to locations inside AT&T’s licensed area in order to go to schools and businesses, to work, learn, shop or to perform important tasks like obtaining medical care. For example, 2010 U.S. Census data shows that the base population of Bastrop County for 2010 was 77,783. Approximately 21.5% of them (over 15,000) spend the day in locations outside the county, and 59.3% of the “workers” in Bastrop County do a daily commute. If one assumes that WCX’s user base is representative of the population base, AT&T’s proposed terms would immediately put WCX in breach, both in terms of total percentage of devices and total percent of use. That cannot be commercially reasonable.

60. AT&T’s terms would require WCX to contractually mandate that the Account owner confiscate all devices from any employee or family member if the employee or family member goes on the road for a month. An employer would not buy WCX’s service for employees if they

---

on its home network would appear to be an essential element of a request for roaming coverage as opposed to resale.”).

<sup>27</sup> *In the Matter of Amendment of the Commission’s Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services*, Second Report and Order and Order on Reconsideration, 15 FCC Rcd 14682, 14684, ¶9 (2000); *In the Matter of Amendment of the Commission’s Rules To Permit Flexible Service Offerings in the Commercial Mobile Radio Services*, First Report and Order and Memorandum Opinion and Order, 11 FCC Rcd at 8968-8969, ¶¶5-7 (1996); *In the Matter of Amendment of Parts 2 and 22 of the Commission’s Rules to Permit Liberalization of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Service*, Report and Order, 3 FCC Rcd at 7041, 7059, ¶66 (1988) (incidental services may include fixed services); *In the Matter of Implementation of Sections 3(n) and 332 of the Communications Act Regulatory Treatment of Mobile Services*, Second Report and Order, 9 FCC Rcd at 1424, ¶36 (1994) (all auxiliary and ancillary services provided by mobile service licensees are included within the definition of mobile services); *In the Matter of Amendment of Subpart K, Part 22 of the Commission’s Rules, to facilitate the development of cellular radio telecommunications service in the rural areas of the country*, Memorandum Opinion and Order, 102 FCC 2d 470, 472-73, ¶5, 475, ¶10 (1985).

travel for extended periods. For example an oil servicing company based in Bastrop with employees working on-site throughout the Eagle Ford Shale could not buy WCX's service. A parent would not buy WCX's service for use by college-bound family members at Texas A&M, Texas State or the University of Texas even though each of those university campuses is within 25 miles of WCX's CMA. Spouses that commute are also prohibited. AT&T's restrictions wholly destroy the entire reason to have multiple accounts per plan. Moreover, AT&T's terms eliminate mobility as a truly useable option to WCX's customers. These restrictions are unreasonable in the extreme.

61. The parties also materially disagree over the extent to which AT&T Mobility will surveil, monitor and manage WCX users' traffic while they are roaming. WCX's intent and proposed terms contemplate a direct network connection to AT&T Mobility<sup>28</sup> consistent with how the GSMA Appendices currently support such roaming arrangements. As a result, AT&T Mobility should send all traffic from WCX authenticated roamers to WCX's network, allowing WCX to manage and provide services to WCX's customers. This may involve WCX managed applications such as VoLTE, interconnected data, text-messaging, machine-to-machine or Internet of Things applications, or it may simply be Internet access. This technical fact, that service will be provided by WCX while roaming is occurring, makes data roaming distinct from any type of resale.

62. WCX's specific intent is, and its proposed terms provide, that there will initially be no "service awareness" capability associated with roaming.<sup>29</sup> WCX's proposed terms provide for no packet inspection, throttling, or manipulation by AT&T Mobility of any sort, other than application-neutral reasonable network management practices during times where cell site

---

<sup>28</sup> RWA agreement Section 9 and Exhibit 4.

<sup>29</sup> RWA agreement Exhibit 1 - definitions of "Data Roaming" and "Service Aware Roaming."

locations are congested, and in a manner that does not discriminate against WCX use when compared to AT&T retail use, nor will there be any additional charge or change in service based upon the types of applications or uses by the WCX Customer.<sup>30</sup>

63. If and to the extent that AT&T's terms would allow it to inspect the content of WCX users' communications they are unreasonable because such inspection would constitute an invasion of privacy and a violation of user's rights to maintain full dominion over and use of their own property.

64. WCX asserts that the current prevailing retail rate of \$0.0096 per megabyte (MB), or approximately \$10 per gigabyte (GB) of data is currently a commercially reasonable data roaming rate, for all usage. The \$10 per GB represents the RWA's estimate of industry-average and AT&T Mobility's prevailing retail rate for consumption. This amount should be commensurately reduced as retail rates go down.<sup>31</sup>

65. The parties are very far apart on price terms. AT&T's base roaming price is more than 15 times the retail rate. The penalty price for what AT&T deems "excessive" roaming is more than 150 times the retail rate. AT&T Mobility's roaming maxima are also, in WCX's opinion, artificially low for total customer usage and individual accounts. These limits unreasonably punish small rural carriers with limited coverage areas, constitute a barrier to entry, and restrict small carriers' ability to offer innovative services involving M2M and Internet of Things capabilities requiring broad dispersion of devices. In particular they prevent carriers with relatively small or isolated licensed areas from serving large accounts and/or support innovative uses that require mobile wireless capability.

---

<sup>30</sup> RWA agreement Section 5.

<sup>31</sup> RWA agreement Exhibit 2 – LTW Rates provides for correlation to the Prevailing Industry Retail Rate for LTE Data Services. It goes on to state that the best estimate of the current prevailing rate is \$0.0096 per MB. 1024 MB equals 1 GB.  $1024 \times 0.0096 = \$9.83$ . WCX rounded up to \$10.00 for ease of reference.

66. In 2007 the Commission refused to benchmark roaming rates and prevailing retail rates.<sup>32</sup> It did so based on a lack of a persuasive showing in the record of that proceeding that consumers would be harmed in the absence of caps or benchmarks and because of concerns that benchmarking or capping could reduce investment incentives or perhaps even raise prices for “regional” calling.

67. The Public Roetter Declaration demonstrates that roaming prices exceeding the prevailing retail data rate is harming and will harm rural consumers. Roetter shows that “the state

---

<sup>32</sup> See *In the Matter of Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, 22 FCC Rcd. 15817, ¶¶ 36-40 (2007) (notes omitted):

37. We decline to impose a price cap or any other form of rate regulation on the fees carriers pay each other when one carrier’s customer roams on another carrier’s network. In particular, we are not persuaded that consumers would be harmed in the absence of a price cap or some other form of rate regulation. We believe that the better course, as established in this Report and Order, is that the rates individual carriers pay for automatic roaming services be determined in the marketplace through negotiations between the carriers, subject to the statutory requirement that any rates charged be reasonable and non-discriminatory.

38. We find that there is insufficient evidence to justify regulating the roaming rates of carriers, and that any harm to consumers in the absence of affirmative regulation in this regard is speculative. Moreover, with the clarifications we make herein with respect to automatic roaming, we find that consumers are protected from being harmed by the level and structure of roaming rates negotiated between carriers. Absent a finding that the existing level and structure of roaming rates harm consumers, regulation of rates for automatic roaming service is not warranted. Because we are not persuaded that the existing level and structure of roaming rates negotiated between carriers harm consumers of mobile telephony services, we do not need to address the argument that the state of competition in the intermediate product market is such as to warrant rate regulation.

39. Based on the foregoing considerations, we conclude that regulation of roaming rates is not warranted on economic grounds. In addition, however, we agree with concerns raised in the record that rate regulation has the potential to distort carriers’ incentives and behavior with regard to pricing and investment in network buildout. Capping roaming rates by tying them to a benchmark based on larger carriers’ retail rates may diminish larger carriers’ incentives to lower retail prices paid by their customers, and perhaps even give them an incentive to raise retail rates. At the same time, by requiring larger carriers to offer national roaming coverage to their competitors’ customers at nearly the same rates offered to their own customers, this form of rate regulation may also give smaller regional carriers an incentive to reduce, or even eliminate, the discounts they offer on regional calling plans, thereby driving up the prices regional subscribers pay for calls within their plan’s calling area.

40. Similarly, regulation to reduce roaming rates has the potential to deter investment in network deployment by impairing buildout incentives facing both small and large carriers. By enabling smaller regional carriers to offer their customers national roaming coverage at more favorable rates without having to build a nationwide network, rate regulation would tend to diminish smaller carriers’ incentives to expand the geographic coverage of their networks. In addition, by reducing or eliminating any competitive advantage gained as a result of building out nationwide or large regional networks, rate regulation would impair larger carriers’ incentives to expand, maintain, and upgrade their existing networks.

of competition in the intermediate product market is such as to warrant” a benchmark or relationship between prevailing retail rates and data roaming prices. Therefore, *in this case*, WCX is supplying the evidence that was missing from 2007. The Public Roetter Declaration also explains and demonstrates that high out of home area roaming prices reduce investment incentives and opportunities with regard to home area networks. Finally, the Public Roetter Declaration shows that the marketplace has changed since 2007. Competitive pressures require nationwide plans, without separate or additional charges for roaming usage. Thus, a small rural provider cannot feasibly charge a “regional” price, much less raise it. This means that high roaming charges necessarily raise the retail price small rural providers must charge for *all* usage, including “regional” consumption. In other words, high roaming charges result in higher prices for all consumption.

68. Rural consumers are being harmed by high roaming prices. Roaming prices that are several multiples above the prevailing retail rate reduce competition, limit available services and put rural customers at a severe disadvantage in comparison to their urban counterparts.

**VI. AT&T Mobility’s Proposed Terms Conditions and Prices Are Not Commercially Reasonable.**

69. AT&T has designated its proposed terms as confidential and insists that any specific discussion of them cannot occur in public. In an attempt to allow this Complaint to be wholly public, WCX will be providing the specific analysis of them through declarations submitted under seal and then a redacted legal analysis and proposed findings. Thus the Complaint itself will contain only general assertions.

**A. AT&T's Proposed Terms relating to billing, audits and suspension during dispute resolution are commercially unreasonable and lack measurement criteria; any prohibition on FCC resolution of disputes is commercially unreasonable.**

70. WCX's proposed terms and conditions allow for continued use in the event of and during the pendency of any dispute between the parties.<sup>33</sup> WCX must fulfill at least 50% of its users' data needs through means other than roaming on AT&T's network. This compromise-based<sup>34</sup> offer and proposed term supplies an easy to administer rule for acceptable roaming volume, so disputes should be few. Nonetheless, disputes do arise from time to time, and dispute resolution terms in agreements are often very important.

i. Dispute resolution.

71. The RWA agreement has provisions for commercial arbitration if private negotiations fail.<sup>35</sup> Significantly, however, they do not preclude and in fact preserve FCC involvement, or if necessary judicial intervention, in order to prevent irreparable harm or if a party claims the other party has violated the contract, the Act or a Commission rule.<sup>36</sup>

72. The Commission: (i) has the authority to approve or reject any roaming agreement implemented under its *Data Roaming Order*; (ii) is a neutral body that is authorized to uphold and foster fair and reasonable practices by mobile services providers, and (iii) possesses sector-specific technical and other expertise. The Commission is the most competent body to determine whether one (or both) of the parties to a roaming agreement have acted or behaved in such a way as to violate its conditions, the Act or a rule, and then if a breach or violation is found to

---

<sup>33</sup> RWA agreement Sections 12 and 17.

<sup>34</sup> WCX does not agree that an increase from 50% roaming to 51% roaming magically transmutes into "resale." To the contrary, WCX asserts that even greater than 90% roaming would not be resale given that the technical arrangement between the parties is entirely different from the technical means by which resale is conducted. WCX has proposed 50% merely for compromise purposes.

<sup>35</sup> RWA agreement Section 17.

<sup>36</sup> *Id.*

determine what the consequences should be based on the damage that these violations may have caused and to whom. WCX believes that preserving Commission involvement and oversight under appropriate circumstances is imperative.

73. To the extent that AT&T's terms would operate to prevent any FCC oversight or ability to weigh in on a dispute over roaming on a going forward basis then they unreasonably frustrate the Commission's goals and policies, and would unlawfully restrict the FCC's jurisdiction over interstate communications by wire. Any terms that commit post-agreement dispute resolution exclusively to some forum other than the FCC and preclude FCC oversight are unlawful and commercially unreasonable. In particular, if one party has violated the Act or a Commission rule in the context of a roaming arrangement then full recourse to the FCC cannot lawfully be imposed over the objection of a party. WCX objects to any term in any agreement that would strip the Commission and/or the courts of their lawful jurisdiction in favor of private dispute resolution or some kind of binding commercial arbitration. WCX may well voluntarily agree on a case by case basis to employ private dispute resolution, but it cannot be compelled to do so as a general matter through contract terms to which it does not assent.

ii. Suspension during dispute resolution.

74. The RWA agreement also provides that roaming will be maintained and not suspended during the pendency of any dispute resolution process.<sup>37</sup> While WCX cannot be specific about AT&T's proposal in this public document, it is fair to say that this is a contested issue.

75. To the extent AT&T's terms allow suspension or termination at its discretion without notice or any other due process which would allow the home carrier to prevent significant damage to its business while the termination remained in effect, they are unreasonable. This

---

<sup>37</sup> RWA agreement Sections 12 and 17.

would be particularly so if AT&T's basis for termination was eventually found to be unjustified. WCX would suffer irreparable harm, because the dispute resolution process could take months or years, and during that time roaming would be terminated. A substantial proportion of WCX's customers would leave. WCX would likely not survive the experience. And, to the extent the AT&T agreement also limits actual damages and prohibits exemplary and other collateral damages it would be unconscionable. AT&T would have the incentive to suspend early and often because it would never suffer any consequence for doing so, even when WCX had done absolutely nothing wrong. Allowing AT&T to suspend or terminate during a dispute would be unreasonable and unconscionable.

iii. Auditing

76. WCX has no audit terms, since its proposed compromise-based "50% not roaming on AT&T" rule is simple and clear. Any wrongly imposed direct limitations on the number of devices that are roaming, individual user limitations on consumption or artificially low percentages overall, will require detailed and specific criteria and measurement requirements because tiny variations could potentially tip the result from one outcome to the other. This is especially so if exceeding a limit constitutes a material breach justifying cancellation, or leads to onerous penalty payments.

77. AT&T's terms contain no details or criteria concerning how usage is determined on a system-wide or individual customer basis, or how device location will be established. There are no instructions on how the audit is to be conducted, the information to be obtained or how it will be measured. WCX has no idea what information should be gathered or stored in anticipation of any audit, and would risk a finding of breach if it for some reason does not retain the "right" data. AT&T's terms are far too vague and ambiguous. They would allow AT&T Mobility to

unreasonably interpret and apply the limitations by manipulation of the underlying information in order to find a “violation.” While WCX does not believe any audit terms are required because its compromise-based “no more than 50% roaming on AT&T” provision would be simple and easy to administer and verify, to the extent the rule is different, any contractual right to audit, without specificity on the information to be provided in an audit and how usage will be measured, would be commercially unreasonable.

**B. Any implicit build-out requirements in addition to and more demanding than those reflected in the FCC’s rule-based build-out requirements are commercially unreasonable.**

78. WCX has already exceeded the FCC’s build-out requirements. WCX has therefore already invested in its network. WCX will continue to do so – if it is not put out of business because of a lack of reasonable roaming. Artificially low amounts of allowed roaming cannot be justified in WCX’s case based on some principle that the restriction is necessary to incent WCX to further invest in its own network facilities. This is particularly the case since the main purpose of roaming is to allow customers to enjoy their service in places where the home provider does not have radio station authorizations, but its users still want to use their service.

79. WCX addresses AT&T’s specific proposals under seal, but for purposes of this public document suffice it to say that AT&T’s proposed terms effectively and wrongly punish WCX for the fact that it is a small rural provider with a limited and contiguous geographic licensed area. Usage limitations cannot be justified on the basis of some notion that they are necessary to incent further home area investment. To the extent AT&T is attempting to overrule the FCC’s specific determinations of the appropriate level of build-out that is necessary in the home area and impose more rigorous in-home build-out requirements they are commercially unreasonable, and unlawful since they represent a prohibited collateral attack on the Commission’s build-out rules.

**C. No service and use restrictions on WCX roaming-enabled services.**

80. The RWA agreement expressly allows the home carrier to resell its services to MNVOs, and specifically addresses and authorizes innovative “Machine-to-Machine” (M2M) services.

81. The mobile sector is anticipating rapid growth in significant value-creating M2M applications and services delivered over mobile networks, as is evident in a recent (February 2014) report published by the GSM Association.<sup>38</sup> Key findings in the GSMA report that are relevant to the circumstances and business model of WCX are presented below.<sup>39</sup>

- Between 2010 and 2013, 120 million M2M connections were added globally (38% CAGR) reaching a total of 195 million in Q4 2013. Globally, M2M connections account for 2.8% of total mobile connections in 2013, up from 1.4% in 2010. In North America almost one in ten mobile connections is M2M. Global M2M connections are forecast to reach a quarter of a billion (250 million) in 2014.
- Several operators surveyed by the GSMA highlighted the fact that the M2M market is moving from a period of market development towards a commercial deployment phase and have restructured their M2M business activities over the last year to reflect the ‘strategic importance’ of M2M to their organizations.
- Major vertical M2M market opportunities identified include automotive (relatively short term) and health care (medium to long term).

82. Several of the most promising and innovative opportunities for M2M applications services – automotive and health care are two examples – involve devices that may well spend a significant and unpredictable proportion of time outside the license area of a small carrier such as WCX. If communication with these devices is subject to severe restrictions on the proportion of total traffic generated or the time they can spend in a roaming mode, then WCX will effectively be excluded from participating in these M2M opportunities. WCX will lose the incentive to support initiatives aimed at introducing innovative M2M capabilities that may be overlooked by

---

<sup>38</sup> “From concept to delivery: The M2M Market today,” February 2014, <https://gsmaintelligence.com/files/analysis/?file=140217-m2m.pdf>.

<sup>39</sup> The GSMA M2M definition only includes SIM connections that enable mobile data transmission between machines. It does not count SIMs used in computing devices in consumer electronics such as smartphones, dongles, tablets, e-readers, routers and hotspots.

large national carriers. One example of many would be an M2M service targeting rural areas in particular that automates monitoring of the lactation cycle of cows to reduce the proportion of missed insemination times for the benefit of farmers from 50% to 10%. AT&T and the other nationwide providers focus mainly on urban areas and needs, and may choose to not support cow lactation cycles applications or any others geared to fulfill rural or agricultural needs. But AT&T's terms would prevent rural providers that do want to support such things from doing so. AT&T's terms therefore erect barriers to entry for not only competitive wireless providers but also for the "rural-focused" mobile app market.

83. The GSMA has anticipated and developed a mechanism to accommodate a market environment that enables M2M product suppliers to produce solutions that work with multiple operators for the sake of convenience, flexibility and economies of scale. As the GSMA points out, in some devices or pieces of equipment such as anti-theft modules in cars, utility meters, personal or property tracking devices and security modules, the SIM (Subscriber Identification Module) card has to be inserted in the machine and hermetically sealed during the manufacturing process. It is often unknown which mobile operator will be operating the M2M service. This situation differs from the traditional mobile telephony market where the mobile operator usually purchases SIM cards in bulk, installs its credentials on them, and then inserts these cards into the mobile phones. The mobile industry through the GSMA has produced the 'Embedded SIM' specification to enable remote "over the air" provisioning and management of SIMs in M2M devices. This solution is designed to enable all operators to participate conveniently and thereby speed adoption of M2M services as well as open up opportunities for new services and applications in new industry verticals.

84. Recent announcements by the mobile satellite operator Iridium produce additional evidence for the growth of M2M services and applications and the wide area coverage that customers need. Iridium reported a \$17 average revenue per user (ARPU) for commercial M2M data in the second quarter of 2014.<sup>40</sup> It also recorded an 18% growth year-on-year in commercial M2M subscribers.<sup>41</sup>

85. Therefore, a business model and plans for small as well as large operators will and should naturally include, as WCX's does, a growing role for M2M services and applications. AT&T itself has clearly identified M2M services and applications as very important in its plans and as providing great value to its customers,<sup>42</sup> a position and conclusion that WCX has also reached. By providing commercially reasonable terms and conditions to small carriers, the RWA Model Agreement enables WCX and other carriers to offer both more traditional mobile as well as new M2M services with national coverage. This Agreement thereby supports and contributes to the goal of ensuring that small carriers can compete and innovate fairly on their own merits, and that the licenses they hold will be exploited to deliver the maximum possible value to customers.

86. The business relationship between WCX and M2M or Internet of Things applications and devices may or may not resemble that between AT&T and Amazon. AT&T may treat some of WCX's activities as "resale" oriented and some of WCX's business partners as MNVOs. To the extent AT&T's terms restrict "resale" and to the extent that restriction operates to prevent WCX from supporting innovative uses, services, applications and devices, they are commercially unreasonable, unjust and unreasonable, and unreasonably discriminatory. Further, to the extent AT&T's terms would treat the relationship between WCX and "interconnected" text providers as

---

<sup>40</sup> [http://files.shareholder.com/downloads/ABEA-3ERWFI/3380800712x0x772588/ba0cb2b4-2461-496b-b4b7-4ceda78e0d8e/IRDM\\_News\\_2014\\_7\\_31\\_Financial\\_Releases.pdf](http://files.shareholder.com/downloads/ABEA-3ERWFI/3380800712x0x772588/ba0cb2b4-2461-496b-b4b7-4ceda78e0d8e/IRDM_News_2014_7_31_Financial_Releases.pdf).

<sup>41</sup> [http://www.satellitetoday.com/telecom/2014/08/01/iridium-sees-major-m2m-growth-keeps-pace-with-iridium-next/?hq\\_e=el&hq\\_m=2924229&hq\\_l=10&hq\\_v=136e6b3268](http://www.satellitetoday.com/telecom/2014/08/01/iridium-sees-major-m2m-growth-keeps-pace-with-iridium-next/?hq_e=el&hq_m=2924229&hq_l=10&hq_v=136e6b3268).

<sup>42</sup> <http://www.mobileworldlive.com/att-m2m-expert-looks-platform>.

“resale” and therefore prevent WCX and its interconnected text providers from complying with the recent “text to 911” rules, or from partnering to support other interconnected data or text-messaging services, they are commercially unreasonable, unjust, unreasonable, and unreasonably discriminatory.

87. AT&T Mobility’s terms either prohibit resale, M2M, Internet of Things or are vague and ambiguous, which means AT&T could later say they are prohibited even though their terms may not expressly so provide. Other vague terms may later be read to inhibit or prohibit other uses while roaming. WCX is unsure of AT&T’s full intent in these matters, but contends that any resale prohibitions, restrictions on M2M or Internet of Things or any other terms barring uses that are privately beneficial and not publicly detrimental are commercially unreasonable, unjust, unreasonable, and unreasonably discriminatory.

**D. Any AT&T surveillance of WCX users’ content or applications through service awareness would be commercially unreasonable.**

88. The parties also disagree whether AT&T Mobility should have the right to surveil, monitor and manage WCX users’ traffic while they are roaming. WCX’s intent and proposed terms contemplate a direct network connection to AT&T Mobility,<sup>43</sup> so that AT&T Mobility can send all traffic from WCX authenticated roamers to WCX’s network, allowing WCX to manage and provide services to WCX’s customers. This may involve WCX managed applications such as VoLTE, machine-to-machine or Internet of Things applications, or it may simply be Internet access.

89. WCX’s specific intent is, and its proposed terms provide, that there will initially be no “service awareness” capability associated with roaming.<sup>44</sup> WCX’s proposed terms provide for no

---

<sup>43</sup> RWA agreement Section 9 and Exhibit 4.

<sup>44</sup> RWA agreement Exhibit 1 - definitions of “Data Roaming” and “Service Aware Roaming.”

packet inspection, throttling, or manipulation by AT&T Mobility of any sort, other than application-neutral reasonable network management practices during times where cell site locations are congested, and in a manner that does not discriminate against WCX use when compared to AT&T retail use, nor will there be any additional charge or change in service based upon the types of applications or uses by the WCX Customer.<sup>45</sup>

90. Both parties are proposing a rate for “data.” AT&T has no reason to know or try to know what the datagrams represent, by way of the application or service being employed by the WCX user and certainly AT&T has absolutely no reason or justification for looking at the content of the communications, thereby unreasonably invading the privacy of WCX’s users without their consent and appropriating their property.

91. To the extent AT&T is proposing that it should be able to surveil or monitor the content or application employed by WCX’s users, or the specific use they are putting to their wireless service, then their proposal is commercially unreasonable, unjust, unreasonable, and unreasonably discriminatory.

## **VII. AT&T Mobility’s Roaming Prices Do Not Comply with CMRS Rules and Are Not Commercially Reasonable**

92. AT&T Mobility’s proposed roaming rate far exceeds AT&T Mobility’s prevailing retail rate for LTE data services. The penalty adjustment terms and conditions and the penalty rate is several orders of magnitude above the prevailing retail rate. The proposed rate and the penalty rate are both commercially unreasonable and excessive. The *Data Roaming Order* sets out the factors for assessing commercial reasonableness, and WCX is presenting Declarations supporting the application of WCX’s terms and AT&T Mobility’s proposed terms to those

---

<sup>45</sup> RWA agreement Section 5.

criteria. AT&T Mobility's proposal, and foremost its pricing, are so unreasonable as to be tantamount to a refusal to offer a data roaming arrangement.

93. There are certain other "price affecting" terms that bear on the price, because they directly or indirectly impact the ultimate price to be paid for an incremental unit of data roaming consumption.

### **VIII. Prayer for Relief**

94. Premises considered, WCX seeks the following relief:

- a. Expeditious action on this complaint, as provided by *Data Roaming Order* ¶77.
- b. While this case is pending, per *Data Roaming Order* ¶80, an interim order directing AT&T Mobility to provide automatic roaming and to charge no more for automatic data roaming than \$10 per GB or some other reasonable level determined by the Commission.
- c. While this case is pending, an order directing AT&T Mobility to not manipulate or change or create a separate charge to WCX when WCX creates and provides voice, SMS, text and long distance and M2M services, either directly or in association with business partners.
- d. Require cooperation between WCX and AT&T Mobility to facilitate seamless roaming hand-offs where technically feasible as described in the WCX proposed terms.
- e. A finding that WCX's proffered roaming terms, conditions and prices are commercially reasonable, and, with regard to WCX's "interconnected" voice and data services and text-messaging are also reasonable and not unreasonably discriminatory under §§201 and 202.
- f. A finding that AT&T Mobility's proffered roaming terms, conditions and prices are not commercially reasonable, and, with regard to WCX's "interconnected" voice and data services and text-messaging are not reasonable and are unreasonably discriminatory under §§201 and 202.
- g. A prescription that WCX's written terms and conditions be used as the final and permanent contract for data roaming.
- h. A prescription of the following prices for roaming equal to less than the Prevailing Industry Retail Rate, which as of the effective date of this Agreement is \$0.0096 per MB, or \$10.00 per GB.

IX. Other Requirements of Section 1.721 of the Rules

C. Declarations (Confidential and Not for Public Inspection in Part)

1. Declaration of Lowell Feldman and Exhibits (For Public Inspection)

**AVAILABLE FOR PUBLIC INSPECTION**

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In the Matter of )  
 )  
WORLDCALL INTERCONNECT, INC. )  
a/k/a EVOLVE BROADBAND, )  
Complainant. )  
 )  
v. )  
 )  
AT&T MOBILITY LLC )  
Defendant )

File No. \_\_\_\_\_

**DECLARATION OF LOWELL FELDMAN**

## Declaration of Lowell Feldman

1. I, Lowell Feldman, state as follows:
2. I declare under penalty of perjury, that I have personal knowledge that the facts set forth below are true and accurate. The statements identified as being made on the basis of information and belief contained herein are based on my experience in the industry, my analysis of public information regarding prices and terms and conditions for roaming, my understanding of current and contemplated service offerings and the particular situation facing smaller and/or rural providers with relatively small geographic areas where they have spectral authorizations.
3. I have read the Complaint to which this Declaration is attached. With respect to the statements made in the Complaint, other than those of which notice can be taken, the facts contained therein are true and correct.
4. I am the CEO of Worldcall Interconnect Inc. a/k/a Evolve Broadband ("WCX"), and have been since its inception.
5. WCX provides wireless mobile services in certain portions of Texas using its licensed 700MHz frequencies. WCX holds a lower B Block 700MHz license covering Cellular Market Area ("CMA") 667. This CMA is adjacent to the CMAs covering Austin, Houston and San Antonio, Texas, where AT&T Mobility has deployed 4G Long Term Evolution ("LTE") service.
6. WCX currently provides "interconnected" voice and data and text-messaging. The voice and data services operate in real-time, are two-way switched, are interconnected with the public switched network, and they utilize an in-network switching facility that enables WCX to reuse frequencies and accomplish seamless hand-offs of subscriber calls.
7. WCX's subscribers have the capability to communicate to or receive communication from all other users on the public switched network. They have regular phone numbers, and can call and be called from all other subscribers on the public switched network.
8. WCX seeks to obtain roaming from AT&T so that WCX's customers can use their voice, data and text-messaging services when they are not in WCX's home area.
9. WCX's home area covers several research facilities associated with major universities, but is not metropolitan by any means. WCX's licensed area is contains 11,000 square miles and has a population of less than 400,000 people. It contains all or part of the following counties: Austin, Bastrop, Burleson, Caldwell, Colorado, Fayette, Gonzales, Jackson, Lavaca, Lee, Matagorda, Washington and Wharton. The territory is "rural" under most accepted understandings of that term.
10. AT&T's licensed areas basically surround WCX's territory and include Austin, Houston and San Antonio.
11. A large portion of the population commutes from within WCX's licensed area to locations inside AT&T's licensed area in order to go to schools and businesses, to work, learn, shop or to perform important tasks like obtaining medical care. For example, 2010 U.S. Census data shows that the base population of Bastrop County for 2010 was

## Declaration of Lowell Feldman

77,783. Approximately 21.5% of them (over 15,000) spend the day in locations outside the county, and 59.3% of the "workers" in Bastrop County do a daily commute.<sup>1</sup>

12. I am also the Chairman of the Rural Wireless Association's ("RWA") Roaming Committee and I have worked with the RWA leadership for over a year, including its Board of Directors, the other members of the Roaming Committee and multiple member carriers and their consultants to create an industry standard Commercially Reasonable Data Roaming Agreement. The most current RWA Model Agreement has been voted on and has been approved by the RWA, is publically posted on the RWA website and is attached as Exhibit 1 to my Declaration. This is the second version of the RWA Agreement to be published and is named Version 1.1. The RWA has taken it upon itself to continually get feedback from its members and industry consultants to establish a model agreement that is non-discriminatory by design due to its public nature. WCX's requested relief in this proceeding is to require AT&T to execute this agreement with WCX, implement this agreement in good faith, and establish a working roaming relationship with WCX.

13. I consider myself to be an expert in communications and technology policy. I have over 20 years of industry experience. I have taught Communications and Technology Law at the University of Texas School of Law, testified in numerous legal and regulatory proceedings as an expert witness and regularly speak at industry events and conferences.

14. I have reviewed and attached as Exhibits 2 and 3 the initial and supplemental Declarations of Dirk Mosa and Joseph Ferrell which were filed on behalf of T-Mobile USA, Inc. in support of its request for an Expedited Declaratory Ruling ("T-Mobile Declarations."). In general, I agree with and support the statements, findings and conclusions reached by Mr. Mosa and Dr. Ferrell. Generally stated, the T-Mobile Declarations point out a type of market failure caused by general uncertainty relating to how Data Roaming Rates are to be established. They accuse AT&T of unreasonable practices with respect to data roaming and they request intervention by the FCC. While I agree with the conclusions in the T-Mobile Declarations, the market failure as described by the T-Mobile Declarations is more pronounced and the AT&T unreasonable practices are even more egregious when the competitive firm is smaller, as is the case for WCX, and when the competitive firm has less spectrum, as is the case for WCX.

15. The problems the T-Mobile Declarations describe are magnified for a firm like WCX because of both our size and age and have an even more devastating impact. This is so because WCX must rely to the maximum extent allowed by the FCC the ability to roam on AT&T. WCX has only the B-Block lower 700 MHZ license, is entirely LTE-based and has no legacy network (1G, 2G or 3G) upon which to rely.

16. The imbalance of bargaining power is so great that AT&T effectively prohibits market entry by WCX through AT&T's negotiating practices with respect to Data Roaming. AT&T is raising costs and making unreasonable demands in similar fashion to

---

<sup>1</sup> See <http://www.census.gov/hhes/commuting/files/ACS/Table1.xls>. The Bastrop information is taken from row 2585, columns E (county name), F (population), N (absolute daytime change), O (percent daytime change), P (percent workers who live and work in the same area).

## Declaration of Lowell Feldman

that described by Farrell. In essence, AT&T sees no benefit from a relationship with WCX, so it will not offer an agreement that could be practically used by WCX.

17. The RWA Model Agreement is non-confidential in nature, and includes proposed rates and terms that resolve the unreasonable and anti-competitive positions that are supported by AT&T's proposed terms for Data Roaming.

18. For example, AT&T miscasts all attempts to implement roaming as some type of "backdoor resale." I believe AT&T's contentions about resale are a legal tactic to try and recast legitimate requests for Data Roaming under the FCC's Roaming Rule as a request for resale. AT&T is purposefully conflating and confusing the FCC's policy promoting build-out with its expansive notions about what constitutes "resale." To AT&T any "significant" and "non-incidental" roaming use constitutes "resale" even if the home carrier has completely built-out its home area network. That was clearly not the FCC's intent. The FCC made this clear in ¶89 of the Order on Reconsideration and Second Further Notice of Proposed Rulemaking, *In the Matter of Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, 25 FCC Rcd 4181, 31223, ¶89 (2010) when it noted "On the other hand, requiring a provider to offer a data service on its home network would appear to be an essential element of a request for roaming coverage as opposed to resale."

19. Data Roaming, as proposed by the RWA, is not resale in that the service provider will always be the home carrier. For example, WCX is already providing VoLTE, and will always support voice services and SMS (including text to 911 as recently required by the FCC) using WCX's own network and technology. Further, before any user could roam on AT&T's network there would have to be a provider-customer contract with WCX, allowing the user to connect to WCX's home network. Even if 99.9999% of WCX's customer data usage was via roaming on AT&T's network, WCX's use would still be roaming and would not be engaged in resale because the roaming usage would still be supplemental, incidental and not primary.

20. However, the RWA did grapple with the issue of what is a "fair" amount of Data Roaming given the FCC's desire to promote build out while still encouraging innovation and competition, all the while keeping in mind the stated goal of a ubiquitous coverage experience for all users. Thus in both an effort to compromise and to promote the policy goals of the FCC, the RWA and WCX recommend that roaming use be limited only in the aggregate to 50% of total data use by a service provider's customer base.

21. This is different than AT&T's position that there must be some very low percentage that, when exceeded, converts allowed roaming into prohibited resale and prohibited use and constitutes a material breach. AT&T's notions would prohibit legitimate and even required offerings such as Text to 911.

22. The RWA and WCX agreement also directly reflect not only the FCC's policies encouraging network build out, but also the responsibility of the FCC to implement build out requirements under current FCC policy. Basically, the RWA conditions the ability to request roaming on meeting or exceeding current FCC Build Out requirements. WCX has deployed a working Band 17 LTE system using an Ericsson Core, Ericsson ENodeBs and Ericsson Remote Radio Units. I understand that AT&T has also deployed like

## Declaration of Lowell Feldman

Ericsson equipment using the same LTE Band for its LTE services in the CMAs adjacent to the WCX CMA, including the areas covering Austin, Houston, College Station and San Antonio. WCX's coverage area is currently geographically more than 35% of its CMA. WCX has already met the FCC build-out requirements associated with FCC Auction 73 and its 700 MHz License. WCX's LTE network is also technically compatible with AT&T's LTE network.

23. WCX has tested in its lab and is offering to the public AT&T network compatible end user devices including hotspots, tablets and smartphones.

24. Without a Commercially Reasonable Roaming Agreement similar to the one attached as Exhibit 1 with AT&T, WCX cannot offer to its retail or wholesale customers the ability to have regional or nationwide data coverage. Without a Commercially Reasonable Roaming Agreement, WCX is now being barred from competing against AT&T and that will continue until there is a reasonable roaming arrangement. Barring a competitor entry into a market directly hurts consumers.

25. WCX has held numerous discussions with potential industry partners about creating joint innovations and launching new innovative services using LTE in the so called "Machine to Machine" market as well as using LTE in the medical monitoring and LTE in the smart-grid markets. Some of these potential partners are also evaluating MVNO offerings using their unique technology.

26. AT&T's intent and proposed terms would prevent WCX from using roaming as part of its efforts to support "Machine to Machine" (M2M) communications, thereby completely freezing WCX out from the M2M market. WCX's intent through its proposed terms is to require AT&T to allow WCX to use roaming as part of WCX's support for the emerging M2M, and expressly state that such use is allowed, subject to the 50% roaming cap. Consumers are directly harmed when there is less competition due to a barrier to market entry such as the one AT&T is attempting to insert in its proposed terms.

27. WCX plans to offer rural-focused applications given its population base. AT&T would likely not choose to deploy these services, given its more urban population base. AT&T's terms would prevent WCX from offering rural-focused applications, thus harming consumers who will not be able to benefit from the services WCX would otherwise be able to provide and AT&T will not provide. AT&T's use restrictions and limitations would therefore harm consumers.

28. Without a Commercially Reasonable Roaming Agreement with AT&T similar to the one attached as Exhibit 1, WCX cannot offer a platform that has regional or nationwide data coverage to potential industry partners. Since WCX has no roaming terms at present, WCX is now excluded from competing against AT&T in innovating new and advanced services to service emerging markets. It is also being prohibited from offering MVNO services.

29. WCX has expended a large percent of its resources pursuing Commercially Reasonable Roaming with AT&T and the industry at large since 2011. WCX has diligently followed all obligations as set forth by the FCC and has worked within industry groups and forums trying to gain a consensus on how to resolve what are AT&T's

## Declaration of Lowell Feldman

unreasonable practices and positions. While some of that pursuit may be subject to confidentiality obligations, the WCX proposed solutions to the unreasonable AT&T practices are not confidential.

30. Specifically, WCX supports the use of and proposes as a standard the adoption and approval of the RWA Model Agreement as a de facto Commercially Reasonable Roaming Agreement. Important to the RWA Model Agreement are the following paragraphs from Section 5 which the RWA and its members all found to be Commercially Reasonable within the Data Roaming relationship:

The Parties acknowledge and agree that the LTE Data Roaming authorized under this Agreement serves as a supplement to the mobile Data Services each Party offers on its own Network and that each Party will endeavor to provide the majority of its customers' mobile Data Services on its own Network.

The Parties further acknowledge and agree that neither Party may limit or condition Authorized Users' Data Roaming in any manner that prohibits or diminishes the ability of either Party to: (1) provide M2M and/or Internet of Things services; (2) act as a wholesaler of Data Services or provide access to Data Services to resellers; or (3) establish MVNO relationships. Further, neither Party may require or precondition any network build-out or any other network or launch requirement that exceeds in any way any build-out requirement established by the FCC.

The Parties further acknowledge and agree that, unless an amendment allowing and providing for Service Aware Roaming is mutually entered into between them, the Serving Carrier shall not engage in or apply any type of Service Awareness restrictions while Authorized Users are engaged in Data Roaming. Furthermore, the Serving Carrier shall not conduct or apply any manner of packet inspection, blocking, throttling, or manipulation of an Authorized User's Data Service traffic while Data Roaming. The Serving Carrier may engage only in Application Agnostic reasonable network management practices during times where cell site locations are congested, and in a manner that does not disfavor Data Roaming use when compared to network management practices applied to the Serving Carrier's own subscribers or end users. The Serving Carrier's roaming-related pricing and practices shall not vary depending on the specific application, service, or device being employed, or the Data Service sent-to or received-by either the Home Carrier or the Authorized Users of Home Carrier.

---

31. AT&T will not agree to these terms. AT&T insists on its own terms, which contain unreasonable limitations on WCXs users' ability to roam, and as a result WCX cannot compete.

32. The RWA Model Agreement has the following non-confidential proposal for establishment of a Data Roaming Rate:

LTE Rates

## Declaration of Lowell Feldman

Unless otherwise mutually agreed to by the parties, LTE Wireless Rates shall be equal to or less than the Prevailing Industry Retail Rate for LTE Data Services which as of this date, [August 2014], is \$10.00 per Gigabyte ("GB") which is equal to \$.0096 per Megabyte ("MB"). This rate is reflected in the table below and may be revisited as both Data Usage increases and the resulting Prevailing Industry Retail Rate decreases.

Reasons to vary from the Prevailing Industry Retail Rate include circumstances where the Parties have a long pre-existing roaming relationship where one Party was incented to build-out network for the benefit of the other Party. In those circumstances, revenue neutrality may also be a goal in establishing the appropriate inter-carrier roaming rate."

33. The RWA and WCX rate proposal is similar to Farrell's analysis in paragraphs 57-73 of his Declaration except that RWA and WCX believe that Farrell's calculations incorrectly (1) weight little used and expensive customer rate plans, (2) underestimate the forward looking use of mobile data, and (3) do not include rate plans from widely used MVNOs, smaller carriers, and corporate offerings. When adjusted for these errors, RWA calculates what it calls the "prevailing retail rate." A detailed analysis of how this is calculated is provided in the Declaration of Martyn Roetter.

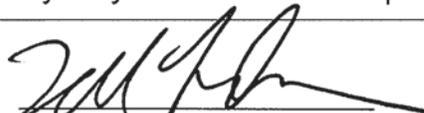
34. Canada recently reviewed complaints against its dominant market providers and required that carriers use the "prevailing Retail Rate" as a cap for data, SMS and voice roaming.

35. WCX requests that the "prevailing retail rate" of \$0.0096 per MB be approved as presumably commercially reasonable in this proceeding and be applied as the Data Roaming Rate in this proceeding.

36. AT&T's proposed price would prevent WCX from using roaming to compete in the "Retail Cell Phone" market and exclude WCX entirely from the "Retail Cell Phone" market by increasing WCX's direct costs. Consumers are directly harmed when there is less competition due to a barrier to market entry such as the one AT&T is now using with its refusal to offer Commercially Reasonable Data Roaming rates. WCX's intent through its proposed terms is to require AT&T to allow WCX's to use roaming as a significant part of WCX's "Retail Cell Phone" market entry by requiring the AT&T Data Roaming rate charged to WCX to be no greater than current "prevailing retail rate."

37. This concludes my Declaration. I reserve the right to supplement or amend the Declaration as circumstances may require or permit, and also reserve the right to reply to any oppositional contentions that AT&T Mobility may raise as the case proceeds.

---



Lowell Feldman

# FELDMAN DECLARATION

## EXHIBIT I

**Domestic Data Roaming Agreement**

between

**ABC WIRELESS**

and

**XYZ WIRELESS**

## DOMESTIC DATA ROAMING AGREEMENT

This Domestic Data Roaming Agreement, together with all exhibits (the "Agreement") is entered into by and between **ABC WIRELESS COMPANY, INC.** ("ABC"), a corporation organized under the laws of \_\_\_\_\_, and **XYZ WIRELESS COMPANY, INC.** ("XYZ"), a corporation organized under the laws of \_\_\_\_\_ as of the \_\_\_\_\_ day of \_\_\_\_\_, 2014 ("Effective Date"). ABC and XYZ will be referred to collectively as the "Parties" or separately as a "Party."

### SUMMARY

It is the intention of the Parties to enter into a bilateral Data Roaming agreement in which each Party's authorized users shall be permitted to roam on the mobile data network(s) of the other Party.

### BACKGROUND

**WHEREAS**, the establishment of a bilateral Data Roaming agreement between the Parties serves the public interest of the United States by promoting connectivity for nationwide access to mobile wireless data services, enabling seamless mobile wireless data coverage, fostering competition among multiple mobile wireless data service providers, encouraging new market entries and expanded network deployments by existing local and regional carriers, and providing all American consumers with greater competitive choices for mobile wireless broadband.

**WHEREAS**, ABC and XYZ desire to facilitate the provision of mobile wireless Data Roaming between the Parties;

**WHEREAS**, the Parties desire to enter this agreement pursuant to the Federal Communications Commission's ("FCC" or "Commission") Rule 47 CFR Part 20.12.

**WHEREAS**, each Party owns and operates, or will own and operate, a facilities-based mobile wireless data network providing commercial mobile data services using LTE;

**WHEREAS**, each Party is licensed by the FCC to provide facilities-based mobile wireless Data Services;

**WHEREAS**, ABC and XYZ acknowledge that the technical and operational standards related to LTE Data Roaming are under constant development but that both Parties agree to follow the terms of this Agreement;

**WHEREAS**, ABC and XYZ further acknowledge that this Agreement is transitional in nature and that, when new services become standardized within the industry and become available on LTE networks, the Parties will negotiate amendments to this Agreement that will include these prospective services.

**NOW, THEREFORE**, in consideration of the mutual covenants and promises herein contained and intending to be legally bound, the Parties hereby agree as follows:

## **1. Definitions.**

The Parties agree to the defined terms set for in Exhibit 1 – Definitions.

## **2. Term of Agreement.**

The initial term of this Agreement shall commence on the Effective Date and, unless earlier terminated pursuant to Section 13, shall continue in perpetuity.

## **3. Scope.**

The Parties acknowledge and agree that the purpose of this Agreement is to provide Data Roaming to supplement retail and wholesale mobile Data Services offered by a Party in its own LTE Market and to allow each Party's Authorized Users to use the other Party's LTE and/or 3G Network. In accordance with the rates, terms and conditions of this Agreement, and in full compliance with the FCC's Rules, each Party will provide Data Roaming to any Authorized User who so requests.

The Parties further acknowledge and agree that because LTE is an evolving worldwide industry standard, that use of certain additional GSMA permanent reference documents ("PRDs") and commercial annexes ("Annexes"), of and between the Parties, constitute an integral part of technical aspects of this Agreement. In case of discrepancies between different parts of this Agreement, the following order of interpretation shall be applied: (1) this Agreement, including its Exhibits; (2) Annexes; and (3) PRDs.

Notwithstanding anything in this Agreement to the contrary, either Party may suspend or terminate service to an Authorized User in accordance with the terms and conditions of this Agreement, but such suspension or termination shall not affect the rights and obligations of the Parties for Service furnished hereunder prior to such termination or suspension.

## **4. Mutual Covenants**

Each Party covenants the following:

- A. It holds or manages one or more FCC license used to provide mobile Data Services.
- B. It is or will become a member of the GSMA.
- C. As of the Effective Date, it either: (1) currently owns, operates and manages an LTE Network and provides mobile Data Services over its LTE Network to its own subscribers and end-users in its respective LTE Market; or, (2) intends to construct, own, operate and manage an LTE Network of comparable technology in its respective LTE Market.
- D. It will provide to its Authorized Users, or allow them to acquire on their own accord, User Equipment that is technologically compatible with the Serving Carrier's LTE Network.
- E. It will support all network equipment necessary to authenticate and communicate with the other Party's LTE Network.

## 5. Services.

All Data Roaming to be provided between the Parties to Authorized Users are governed by the LTE roaming specifications contained in this Section 5 and other provisions of this Agreement, including Annexes and PRDs. The Parties agree to provide operational updates through their respective Annexes, including the GSMA AA.14.

Each Party's ability to access and roam on the other Party's LTE and 3G Network is conditioned on the first Party's provision of LTE Data Services to its own subscribers and end users using the same generation of wireless broadband technology comparable to the second Party's LTE Network technology.

The Parties acknowledge and agree that the LTE Data Roaming authorized under this Agreement serves as a supplement to the mobile Data Services each Party offers on its own Network and that each Party will endeavor to provide the majority of its customers' mobile Data Services on its own Network.

The Parties further acknowledge and agree that neither Party may limit or condition Authorized Users' Data Roaming in any manner that prohibits or diminishes the ability of either Party to: (1) provide M2M and/or Internet of Things services; (2) act as a wholesaler of Data Services or provide access to Data Services to resellers; or (3) establish MVNO relationships. Further, neither Party may require or precondition any network build-out or any other network or launch requirement that exceeds in any way any build-out requirement established by the FCC.

The Parties further acknowledge and agree that, unless an amendment allowing and providing for Service Aware Roaming is mutually entered into between them, the Serving Carrier shall not engage in or apply any type of Service Awareness restrictions while Authorized Users are engaged in Data Roaming. Furthermore, the Serving Carrier shall not conduct or apply any manner of packet inspection, blocking, throttling, or manipulation of an Authorized User's Data Service traffic while Data Roaming. The Serving Carrier may engage only in Application Agnostic reasonable network management practices during times where cell site locations are congested, and in a manner that does not disfavor Data Roaming use when compared to network management practices applied to the Serving Carrier's own subscribers or end users. The Serving Carrier's roaming-related pricing and practices shall not vary depending on the specific application, service, or device being employed, or the Data Service sent-to or received-by either the Home Carrier or the Authorized Users of Home Carrier.

Data Roaming between the Parties shall begin only after both Parties sign a commercial launch letter ("Commercial Launch Letter"). ~~The Commercial Launch Letter can only be issued after~~ both Parties have completed, to their mutual satisfaction, the testing of necessary technical and billing conditions ("Testing") required before a commercial roaming relationship commences. Testing shall include both IREG and TADIG testing. All Testing occurs during a testing period ("Testing Period"). The Testing Period shall commence upon the Effective Date and must be completed within ninety (90) days. Undue delay initiated by either Party during Testing shall be considered a willful breach of this Agreement.

## **6. Coverage and Mapping Information.**

Each Party shall make available to the other Party, upon request, but not more than twice a year, coverage propagation map(s) reflecting then current LTE Network coverage. If the Parties mutually agree to limit Data Roaming to just a geographical portion or sub-set of their full LTE Network by limiting opening and restricting location area codes (“LACs”), then both Parties are required to exchange, upon request, but not more than twice a year, then current LAC maps. Nothing in this Agreement prevents the Parties from entering into a separate agreement that further details how the Parties will manage the opening and closing of LACs for the purposes of Data Roaming, with the full and mutual understanding between the Parties that the default condition of Data Roaming as contemplated by this Agreement is one where the “full” or “entire” LTE Network is open to Data Roaming (*i.e.*, without LAC restrictions) and that LAC splits and LAC requests, and the associated timing of them, is not guaranteed under any circumstances, unless agreed upon in a separate agreement.

## **7. No Obligation to Roam.**

The Parties acknowledge and agree that there is no obligation on either Party to use the Data Roaming offered by the other Party nor shall either Party be obligated or required to place or purchase a minimum number of kilobytes on the other Party’s LTE Network.

## **8. Rates.**

The Parties agree that the rates charged by a Party and its Affiliates to the other Party and its Affiliates for the provision of Data Roaming to Authorized Users will be the LTE rates as set forth on Exhibit 2 - LTE Rates (the “LTE Rates”).

## **9. Interconnection, Billing, Accounting and Settlement.**

The Parties acknowledge and agree to adopt GSMA Annexes and PRDs as necessary and follow all globally-recognized GSMA industry procedures found in the relevant GSMA Annexes and PRDs for Interconnection, Billing, Accounting and Settlement. These procedures shall include, but are not limited to, the TADIG and TAP provisions included in the mutually executed AA.13. Each Party shall be responsible for billing to, and collecting from, its own Authorized Users all charges that are incurred by such Authorized Users as a result of Data Roaming which are provided to the Home Carrier by the Serving Carrier. Exhibit 4 of this Agreement includes a technical description of Interconnection, Billing, Accounting and Settlement procedures and a partial list of GSMA Annexes and PRDs.

## **10. Taxes.**

Each Party shall be responsible for billing to, and collecting from, its Authorized Users, and remitting to the Federal Government, all federal excise tax due in connection with such Data Roaming and the Home Carrier shall be solely responsible for the computation, billing, collection and remittance of all such other taxes, government fees and government impositions. The Parties acknowledge and agree that the Party that bears the economic burden of any tax, charge or fee

shall have the sole right to dispute the application and amount of such tax, charge or fee and the Parties further agree to cooperate to the extent reasonably required to assist any Party in any such dispute, including but not limited to, the assignment of any rights to a refund.

## 11. Notifications and Methods of Contact

Unless otherwise specified in the Annexes and PRDs, including the AA.13, AA.14 and IR.21, all notices required by this Agreement are to be sent to:

ABC WIRELESS  
Roaming Department  
Address 1  
Address 2  
Attn:  
Telephone  
E-Mail

cc: ABC WIRELESS/LAW FIRM  
Legal Department/Law Firm  
Address 1  
Address 2  
Attn:  
Telephone  
E-Mail

XYZ WIRELESS  
Roaming Department  
Address 1  
Address 2  
Attn:  
Telephone  
E-Mail

cc: XYZ WIRELESS/LAW FIRM  
Legal Department/Law Firm  
Address 1  
Address 2  
Attn:  
Telephone  
E-Mail

## 12. Suspension of Data Roaming Services

Suspension of Data Roaming shall be according to existing GSM standards. Notwithstanding anything in the Agreement to the contrary, either Party may without liability suspend or

terminate all or any of its Data Roaming to individual Authorized Users in circumstances where it would suspend or terminate those Data Services to its own subscribers or end users, including but not limited to:

1. Authorized Users using equipment which is defective or illegal; or
2. Authorized Users causing any technical or other problems on the Serving Carrier's Network; or
3. Suspected fraudulent or unauthorized use; or
4. Authentication of the legal relationship not being possible; or
5. Maintenance or enhancement of its Network.

In case of a proposed suspension of Data Services to all Authorized Users, the Home Carrier shall give no less than eight (8) weeks written notice to the other Party prior to the suspension taking effect and shall list all items that must be cured to prevent suspension. If the suspension continues for more than six (6) months, the other Party shall have the right to terminate the Agreement with immediate effect by written notice. The Home Carrier has the right at any time, for technical reasons, without liability but giving reasoned written notice to the Serving Carrier, to suspend access to the Data Services for its own Authorized Users roaming in the Serving Carrier's Network. Alternatively, if it is technically more practicable, the Home Carrier may require that the Serving Carrier take actions to suspend all of its Data Services to Authorized Users of the Home Carrier. The Serving Carrier shall use its best efforts to comply with such requirements within seven (7) calendar days after receipt of the notice. The suspension shall be removed as soon as the technical reason for the suspension has been overcome by the Serving Carrier to the satisfaction of the Home Carrier.

Notwithstanding the foregoing, the Parties will continue to provide all services and honor all other commitments under this Agreement, including, without limitation, making payments in accordance with this Agreement while a dispute is being resolved under the procedures governed by Section 17. A Serving Carrier may not suspend Data Services or cancel this Agreement based on claims that have been submitted to formal or informal Dispute Resolution pursuant to Section 17.

### **13. Termination of the Agreement**

In addition to termination under the conditions of Sections 12, this Agreement may be terminated as follows:

- A. By mutual agreement of the Parties; or
- B. By one Party, with immediate effect, when the other Party is in material breach of this Agreement and does not or is not capable of remedying such breach within ninety (90) days of receipt of a written notice to such effect; or
- C. By written notice of either Party to the other Party in the event that Data Roaming becomes technically impracticable on either Party's Network and the provisions set out in Section 12 (Suspension) are not sufficient to solve the problem; or

- D. If an unacceptable level of unauthorized use occurs and the other Party is not capable of remedying such unauthorized use within 30 days of receipt of a written notice to such effect; or
- E. Subject to Section 4, immediately in the event a final order by the FCC revokes or denies renewal of all of the license(s) or permissions to operate a Network granted to either Party, or any other license necessary to operate the Services, takes effect.

In the event of termination on the grounds of a breach of this Agreement under the provisions of Section 13.B, the Party in breach shall be liable to the other Party (in addition to charges properly due and payable to the Serving Carrier) for proven direct damage or loss (excluding indirect or consequential damage or loss) arising as a consequence of such breach up to a maximum aggregate liability of \$1,000,000, provided however, that such limitation of liability shall not apply if a damage or loss is caused by a Party's willful misconduct or gross negligence. For the avoidance of doubt, the termination of this Agreement shall not affect the rights and liabilities of the Parties under the Agreement with respect to all charges incurred prior to the effective date of said termination.

#### **14. Confidential Information.**

The main body of this Agreement, and Exhibits 1, 2, 3 and 4 are not confidential.

The Parties may enter into a separate industry standard confidentiality agreement pertaining to the remaining Schedules and Exhibits including the coverage areas on Schedules A-1 and A-2, the technical exhibits contemplated in this Agreement and the information passed between the companies after this Agreement becomes effective.

#### **15. Indemnification.**

The Parties acknowledge and agree that the purpose of this indemnity is to ensure that a Party who provides Data Roaming as a Serving Carrier shall have no liability whatsoever for any claims and demands by Authorized Users of the other Party who is a Home Carrier of such Authorized Users. Accordingly, each Party hereby agrees to indemnify the other Party, its Affiliates, and any and all of their officers, directors, employees, agents, members, managers and/or affiliates, against, and hold them harmless from losses and expenses (including, but not limited to, reasonable attorney's fees and disbursements) which may result from any claims, suits, proceedings or demands against an indemnified Party (a) asserted by an Authorized User as a result of the indemnified Party's failure to provide LTE Data Service (including all requirements of such Data Roaming contemplated by this Agreement) to such Authorized User pursuant to the terms of this Agreement, or (b) as a result of the indemnified Party's provision of LTE Data Service to an Authorized User that is not entitled to Data Roaming under the provisions of this Agreement. Each Party's indemnification obligation under this Section 5 is subject to the following: (i) a Party seeking indemnification hereunder will promptly notify the indemnifying Party, in writing, of the suit, claim or proceeding or a threat of suit, claim or proceeding; (ii) at the indemnifying Party's reasonable request and expense, the indemnified Party will provide the indemnifying Party with reasonable assistance for the defense of the suit, claim or proceeding; and (iii) the indemnified Party will allow the indemnifying Party sole

control of the defense of any claim and all negotiations for settlement or compromise, provided that the indemnified Party will have the right, at its own expense, to employ separate counsel and participate in the defense thereof, and provided further that the indemnifying Party may not enter into any settlement agreement with a Third Party which would in any manner whatsoever affect the right of, or bind the indemnified Party in any manner to such Third Party, without the indemnified Party's prior written consent.

The Parties acknowledge and agree that they were each represented by counsel in the negotiation of this indemnity provision, that the Parties would not have entered into this Agreement on the terms and conditions contained herein (including pricing) without this provision, and that the Parties intend for this indemnity to apply to the maximum extent possible even in the event of the gross negligence of the indemnified Party.

#### **16. Survival.**

Any provision of this Agreement which by its nature should survive the expiration or termination of this Agreement, including without limitation Sections 10, **Error! Reference source not found.**, 9, 10, 12, 18, 19, **Error! Reference source not found.**, 17 and 26, shall survive the expiration or termination of the Agreement.

#### **17. Dispute Resolution.**

All claims and disputes relating in any way to the performance, interpretation, validity, or breach of this Agreement shall be resolved as provided in this Section 17.

A. Informal Dispute Resolution. It is the intent of the Parties that any disagreements be resolved amicably and informally to the greatest extent possible. Required notices should be sent to the appropriate contacts listed in Section 11. If a disagreement cannot be resolved within thirty (30) days by representatives of the Parties with day-to-day responsibility for this Agreement, such matter shall be escalated to appropriate representatives of the Parties with authority to resolve and/or settle the dispute. Such representatives shall meet either in person at a mutually acceptable location or telephonically, in order to attempt to resolve the dispute. If such representatives are unable to resolve the dispute within thirty (30) days of escalation, then formal dispute resolution may proceed through binding arbitration, an action at the Federal Communications Commission or before a court of competent jurisdiction.

B. Formal Dispute Resolution Options.

a. Consensual Binding Arbitration. Upon mutual consent and agreement by both Parties ~~any matter not resolved through informal dispute resolution may be referred~~ to final and binding arbitration in accordance with rules established by the American Arbitration Association ("Rules") as amended by this Agreement. If the Parties agree to binding arbitration a single neutral arbitrator will decide all claims hereunder. The costs of arbitration, including the fees and expenses of the arbitrator will be shared equally by the Parties involved in the arbitration. Each Party will bear the cost of preparing and presenting its case. The award of any arbitration will be final, conclusive and binding on the Parties. Judgment on the award may be entered

in any court having jurisdiction over the Party against which the award was made. The arbitrator will be limited, in granting relief, to comply with the express provisions of this Agreement relating to damages or the limitation thereof and nor Party may seek punitive damages.

- b. FCC or Court Action. The Parties shall first attempt to exclusively resolve any dispute through informal dispute resolution as provided above, unless a complaining Party asserts interlocutory relief is necessary to prevent serious and irreparable harm during the sixty (60) day informal dispute resolution period. A Party may seek interlocutory or permanent relief, including damages, from a court of proper jurisdiction or the Federal Communications Commission in order to enforce this Agreement, to assert the other Party has violated the Communications Act or any other state or federal law, an FCC rule or any other administrative rule, or to prevent serious and irreparable injury to a Party. For purposes of this Agreement any such request for relief before the Federal Communications Commission or a court shall be treated as pursuit of Formal Dispute Resolution under this Section 17.

#### **18. Liability of the Parties, Limits of Liability.**

Neither Party shall be liable to the other Party under or in connection with this Agreement except:

- A. In respect of charges to be paid to the Serving Carrier pursuant to the appropriate GSMA Annex;
- B. To the extent of its negligence where such negligence results in proven damage or loss to the other Party, in which event the liability of the negligent Party shall be limited to a and shall in no event exceed \$1,000,000.

In no event shall either Party be liable for any consequential damage or loss of whatever nature, including but not limited to, loss of profit or loss of business. Furthermore, in no event shall any employee of either Party be liable to the other Party for any act of negligence or intent under or in connection with this Agreement. Save for this limitation with regard to an employee's personal liability, nothing in the foregoing shall in any way restrict the liability of either Party for the actions of its employees.

Limitation of liability as described in this Section 18 shall not apply if damage or loss is caused by a Party's willful misconduct (including fraud) or gross negligence.

---

#### **19. Trademarks.**

The Parties agree that they will not use the name, service marks or trademarks of the other Party or any of its Affiliated companies in any advertising, publicity releases or sales presentations, without such Party's prior written consent. Neither Party is licensed hereunder to conduct business under any logo, trademark, service or trade name (or any derivative thereof) of the other Party.

## **20. Compliance with Laws.**

The Parties shall comply with, conform to, and abide by all applicable and valid laws, regulations, rules and orders of all governmental agencies and authorities, and agree that the Agreement is subject to such laws, regulations, rules and orders. Without limitation, each Party shall comply, at its own expense, with the provisions of all applicable federal, state and municipal laws, regulations, and requirements applicable to the Party as an employer.

## **21. Section Headings.**

The headings in the Agreement are inserted for convenience and identification only and are not intended to describe, interpret, define or limit the scope, extent or intent of the Agreement or any provision hereof.

## **22. Original and Counterparts.**

This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement.

## **23. Controlling Law.**

Disputes concerning service provided under this Agreement shall be construed in accordance with the internal laws of the state of Delaware, without regard to its conflict of law doctrine.

## **24. Force Majeure.**

No Party will be responsible for any delay or failure in performance of any part of this Agreement to the extent that such delay is caused by reason of: acts of God, wars, revolution, civil commotion, acts of public enemy, embargo, acts of government in its sovereign capacity, labor difficulties, including without limitation, strikes, slowdowns, picketing or boycotts, or any other circumstances beyond the reasonable control and not involving any fault or negligence of the Party affected ("Force Majeure Events"). If any such Force Majeure Event occurs, the Party affected, upon giving prompt notice to the other Party, will be excused from such performance on a day-to-day basis during the continuance of such Force Majeure Event (and the other Party will likewise be excused from performance of obligations on a day-to-day basis during the same period), provided, however, that the affected Party will use its best reasonable efforts to avoid or remove such Force Majeure Event and the Parties will proceed immediately with the performance of their obligations under this Agreement whenever such causes are removed or cease.

---

## **25. Intentionally Left Blank**

## **26. Successors and Assigns.**

This Agreement is solely for the benefit of the Parties and their respective Affiliates as expressly provided herein, their successors and permitted assigns, and does not confer any rights or remedies on any other Person. Neither Party may, directly or indirectly, sell, assign, transfer,

or convey its interest in this Agreement or any of its rights or obligations hereunder, without the written consent of the other Party.

**27. No Partnership or Agency Relationship Created.**

Nothing contained in this Agreement shall create a partnership between the Parties, impose duties upon either Party as though they were partners with one another, or render either Party liable for any debts or obligations of the other Party, nor shall either Party hereby be an agent of another Party.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Domestic LTE Roaming Agreement to be executed by their duly authorized representatives as of the date first written above:

**ABC WIRELESS COMPANY, INC.**

By \_\_\_\_\_, its manager

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**XYZ WIRELESS COMPANY, INC.**

By \_\_\_\_\_, its manager

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

## Exhibit 1 - Definitions

For the purpose of this Agreement, the following defined terms shall have the meaning as set forth below or, if not defined therein, given the meaning standard in the wireless telecommunications industry.

“ABC LTE Markets” means all of the LTE markets listed on Schedule A-2.

“ABC” shall have the meaning given in the preamble.

“Affiliate” shall have the meaning given by the FCC rules.

“Authorized User” means a subscriber or end user of either Party with User Equipment identified by a Home Network as qualified to receive Data Roaming from a Serving Network.

“Application Agnostic” means complete indifference to the specific applications, content, services or uses being employed by a user, even if the network operator has validly obtained information or an awareness of the application, content, service or use.

“Business Day” means any day other than a Saturday, Sunday or a United States holiday observed by national banks.

“Change in Control” means the consummation of a transaction in which the Control of a Person has changed from one Person to another Person, but does not include internal restructurings or reorganizations between and among Affiliates. For purposes of this Agreement, a Change in Control shall include any of the following: (i) the acquisition of ownership, directly or indirectly, beneficially or of record, by any Third Party (alone or in combination with any other Third Party) of 50% or more of the aggregate ordinary voting power represented by the issued and outstanding capital stock or membership interests of a Person; (ii) occupation of a majority of the seats (not counting any vacant seats) on the board of directors or managers of a Person by Third Parties who were nominated or appointed by any Third Party (alone or in combination with any other Third Party); or (iii) the transfer (by assignment, sale or otherwise, in a single transaction or series of transactions) of all or substantially all of the properties or assets of a Person to any Third Party (alone or in combination with any other Third Party).

“Control” of a Person means (i) holding fifty percent (50%) or more ownership or beneficial interest of income and capital of such Person; or (ii) ownership of at least fifty percent (50%) of the voting power or voting equity of such Person; or (iii) having sole or shared management of a partner of such Person; or (iv) regardless of the percentage ownership interest held, having the ability to otherwise direct management policies of such Person by contract or otherwise.

“Data Roaming” means the provision of Data Services by one Party via a LTE Network or GSM Network to an Authorized User of the other Party pursuant to this Agreement.

“Data Services” means digital data communication services.

“Effective Date” shall have the meaning given in the Preamble.

“FCC” means the Federal Communications Commission.

“Force Majeure Event” shall have the meaning given in Section 24.

“Home Carrier” means a Party (including an Affiliate of a Party) that provides LTE Data Service to its Authorized Users in its LTE Market.

“Home Network” means the LTE Network used to provide Data Services to the subscribers or end users of a Home Carrier without use of Data Roaming.

“IREG” means International Roaming Expert Group.

“Internet of Things” means any software application or service which may use LTE as one of its methods of sending and receiving data communication between and among devices and other applications and services.

“LTE” means Long Term Evolution, providing IP wireless connectivity using Evolved Universal Terrestrial Radio Access Network (E-UTRAN), as defined in 3GPP Technical specifications 36.300 and 23.401 and their successor specifications.

“LTE Market” of a Party means, in the case of XYZ, XYZ LTE Markets, and in the case of ABC, ABC LTE Markets.

“LTE Network” means the totality of all infrastructure and technology used by a Party or its Affiliates to provide Data Roaming in such Party’s LTE Market.

“LTE Rates” shall have the meaning given in Exhibit 2.

“Machine To Machine” or “M2M” means data communication and collection between connected devices, often automatic in nature or by a pre-programmed design. User Equipment can be used for M2M and an Authorized User may utilize individual or multiple M2M devices.

“MVNO” means Mobile Virtual Network Operator. MVNOs resell the wireless services, including the Data Services, of a Party.

“Network” means the totality of all non-Roaming infrastructure and technology used by a Party or its Affiliates to provide various wireless services to its own Authorized Users, including but not limited to any facilities or services used to interconnect and deliver or receive data, voice, SMS and other information between the Parties and their Authorized Users.

“Party” and “Parties” shall have the meaning given in the preamble.

“Person” means an individual, corporation, limited liability company, partnership, trust, association, joint venture, unincorporated organization or entity of any kind or nature, or a governmental entity or authority.

“Service Aware Roaming” or “Service Awareness” while Data Roaming means the ability of a Party, as Serving Carrier, to distinguish between various services (*e.g.*, M2M applications, data

applications, SMS, voice, etc.) carried by the LTE network. Serving Carriers applying Service Awareness to Authorized Users engaged in LTE Data Roaming have the capability to determine and provide the appropriate throughput needs of a given service (*ex*: assigned QoS), or, identify, through packet inspection requested IMS-based services such as VoLTE, or other M2M application-based services, with the intent then to provide the services without delivery to the Home Network.

“Serving Carrier” means a Party (including an Affiliate of a Party) that provides LTE Data Roaming to the Authorized Users of the Home Carrier in the Serving Carrier’s LTE Market.

“Serving Network” means the LTE Network of the Serving Carrier used to provide Data Roaming to the Authorized Users of a Home Carrier.

“TADIG” means Transferred Account Data Interchange Group.

“TAP” means Transferred Account Procedures or Transferred Account Protocol.

“Term” shall have the meaning given in Section 1.

“Third Party” means a Person other than a Party or an Affiliate of a Party.

“User Equipment” or “UE” means any Authorized User’s device capable of receiving LTE Data Service, including M2M devices.

“VoLTE” means Voice over LTE, as defined by GSMA PRD IR.92 and successor specifications. It is distinguished from other VOIP applications allowing voice calls over IP-based networks by virtue of its voice application capabilities being managed inside the LTE Network and not being provided “over the top” via the public internet.

“XYZ Wireless LTE Markets” means all of the LTE markets listed on Schedule A-1.

“XYZ Wireless” shall have the meaning given in the preamble.

## Exhibit 2 – LTE Rates

1. Unless otherwise mutually agreed to by the Parties, LTE Rates shall be equal to or less than the prevailing industry retail rate for LTE Data Services which as of this date, [AUGUST 2014], is \$10.00 per Gigabyte (“GB”) which is equal to \$.0096 per Megabyte (“MB”). This rate is reflected in the table below and may be revisited as both data usage increases and the resulting Prevailing Industry Retail Rate decreases.

Reasons to vary from the prevailing industry retail rate include circumstances where the Parties have a long pre-existing roaming relationship where one Party was incented to build-out network for the benefit of the other Party. In those circumstances, revenue neutrality may also be a goal in establishing the appropriate inter-carrier roaming rate.

	<b>Operator</b>	<b>IMS based LTE Voice and MMS Rates</b>	<b>DATA Rates</b>
	ABC	TBD when deployed	.0096 per MB
	XYZ	TBD when deployed	.0096 per MB

**Exhibit 3 – MAPS and AREAS**

SCHEDULE A-1 - Maps

SCHEDULE A-2 - Maps





## Exhibit 4 – Technical Aspects of Data Roaming

### **THIS EXHIBIT MAY HAVE STANDALONE TECHNICAL TERMS OR MAY INCORPORATE THE GSM STANDARDS INCLUDING BUT NOT LIMITED TO: AA.13, AA.14, and IR. 21**

(Note that terms below are intended to mimic the current GSMA terms of Interconnecting and passing Data Roaming via LTE)

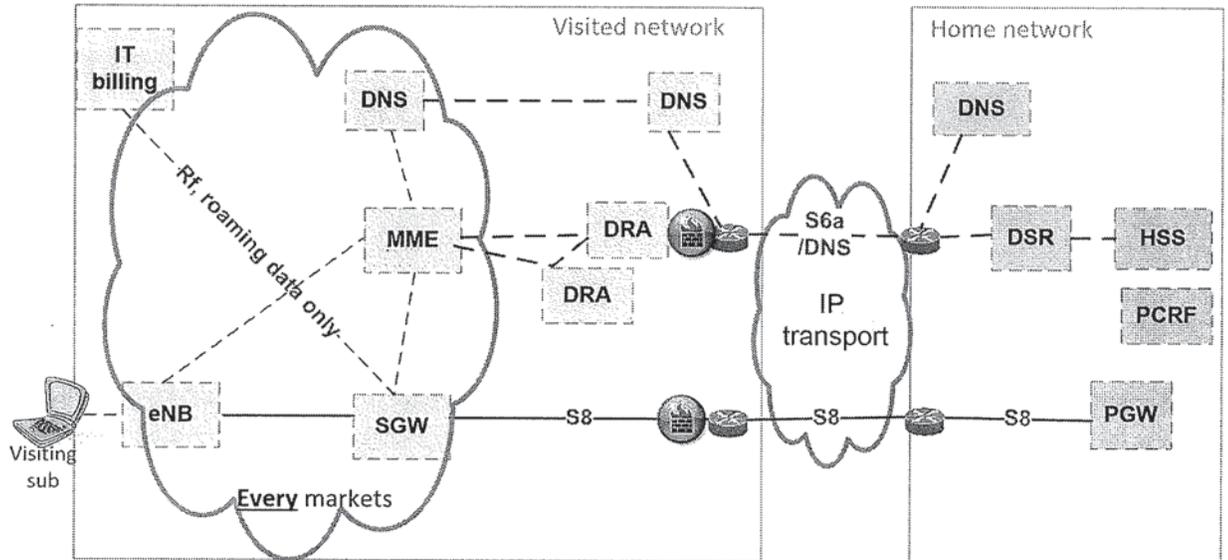
#### 1 NETWORK CONNECTIVITY AND ROUTING FOR LTE DATA SERVICE ROAMING

##### 1.1 Connectivity.

- 1.1.1 Unless both Parties agree to use an IPX Broker, both Parties agree to interconnect their LTE Networks directly with each other. This direct connection is to enable (a) the S6a Interface to exchange LTE Data Services subscriber and device authentication traffic via the establishment of a dedicated virtual private network (“VPN”) connection, and (b) the S8 Interface to exchange LTE Data Services bearer traffic via the Internet and accounting traffic (e.g. start and stop records) via the establishment of an S8-specific VPN connection. Prior to launch of any LTE Data Roaming traffic, the Parties will agree on the path of these connections and shall supply the other the information necessary to properly configure its network to route the Diameter Protocol traffic to these two connections. All servers must use public IP addresses that can be easily broadcast over the dedicated facilities. The Parties shall make reasonable effort to schedule and implement any necessary network changes.
- 1.1.2 The Parties agree to use the S6a Interface to exchange LTE Data Service traffic between the Serving Carrier’s MME and the Home Carrier’s HSS for authentication of the subscriber and the device using the Diameter Protocol.
- 1.1.3 The Parties agree to use the S8 Interface to exchange non-authentication LTE Data Service traffic between Serving Carrier’s S-Gateway and the Home Carrier’s PDN Gateway (e.g., accounting traffic, bearer traffic).
- 1.1.4 In order to ensure proper communication between networks, each Party shall provide to the other Party, details necessary for implementing the S6a Interface and S8 Interface. Prior to implementing such Interfaces between the Parties’ respective LTE Networks, both Parties shall agree on all the mandatory and optional attributes for such Interfaces.

1.1.5 The following Chart 1 depicts the functional elements involved in the exchange of LTE Data Service traffic between the Parties:

Chart 1



1.1.6 Each Party will pay for its own respective connection to the mutually agreed upon meet points. Each Party shall be responsible for increasing the bandwidth of its connection as necessary to support future increases in traffic.

(A). In the event a Party changes this connectivity: (a) that Party shall notify the other Party thirty (30) days in advance of the change if the Party is increasing or decreasing the capacity of the connections; or (b) that Party shall notify the other Party one hundred and twenty (120) days in advance of the change for any other connectivity changes.

(B). In the event a Party makes any change to its connectivity, that Party will work with the other Party to ensure a seamless transition with no or minimal service outage.

1.1.7 Both Parties shall ensure that there are at least two geographically diverse connections for failover in case one of the connections fails. If one of the connections fails, requiring use of the failover connection, the responsible Party will make reasonable efforts to restore geographically diverse connections in a timely manner.

1.1.8 At least one of the Serving Party's Diameter Protocol systems must be able to deliver Diameter Protocol messages initiated within its network to the other Party's HSS system while serving a subscriber of the other Party, and to receive and process any responses to those messages.

- 1.1.9 At least one of the Home Carrier's HSS systems must be able to receive, process, and deliver responses to Diameter messages initiated by the Serving Carrier's system.
- 1.1.10 Both Parties shall use reasonable efforts such that the connections must not introduce additional undue latency. In the event the desired latency level is not achieved by either Party, the Parties agree to work towards a reasonable problem resolution.
- 1.2 Routing.
  - 1.2.1 The Parties agree and warrant that all LTE Data Service traffic will be routed in a mutually agreed to secure manner.
  - 1.2.2 The Parties agree to route LTE Data Service traffic as follows:
    - (A) LTE Data Service authentication traffic via the S6a Interface;
    - (B) LTE Data Service accounting traffic via the S8 Interface; and,
    - (C) LTE Data Service bearer traffic via the S8 Interface.
  - 1.2.3 Diameter messages transmitted using the S6a interface will follow the requirements specified in IETF RFC 2960 and use the SCTP checksum method specified in IETF RFC 3309.
  - 1.2.4 Neither Party will route any LTE Data Service traffic in a manner that results in a third-party performing any function for one Party that results in the other Party being charged by such third-party.
  - 1.2.5 Both Parties shall send Diameter Protocol traffic in a secure manner. For the sake of clarity, authentication traffic and accounting traffic must be sent as Diameter Protocol traffic.
- 1.3 Security. Each Party will immediately notify the other Party if it becomes aware of security breaches and/or virus introduction into its respective network systems (i.e., non-subscriber equipment) that impact the LTE Data Services contemplated herein. All such notifications shall be provided to the designated contacts specified in the Technical Data Sheet.

---

## 2 BILLING AND SETTLEMENT

- 2.1 Authorized User Billing. The Home Carrier is responsible for billing of their Authorized Users for LTE Data Services while roaming on the Serving Carrier's LTE Data Network.
- 2.2 Settlement. The Parties agree to settle using GSMA standards.

2.3 Carrier Billing. Each Serving Carrier who provides LTE Data Service to an Authorized User pursuant to this Agreement shall send the Home Carrier an invoice on the 25th day of each month by 12 noon EST/EDT. If the 25th falls on a weekend then the invoice will be provided to the Home Carrier on the following business day by 12 noon EST/EDT. This invoice shall reflect all charges relating to LTE Data Services utilized by the Home Carrier's Authorized Users during the relevant billing period as defined in the Agreement. It is the intent that the net settlement amount for the current settlement period will be approved and submitted by the end of the calendar month. Once both Parties agree on settlement, the Serving Carrier will send the Home Carrier an invoice via email. At this time, an adjustment form will be created. An invoice shall include, at a minimum, the following information:

- ✧ Settlement Period:
- ✧ Total Data Usage (Bytes):
- ✧ Total KB's (total Bytes rounded one time to next KB):
- ✧ Charge per KB:
- ✧ LTE Data Charge:
- ✧ Tax (if applicable):
- ✧ Total Charge:

## 2.4 Settlement.

2.4.1 Settlement When The Difference is Less Than 2%. Each Party will independently calculate total charges. If the Home Carrier calculates a total charge that differs (either higher or lower) from the Serving Carrier's total charge by less than 2% (using the Serving Carrier's invoiced charges as the denominator), the Parties agree to each assume half of the difference as outlined in 2.4.1(A) below and proceed with settlement for that period. Any overcharge or undercharge must be reported within 90 days after the end of a settlement period.

Example: If ABC's calculations show that XYZ owes \$1,000,000 and XYZ's calculations show that XYZ owes ABC \$1,010,000. In this example, XYZ would owe ABC \$1,005,000.

- 2.4.2 Settlement when the difference is 2% or more. Each Party will independently calculate total charges. If the Home Carrier calculates a total charge that differs from the Serving Carrier's total charge by 2% or more (using the Serving Carrier's invoiced charges as a the denominator), the Parties agree to each assume half of the difference outlined in Section 2.4.2(A) below and proceed with settlement for that period. The Parties agree to work in good faith to identify, correct and agree to a resolution of the issue in the amount greater than 2% (including any necessary payments or credits) prior to the next settlement period. Any overcharge or undercharge must be reported within 90 days after the end of a settlement period.

Example: If ABC's calculations show that XYZ owes \$1,000,000 and XYZ's calculations show that XYZ owes ABC \$1,100,000, XYZ would pay ABC \$1,050,000 and the parties would work in good faith to identify, correct and agree to a resolution of any variance greater than 2% between the Serving Carrier's total charges calculated and the Home Carrier's total charges calculated for the Billing Period (including any necessary payments or credits) prior to the next settlement period.

- 2.5 Testing Charges. Except for agreed-upon test usage, each Party is responsible for the respective test usage and related charges when LTE Data Roaming on the other Party's LTE Network.
- 2.6 Remittance. Undisputed charges for services will be remitted within thirty (30) days following receipt of the invoice.
- 2.7 Billing Disputes. If a Party disputes a charge on an invoice, it will provide notice of that dispute in writing within 90 days following receipt of the invoice. Either Party may invoke the Dispute Resolution procedures in Section 17 of the Agreement.

2.8 Billing Issue Resolution. Serving Carrier shall provide to the Home Carrier the detailed information below or any other mutually agreed upon billing information within a commercially reasonable time period as requested and required for billing issue resolution. This information shall be transmitted from the Serving Carrier to the Home Carrier via mutually agreed upon electronic transmittal.

- ✧ GMT stop date and time
- ✧ GMT start date and time
- ✧ User name
- ✧ Account Session ID
- ✧ Technology Type
- ✧ PLMN ID
- ✧ Total Bytes

# FELDMAN DECLARATION

## EXHIBIT II

**EXHIBIT 1**  
**Declaration of Dirk Mosa**

## DECLARATION OF DIRK MOSA

I, Dirk Mosa, do hereby declare and state as follows:

1. My name is Dirk Mosa. I am the Senior Vice President, Corporate Development and Roaming at T-Mobile USA, Inc. ("T-Mobile"). I joined T-Mobile International in April of 1994 in Bonn, Germany, and later joined T-Mobile USA in September of 2001 after the successful completion of the Deutsche Telekom/VoiceStream merger. My responsibilities include mergers & acquisitions, FCC spectrum auctions and other spectrum acquisitions, and domestic and international roaming, among other responsibilities.

2. My 20 years of experience in the industry includes 9 years of heading up T-Mobile USA's roaming department. In that capacity, I have been in charge of negotiating roaming agreements with carriers across the country and around the world, as well as the operationalization of such roaming agreements. In my time at T-Mobile, I have overseen negotiation of more than 1,000 roaming agreements. T-Mobile currently has approximately 50 domestic roaming agreements and 120 international roaming agreements covering approximately 420 unique networks (several contracts cover a number of countries/networks, for example with the Vodafone Group, Deutsche Telekom Group or Orange Group).

3. T-Mobile has introduced several Un-carrier innovations that are helping to reshape the industry. For example, during 2013, T-Mobile launched its Simple Choice offerings providing customers with simplified unlimited pricing while eliminating annual service contracts, and decoupling plan and device pricing to improve customer transparency. T-Mobile also launched the Simple Global offering that allows customers to use voice services at low cost, and data and text free of charge, while traveling in more than 100 countries. T-Mobile subsequently enhanced its Simple Choice offerings to include payment of early termination fees for customers that choose to switch from other carriers, and introduced its JUMP! device upgrade program and Free Data for Life for tablets. Most recently, T-Mobile launched the budget-friendly Simple Starter plan and announced that it will eliminate domestic overage fees for all of its customers. These innovative offerings have appealed to and benefited consumers, as evidenced by the fact that, in 2013, T-Mobile won 2,000,000 additional postpaid customers and 400,000 prepaid customers.

4. Customers expect their devices to work wherever their travels take them. Voice and data roaming enables T-Mobile to fulfill this expectation and provide our customers with access to seamless nationwide and international coverage. While voice roaming usage per customer is stable or even declining, data roaming traffic per customer is increasing dramatically, among other things due to increased network speeds, the wide adoption of smartphones, and growing use of mobile applications. For instance, the percentage of T-Mobile customers that have smartphones grew from 70% in Q4 2012 to 81% in Q4 2013. In addition, 91% of T-Mobile customers purchasing a new device in the fourth quarter of 2013 purchased a smartphone. T-Mobile's average usage per subscriber per month was about 1,700 MB in January 2014, about 2.5 times the average usage in January 2013.

5. Every wireless carrier, including AT&T and Verizon as well as T-Mobile and all other domestic carriers, utilizes roaming. The very concept of nationwide (or global) coverage is

premised on the provision of roaming. T-Mobile continues to build out its network, but I do not foresee a time when T-Mobile will be able to provide 100% coverage of the entire United States on its own network. Even in markets robustly built out by multiple carriers, there will be discrete areas that are served by only one carrier. This occurs for many reasons, including zoning limits on tower construction, limited access to backhaul, and other cost challenges, including the inability to recoup investment costs. Wireless carriers will likely always require roaming on commercially reasonable terms in order to offer customers the widest possible coverage footprint.

6. Obtaining access to data roaming on commercially reasonable terms is critical to T-Mobile's ability to provide customers with seamless access to nationwide data coverage and to effectively compete in today's marketplace, in which wireless service has become an essential part of everyday life for customers who rely on ubiquitous networks.

7. Given the importance of data roaming, T-Mobile routinely engages in a detailed process to develop roaming forecasts. T-Mobile prepares these internal forecasts as part of its financial planning, budget, plan, and forecast processes. Historically, comparing actual performance to the forecasts has consistently demonstrated accuracy to within 5% on volume and financials. T-Mobile's roaming and financial planning teams work together closely to ensure the accuracy of this process.

8. T-Mobile's 2014 forecasts relied upon in the Petition reflect all current agreement terms. Roaming agreement negotiations are ongoing, including the sunset of certain of T-Mobile's most critical roaming agreements at the end of 2014 – which is one reason why expeditious Commission action is needed. Other of T-Mobile's agreements covering 2014 volume also remain in place through 2015, with a few extending through 2016. For purposes of forecasting, existing rates are assumed to be constant. The forecast process is performed at the roaming partner level and takes into account all known agreement terms and current go-forward volume dynamics. T-Mobile's roaming forecasts are developed for business planning purposes; the 2014 forecasts provided by T-Mobile in preparation for drafting the Petition and other documents supporting it were forecasts developed in the ordinary course of T-Mobile's business.

9. In my view, certain "must-have" carriers are using the ambiguity of the *Data Roaming Order* as a shield to protect and extend unreasonable roaming practices. T-Mobile currently is unable to obtain data roaming at commercially reasonable rates and terms from these carriers. While these problems are not limited to any one carrier, T-Mobile's experience with AT&T provides a concrete example of the need for further action by the Commission.

10. As a direct result of the refusal to provide roaming at commercially reasonable rates, T-Mobile has been forced to throttle and cap roaming data usage from the first MB when our customers roam onto certain networks, including AT&T's network.

11. Data roaming traffic carried by the substantial majority of roaming partners other than AT&T is generally offered at rates that do not require throttling or capping.

12. Over the past several years, AT&T has acquired a number of our roaming partners. As a result, carriers, including T-Mobile, face increased need for access to data

roaming from AT&T in order to provide consumers with the nationwide coverage they demand. In contrast, AT&T only requires roaming from a select few operators, presumably giving them an imbalance in bargaining power with the majority of domestic operators requesting roaming. In my view, AT&T uses its significant pricing power to keep roaming prices for T-Mobile at commercially unreasonable levels – which is why additional Commission guidance is urgently needed to ensure achievement of commercially reasonable rates and terms.

13. It is essential for T-Mobile to negotiate a commercially reasonable nationwide data roaming rate from “must-have” providers like AT&T. This enables T-Mobile to offer the nationwide data roaming access that customers have come to expect even as their consumption of data grows dramatically.

14. Mobile wireless carriers in the U.S. employ two incompatible 2G and 3G technology platforms, GSM vs. CDMA, with each of the two largest carriers in particular supporting one and not the other (*i.e.*, AT&T using GSM and Verizon using CDMA). Therefore a carrier may have only one choice of roaming provider in an area even where there are two or more built-out, but incompatible, networks. It is well-established that multimode handsets and other work-arounds to resolve incompatibility between the two technologies are not adequate. Multimode handsets require additional circuitry and antennas, consume more power, require larger batteries, and so are costlier and do not offer the modern, sleek form factors demanded by consumers. And even if multimode handsets were consistent with consumer demand, their use to solve technical incompatibilities would be cost prohibitive. T-Mobile would be forced to convert its entire base of customer handsets to more expensive multimodal handsets, and thereby increase the costs of all its handsets for all of its customers.

15. T-Mobile uses GSM/UMTS (HSPA) technology, and AT&T is the only GSM/UMTS (HSPA) provider in many (often rural) markets. AT&T has a monopoly or near-monopoly over GSM/UMTS (HSPA) roaming in many such markets. AT&T has been able to leverage the pricing power it has in these markets to charge T-Mobile an anticompetitive, commercially unreasonable nationwide roaming rate. T-Mobile’s current nationwide roaming arrangement with AT&T reflects this pricing power.

16. In my position as head of the T-Mobile roaming department, I am exposed to data rates throughout the world. AT&T’s roaming rates with T-Mobile – despite our best efforts over many years to negotiate them down – remain in my opinion significantly higher than a commercially reasonable rate. Because AT&T’s roaming rates are significantly higher than what a reasonable rate would be, T-Mobile typically only roams on AT&T’s network where AT&T provides the only available network. AT&T is by far T-Mobile’s largest domestic roaming partner; however, the share of T-Mobile’s outbound voice and SMS roaming volume that it sends to AT&T is roughly double the volume of outbound data roaming that T-Mobile sends to AT&T. Were AT&T’s data roaming rate commercially reasonable, I would expect the portion of data roaming traffic directed to AT&T to more closely track the portion of voice and SMS roaming traffic directed to AT&T.

17. In my view, T-Mobile also has been subject to anticompetitive negotiation tactics used by AT&T that seem designed to weaken T-Mobile rather than to maximize the incremental revenue T-Mobile could offer to AT&T by expanding its roaming on AT&T’s network. For

example, T-Mobile has at times offered to make minimum annual revenue commitments for data services in exchange for lower rates that would have in total provided AT&T additional revenue. Under this approach, T-Mobile would have removed throttling and cap limitations on its customers' roaming on AT&T's network and driven significantly greater volume, revenues, and profits to AT&T.

18. Additionally, in several instances we have been told by other roaming partners that they cannot offer T-Mobile better rates due to AT&T's aggressive use of Most Favored Nations ("MFN") clauses in its roaming contracts. Under MFNs, a carrier is prohibited from offering lower rates to other partners (such as T-Mobile) without facing a substantial decrease in inbound roaming traffic from AT&T or the need to substantially lower their price for a large volume of inbound roaming traffic – a choice that results in many carriers deciding to keep the higher roaming price. AT&T's leverage of its "must-have" status via MFNs keeps prices unreasonably high for competitors such as T-Mobile.

19. Commercially reasonable wholesale roaming rates may be negotiable in situations where a roaming purchaser has a choice among roaming partners. Examples of scenarios where a competitive environment exists and reasonable prices can be achieved include: (1) when (legacy) MetroPCS can choose between Verizon and Sprint in obtaining CDMA-based roaming services; (2) when smaller carriers can choose between AT&T and T-Mobile in obtaining GSM-based roaming services; (3) for international carriers seeking roaming services in the United States from multiple carriers; or (4) for T-Mobile when seeking roaming services abroad from multiple carriers within one country.

20. T-Mobile is often able to negotiate commercially reasonable rates with overseas carriers for international roaming where it has a choice among international roaming providers. For example, T-Mobile's Simple Global offering shows that the competitive market for international roaming provides commercially reasonable rates that allow carriers to price their international retail offering competitively, or, in T-Mobile's case with its Simple Global offering, for free.

21. The actual cost to provide a megabyte of data to roaming partners mirrors the cost to provide a megabyte for one's own customers, and T-Mobile's internal (and very likely AT&T's internal) cost is only a small fraction of the roaming rates charged by AT&T. Costs to produce a megabyte continue to decline, with 4G/LTE being more efficient than its predecessor technologies 2G GSM and 3G UMTS/HSPA. Consequently, commercially reasonable rates should also decline over time due to the lower costs associated with the new technologies, such as 4G/LTE.

22. However, in my opinion, the availability of 4G/LTE roaming will not in the foreseeable future negate the need for 2G and 3G roaming. First, today carriers deploying LTE still typically require their customers to use 2G or 3G when making voice calls, so the roaming provider's network must use a 2G/3G technology that is compatible with the roaming customer's handset. Second, while LTE technology will enable more voice calls on LTE networks in the future, LTE handsets will continue to have to revert to 2G/3G technology for voice calls and data sessions where the LTE signal is too weak. Third, because many customers are slow to adopt the most modern handsets, carriers will need a roaming partner that continues to provide the

compatible last-generation technology, so that its customers who still have legacy phones can roam outside their carrier's facilities-based service territory.

23. Consequently, I do not believe that the adoption of LTE technology will alleviate AT&T's pricing power in certain areas, as technological incompatibilities will remain that will require T-Mobile to roam only with carriers using GSM technology. As a result, we need further guidance from the Commission in order to obtain commercially reasonable rates for these services.

24. Under the wholesale roaming rates currently charged by AT&T, T-Mobile at times finds itself suffering a net loss with respect to certain customers simply by virtue of T-Mobile providing the customers with roaming service on AT&T's network even as they are throttled and capped to contain costs.

25. Roaming rates such as these, which are so high as to require T-Mobile and other carriers to limit customers' ability to roam freely from the first MB in order to simply break even economically, are by definition commercially unreasonable and harm consumers. When throttling and cap limitations are removed, consumers use significantly more data, typically in the range of 10-20x.

26. With commercially reasonable data roaming rates (which many carriers provide), the marginal cost of enabling data roaming is low enough to justify elimination of throttling or capping.

27. Another potential benchmark for assessing commercially reasonable data pricing is that offered in the MVNO wholesale market. Nationwide carriers such as AT&T, Verizon, Sprint, and T-Mobile enable Mobile Virtual Network Operators ("MVNOs") to resell their services domestically at "per minute/per megabyte" or "big bucket" rates. The wholesale rates that T-Mobile charges to MVNOs are much lower than the wholesale roaming rates offered by AT&T. In my opinion, there is no reason why the wholesale rates for minutes and megabytes charged to other carriers (*i.e.*, roaming) should be so much higher than the wholesale rates for minutes and megabytes charged to MVNOs. I expect that T-Mobile's volume is much greater with AT&T than AT&T has with several of its MVNOs, who pay lower rates at lower (wholesale) volumes. In my view, this is further evidence that AT&T keeps roaming rates artificially high and commercially unreasonable.

28. International roaming agreements may be based on negotiated discounts or may rely on published standard Inter-Operator Tariff ("IOT") rates. In 2013, there were 450 international operators that purchased wholesale U.S. data roaming traffic from T-Mobile, with 298 of them purchasing U.S. roaming through discount agreements negotiated with T-Mobile and with the remaining 152 operators operating under the standard IOT rates. The vast majority of international carriers that do operate under IOT rates have roaming volumes that are very small, which do not justify the costs of negotiating a discount agreement.

29. In Dr. Joseph Farrell's Declaration, he calculates the volume weighted distribution of wholesale prices that T-Mobile charges international operators for data roaming in the U.S. through negotiated discount agreements. Some of the actual and forecasted average

rates used in his calculation reflect the fact that the international carrier has committed to purchase a larger volume of roaming services than it actually used or is expected to use currently. In some cases, the foreign carrier has made reciprocal agreements with T-Mobile for unlimited roaming for a fixed fee, but volume has not grown considerably yet. In these cases, it is important to note that the actual and forecasted rates do not yet reflect the impact of operators altering retail offers for customers to fully utilize the value provided in the agreements, and will likely be much lower once this occurs.

30. T-Mobile has renegotiated its contracts with more and more international operators for 2014 to provide substantially lower data roaming rates. Several of these contracts allow the international operator to enjoy unlimited use of T-Mobile's data network in 2014 for a fixed dollar amount under reciprocal terms, with the pro-consumer result that, at least during the contract term, marginal costs are zero.

31. T-Mobile recently negotiated a substantial number of unlimited use reciprocal contracts and has launched a retail plan (Simple Global) that passes through favorable (marginal) wholesale terms by allowing T-Mobile subscribers to enjoy free, unlimited data roaming (and SMS) services abroad in more than 100 countries. T-Mobile is aware of only a handful of foreign carriers thus far who have offered similar retail plans to their customers. As a consequence, T-Mobile's subscribers are expected to generate a much larger volume (in fact, multiples larger) of traffic than their foreign counterparts and thus achieve much lower blended costs per MB under the same contractual terms.

32. The vast majority of international carriers that have wholesale data roaming agreements with T-Mobile very likely also have agreements with AT&T to enable roaming in areas where T-Mobile lacks coverage, where their handsets are incompatible with the spectrum bands T-Mobile's network uses, or where they feel they need to use AT&T for roaming to provide AT&T with an incentive to use their networks for roaming. For these providers, AT&T and T-Mobile directly compete to provide roaming.

33. T-Mobile individually negotiates – and I myself have negotiated – hundreds of commercially reasonable roaming agreements. But the lack of any practical guiding principles in the Commission's data roaming rules leaves carriers with little real-world guidance when faced with unreasonable tactics deployed by “must-have” roaming partners. In my opinion, without real-world guidance of the sort requested by T-Mobile, the Commission's *Data Roaming Order* will remain of little relevance to actual, real-world negotiations involving carriers with imbalanced bargaining power.

I have read the forgoing Petition for Declaratory Ruling of T-Mobile USA, Inc. With respect to statements made in the Petition, other than those of which notice can be taken, the facts contained therein are true and correct to the best of my personal knowledge, information, and belief.

A handwritten signature in black ink, appearing to read "Dirk Mosa", is written over a horizontal line.

Dirk Mosa

Date: May 22, 2014

**EXHIBIT 1**  
**Reply Declaration of Dirk Mosa**

## REPLY DECLARATION OF DIRK MOSA

I, Dirk Mosa, do hereby declare and state as follows:

1. My name is Dirk Mosa. I am the Senior Vice President, Corporate Development and Roaming at T-Mobile USA, Inc. (“T-Mobile”). My background and experience is fully described in the May 22, 2014 “Declaration of Dirk Mosa” that is attached as Exhibit 1 to the “Petition for Expedited Declaratory Ruling of T-Mobile USA, Inc.” filed with the FCC on May 27, 2014, in WT Docket No. 05-265 (the “Petition”). What follows is a supplemental declaration addressing points raised by AT&T in its Comments filed on July 10, 2014 in this proceeding.

2. AT&T claims that there is no need for further regulatory guidance regarding data roaming because the marketplace is functioning. I disagree. In my nine years of experience negotiating roaming agreements for T-Mobile USA, including with AT&T, it has become clear that the data roaming marketplace is not functioning well.

3. T-Mobile has been forced into commercially unreasonable agreements with AT&T. In fact, T-Mobile has data roaming agreements with many other domestic carriers, and AT&T’s rate is currently *150 percent higher* than the average rate that T-Mobile pays for data roaming across all other domestic partners. Based on our acquisition of MetroPCS, we also know that AT&T’s current data roaming rate with T-Mobile is *one thousand percent higher* than the data roaming rate negotiated between Leap Wireless and MetroPCS prior to AT&T’s acquisition of Leap. However, that agreement was not surprisingly terminated by AT&T immediately after the Leap acquisition closed.

4. T-Mobile has no other option than to pay the exorbitant rates that AT&T demands because of the importance of roaming to any carrier’s business model – including T-Mobile’s – and the lack of other roaming partner options. AT&T is currently the only GSM roaming partner available to T-Mobile in 17 entire states and portions of many other states. The lack of alternatives has been exacerbated by AT&T’s acquisition of other roaming partners.

5. One of the ways AT&T drives up our roaming cost is by making us roam throughout geographically larger areas than we need. To explain, parties to roaming agreements typically mutually agree to open or restrict roaming in discrete geographic areas based on a group of cell sites organized into what are called location area codes (“LACs”). LACs can be of any size, from one cell site to multiple cell sites. Having LACs with a relatively small number of sites allows each party to closely match roaming areas to their needs for roaming services. Over the last few years in particular, as it has acquired other carriers, AT&T has begun to insist on including more sites per LAC.

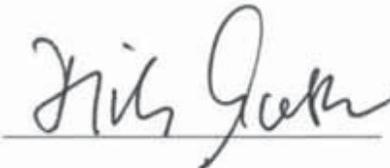
6. AT&T’s design of LACs with large numbers of sites has negative consequences for T-Mobile and our customers, especially where T-Mobile only needs roaming in a small portion of a LAC. Under AT&T’s expanded LAC design, we are forced to pay for roaming coverage we don’t want or need and our customers roaming in the area will have a degraded experience due to our need to limit data services as the result of AT&T’s unreasonable roaming charges. Unfortunately, the only other alternative presented by AT&T is that our customers will simply not have data roaming service in the affected area.

7. Another way AT&T drives up roaming costs is through the anti-competitive use of “most favored nation” (“MFN”) clauses it has negotiated in roaming agreements with other carriers. Both AT&T and its roaming partners under MFN cite the MFN rate as the best available to other carriers, even though under T-Mobile’s analysis, the rates are unreasonably high. As we have been told, some of these roaming partners would extend better roaming rates to T-Mobile if they were not restricted by AT&T’s MFN.

8. AT&T says that these MFNs are “part of a larger, more complex agreement in which AT&T is either providing access to spectrum or otherwise funding build-out of broadband networks in the relevant area.” What AT&T fails to acknowledge, in my opinion, is that these high MFN data roaming rates cross-subsidize the other “arrangements” that AT&T describes. I suspect that under these business arrangements, AT&T either has an agreement with the operator to purchase their respective network and spectrum at some time in the future (something like a “call-option”), or AT&T leases spectrum to the operator with an option to purchase the network sometime in the future. As a result, operators will agree to above-market roaming rates to enter into the larger transaction to facilitate the larger deal. These operators then rely on these MFN rates as the best available when negotiating with other carriers such as T-Mobile. These MFN clauses, therefore, subject T-Mobile and other roaming carriers to roaming costs on both AT&T’s network and the network of its MFN roaming partners that are artificially inflated and completely inconsistent with commercially reasonable, independently negotiated rates.

9. Lastly, without the benefit of the guidance that T-Mobile seeks, some carriers – AT&T in particular – will continue to show no urgency in negotiating roaming agreements. For example, T-Mobile’s current roaming agreement with AT&T expires on December 31, 2014. I personally have been involved in T-Mobile’s past roaming negotiations with AT&T, and it has taken a minimum of nine months, but as long as 18 months to re-negotiate a roaming agreement with AT&T. Without direction from the Commission, I am very concerned that the present pace of negotiations may unnecessarily take this long or longer, which has the practical effect of having T-Mobile continue to pay unreasonable data roaming rates into 2015.

I have read the foregoing Reply of T-Mobile USA, Inc. With respect to statements made in the Petition, other than those of which notice can be taken, the facts contained therein and in this Declaration are true and correct to the best of my personal knowledge, information, and belief.

A handwritten signature in black ink, appearing to read "Dirk Mosa", written over a horizontal line.

Dirk Mosa

Date: August 20, 2014

# FELDMAN DECLARATION

## EXHIBIT III

## **EXHIBIT 2**

**Declaration of Joseph Farrell, D.Phil.  
In Support of Petition for Expedited  
Declaratory Ruling of T-Mobile USA, Inc.**

**DECLARATION OF JOSEPH FARRELL, D.PHIL.**

**IN SUPPORT OF PETITION FOR EXPEDITED DECLARATORY RULING  
OF T-MOBILE USA, INC.**

**May 19, 2014**

## Table of contents

I. Executive Summary .....	1
II. Charge and Qualifications .....	6
III. The Growing Importance of Data Roaming .....	8
IV. Market Power in Data Roaming Markets .....	12
IV.A. Sources of Market Power .....	12
IV.B. Competitive Effects from Exercise of Market Power .....	13
V. The 2011 <i>Data Roaming Order</i> .....	16
VI. Some Benchmarks for Wholesale Roaming Rates .....	20
VI.A. Retail Data Prices .....	20
VI.B. Roaming agreements with foreign carriers .....	25
VI.C. Wholesale Rates T-Mobile Charges to MVNOs .....	29
VI.D. Domestic Wholesale Data Roaming Rates .....	30
VII. Recommendations and Conclusion .....	37

## List of figures

Figure 1. T-Mobile subscribers' average data use, MB per month .....	9
Figure 2. Advertised domestic prices for data services sold in retail bundles, February 2014 .....	23
Figure 3. Domestic Voice Revenue Per Minute, retail and wholesale roaming .....	25
Figure 4. Data roaming prices T-Mobile charges international operators in the US, 2013, and T-Mobile's projections for 2014 .....	27
Figure 5. Average domestic wholesale data roaming prices T-Mobile pays, 2008-2013, and T-Mobile's projections for 2014 .....	32
Figure 6. Average domestic wholesale data roaming prices T-Mobile paid, 2013, and T-Mobile's projections for 2014, by type of contract.....	33
Figure 7. Domestic wholesale data volumes T-Mobile buys, 2013 and T-Mobile's projections for 2014, by type of contract .....	34
Figure 8. Distribution of domestic wholesale prices T-Mobile pays, 2013 and T-Mobile's projections for 2014 ....	36

## List of tables

Table 1. Select retail plans of major US operators .....	22
Table 2. Maximum retail costs per MB for a customer who uses 1,700 MB per month.....	24
Table 3. Data roaming prices T-Mobile charges international operators in the US, 2013, and T-Mobile's projections for 2014 .....	27
Table 4. Distribution of average data roaming prices T-Mobile expects to charge international operators in the US in 2014, by type of contract.....	28
Table 5. Data roaming rates that T-Mobile pays to foreign operators, 2013 and projection for 2014 .....	29
Table 6. T-Mobile's domestic wholesale data roaming purchases, 2008-2013, and T-Mobile's forecast for 2014.....	31
Table 7. Historical and future purchases from providers of wholesale data roaming to T-Mobile, 2008-2013, and T-Mobile's projection for 2014, by type of contract.....	35

## I. Executive Summary

- (1) Data roaming services are increasingly important for retail competition among wireless carriers.
  - Consumers have come to expect national coverage.
  - All carriers rely on roaming (to differing extents) to provide the national coverage.
  - A carrier facing especially high costs for roaming services faces a competitive disadvantage in the retail market. At the same time, if all carriers face unduly high costs for roaming, such an overall cost elevation is especially likely to be strongly passed on to consumers.
  
- (2) I have been asked by T-Mobile USA (“T-Mobile”) to comment on the potential for consumers and competition in wireless markets to be harmed by unreasonable demands in data roaming negotiations or agreements (including rates).
  - In some cases, carriers have both substantial market power in supplying roaming and a substantial economic incentive to use this power to raise rivals’ costs, either unilaterally or as a reciprocal agreement to soften competition between contracting carriers. In such cases, the Commission should deem high rates (or unduly burdensome non-price terms) to be not commercially reasonable.
  - The Data Roaming Order states that, in determining whether a rate is commercially unreasonable, the Commission will consider “the level of competitive harm in a given market and the benefits to consumers.”
  - The Order also says that the Commission will consider “whether the terms and conditions offered by the host provider are so unreasonable as to be tantamount to a refusal to offer a data roaming arrangement.”
  
- (3) While competition in offering wholesale roaming exists in most urban areas, “pockets of monopoly” give some carriers (large and small) a degree of market power in wholesale data roaming markets.
  - A carrier may have monopoly power or substantial market power in roaming services in a certain area sold to certain requesting carriers, without also having substantial market power in retail markets, especially retail markets for nationwide service.
  - A carrier with market power in a region may charge a rate substantially above the price that would prevail in a more competitive market. Indeed, even some small providers may charge high wholesale rates in order to “harvest” roaming revenues in sparsely populated areas with little competition and few retail customers.

- Where a roaming agreement covers a broad geography where the supplier faces a range of competitive conditions, but includes a flat “blended” rate that does not vary with geographic competitive or cost conditions, localized market power can still be expected to affect the rate negotiated. The effect will likely be smaller on a per-MB basis than would be negotiated if the supplier had more geographically uniform market power, but will extend more widely, and there is no economic reason to expect that such blending would make the total effect negligible.
  - Such market power is not a purely transient phenomenon that will be cured in the foreseeable future as additional networks are built out. In many parts of the country, it likely is economically infeasible and/or undesirable to build out multiple networks because of high fixed costs relative to a low density of potential users. Furthermore, even in areas that are built out there can be holes in coverage, due for instance to zoning limitations on towers. So in order to offer its customers reliably complete coverage, a carrier may require roaming even in territory that it generally serves based on its own facilities. The commercial and competitive need for roaming will therefore persist.
  - Wholesale market power is more likely to be a problem when a carrier seeking roaming lacks adequate potential roaming partners. This can happen because there are few potential partners in a geographic area, or because there are few who use a compatible technology. For example, as I discuss below, customers of domestic carriers using GSM technology generally cannot roam on CDMA networks. Such incompatibilities between handsets and networks are likely to limit competitive alternatives for the foreseeable future, and future technological developments not yet foreseen could as easily create incompatibilities as solve them.
- (4) A serious competitive problem can arise when a wireless carrier must purchase wholesale roaming services from a retail competitor in order to compete in the retail market. In this case a seller of roaming services with market power may have an additional incentive to raise the rival’s costs by charging a rate even higher than would be charged absent this consideration.
- Wholesale rates that exceed the monopoly price can arise from this incentive.
  - Such a strategy of “raising rivals costs” to weaken the rival’s competitive abilities and incentives in a downstream market is condemned in the antitrust literature.
  - Higher wholesale rates will normally induce the purchasing carrier to raise retail prices, unless it instead limits consumers’ use of data roaming, an option whose use is observed in today’s markets, and that reduces service quality for consumers.
- (5) Recognizing competitive concerns related to roaming, the Commission issued the Data Roaming Order.
- The Order lays out a number of objectives, including competition.

- It mandates that facilities-based carriers provide data roaming access to other carriers on “commercially reasonable” terms.
  - It offers a long list of possible factors that “... the Commission may consider in determining whether terms are commercially reasonable,” but clearly there is scope for further guidance that could assist carriers during negotiations or that could clearly guide the resolution of a complaint proceeding.
- (6) The European Commission has also expressed related concerns about the potential for competitive harm in international roaming markets, but recently has adopted a different approach that caps roaming rates directly. The Euro rate cap will fall to 0.05 Euro per MB by July 1, 2014, approximately equivalent to seven US cents per MB at today’s exchange rate.
- (7) I propose that, when deciding whether a proposed data roaming rate (or agreement) is commercially reasonable, the Commission should be especially concerned about high rates charged to a significant retail competitor that lacks adequate alternative roaming providers. The Commission should develop appropriate local measures of competition in wholesale data roaming markets to aid detection of rates likely to have been influenced by such effects (recognizing that the effects of local market power may be blended into a nationwide roaming rate).
- High rates may reflect incentives to raise rivals’ costs and/or an exercise of substantial market power in this setting.
- (8) I discuss several benchmarks that the Commission should consider in drafting prospective guidance for the industry and also in evaluating whether a proposed wholesale data roaming rate is “high” in a sense relevant to determining whether it is commercially unreasonable.
- None of these benchmarks is or can be ideal. In addition to various measurement issues, the force of benchmarks is limited by the fact that price discrimination is not inherently harmful in settings such as mobile wireless services. Nevertheless, as the Commission rightly found, there is a real risk of a competitive and consumer problem in mobile data roaming. Thus, while the Commission should be cautious in diagnosing commercially unreasonable demands, it should not allow the complexities to prevent it from providing prospective guidance and predictable enforcement. Whether a proposed rate is significantly higher than a number of imperfect benchmarks is an appropriate part of the Commission’s consideration of all the circumstances in deciding whether such a rate is commercially unreasonable. The Commission should apply benchmarks cautiously and in conjunction with one another and with an analysis of competitive risks.
- (9) I illustrate these benchmarks using data available from public sources and from T-Mobile; of course, Commission staff may have access to a variety of relevant industry data.

- (10) As a natural first benchmark, the Commission should consider whether a roaming rate offered to a retail competitor greatly exceeds a suitable measure of retail price—meaning, in this context, an estimate designed not to underestimate effective retail prices of data services.
- Such a comparison must recognize that customers purchase data services in varying amounts as part of packages that include other goods and services and “buckets” of data services. Below, I discuss approaches to constructing a suitable measure of retail price for this purpose.
  - In particular, it may be informative to examine retail prices that the roaming provider charges its own retail customers who reside in areas where the wholesale customer requires roaming services. Data services provided to the roaming customer and to the seller’s own retail customer are likely to be similar in such cases.
- (11) As a second benchmark, the Commission should consider whether a wholesale roaming rate substantially exceeds roaming rates charged to foreign carriers when their customers roam in the United States.
- Since the foreign carriers do not offer retail service in the United States, the raising rivals’ cost motive for charging a high price likely does not apply in this setting, subject to caveats in the case of international affiliations.
  - One can also compare rates charged by foreign carriers when a US carrier’s customer roams abroad. Based on T-Mobile’s recent experience, these appear to be lower, at least as measured by average price, than the inbound rates.
  - In applying this and some other benchmarks, one should keep in mind that in a two-way roaming agreement, each party provides roaming to the other, in addition to any money that changes hands.
- (12) As a third benchmark, the Commission should consider the price for wholesale data service that a seller charges to MVNO customers.
- The MVNO benchmark is closer to a simple exchange of roaming for dollars without the measurement issues involved in two-way agreements.
  - The raising rivals’ cost motive for charging high wholesale prices is tempered in this setting to the degree that MVNO service is a qualitatively different retail product from that sold by facilities-based carriers. Specifically, many MVNOs focus on the pre-paid market and target price-sensitive customers that facilities-based host carriers are less focused on serving. Consequently, the MVNOs may be seen as competing less directly against the range of services offered by the host network.

- The MVNO benchmark must also be interpreted cautiously because MVNO customers may use the host carrier's network in substantially different ways compared to a roaming customer of a facilities-based competitor.
- (13) A fourth benchmark is the general level of prevailing domestic wholesale roaming agreements. This exercise is complicated on a going-forward basis because of changes in technology/costs, consumption patterns, and market competition/concentration.
- Wholesale rates have trended downward strongly in recent years, so that historical wholesale rates may no longer be consistent with the general level in the industry even if they were when first negotiated. In addition to the downward trend in average prices, marginal prices have declined to zero for many of T-Mobile's roaming partners who offer unlimited data roaming (or a very large amount) for a fixed fee.
  - Some prevailing roaming rates may reflect the past exercise of market power or attempts to weaken retail rivals. Thus, especially at a time of generally declining rates, the prevailing general level is more akin to an upper bound on reasonable rates than it is to an unbiased benchmark for such rates. Over-reliance on historical roaming rates in these contexts would risk perpetuating excessive rates.

## II. Charge and Qualifications

- (14) I have been asked by counsel for T-Mobile to comment on how the Commission might provide prospective guidance and predictable enforcement criteria for evaluating the commercial reasonableness of wholesale data roaming rates. This initial evaluation is based on my familiarity with the telecommunications industry (and the commercial mobile wireless industry in particular), my review of publicly available documents and data sources, documents and information provided to me by T-Mobile and its counsel, and discussions with executives of T-Mobile.
- (15) I have been asked specifically to consider potential harm to competition from roaming rates that reflect incentives to raise rivals' costs and other exercise of localized monopoly or substantial market power, and to offer my opinions how the Commission might interpret its 2011 Data Roaming Order<sup>1</sup> in order to account for such potential for harm.
- (16) I also have been asked to also identify some data benchmarks that the Commission might consider in providing prospective guidance and predictable enforcement criteria for evaluating whether a proposed data roaming agreement is commercially unreasonable on grounds that it is likely to harm competition.
- (17) I am Professor of Economics at the University of California, Berkeley, where I am also an Affiliate Professor of Business and have served as the Chair of the Competition Policy Center. I am also a Partner with Bates White, LLC. I received my D.Phil., M.Sc., and B.A. degrees from Oxford University.
- (18) From 2009 to 2012, I served as Director of the Bureau of Economics at the Federal Trade Commission, where I supervised approximately 70 Ph.D.-level economists and reported directly to the Chairman and Commissioners. I was responsible for economic analysis relating to the Commission's broad antitrust and consumer protection portfolios.
- (19) Earlier, in 2000 to 2001, I served as Deputy Assistant Attorney General for Economic Analysis for the Antitrust Division of the U.S. Department of Justice. In this position, which is the chief economist position at the Division, I supervised approximately 50 Ph.D.-level economists and reported directly to the Assistant Attorney General for Antitrust.
- (20) Earlier, in 1996-1997, I served as Chief Economist for the Federal Communications Commission (FCC), where I reported directly to the Chairman and Commissioners.

---

<sup>1</sup> *Reexamination of Roaming Obligations Of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, WT Docket No. 05-265, Second Report and Order, 26 FCC Rcd 5411 (2011) (“*Data Roaming Order*”).

- (21) I have taught undergraduate and Ph.D.-level courses at the University of California at Berkeley and earlier at the Massachusetts Institute of Technology (MIT), and the University of Michigan, on microeconomic theory, industrial organization, and game theory. My teaching experience includes both theoretical and empirical analysis.
- (22) I have published extensively in peer-reviewed academic journals and elsewhere on topics centering on the economics of competition, industrial organization, and innovation.
- (23) I have served on the editorial boards of professional journals, including serving as Editor of the *Journal of Industrial Economics* from 1995–2000 and on the Board of Editors of *Information Economics and Policy* from 2004–2007. I am a Fellow of the Econometric Society, past President of the Industrial Organization Society, and former Board Member for the National Academies' Computer Science and Telecommunications Board.
- (24) I have been retained as a consultant or expert witness in a variety of matters involving telecommunications, intellectual property, antitrust and merger analysis. I have served as a consultant to the Department of Justice (DOJ), Federal Trade Commission (FTC), Canadian Bureau of Competition, Reserve Bank of Australia, and to many private parties. I have testified on matters related to economic policy in hearings before the Senate Judiciary Committee, FCC, FTC, and DOJ.

### III. The Growing Importance of Data Roaming

- (25) In 1998, AT&T introduced its National One-Rate plan, the first plan that allowed customers to purchase a bucket of voice minutes of use (MOUs) that they could use anywhere in the nation without incurring (consumer-level) roaming or long distance charges. This digital one-rate (DOR) plan proved extremely popular, and almost all other major wireless providers subsequently introduced similar DOR plans.<sup>2</sup> As more wireless customers subscribed to these DOR plans, they came to expect and demand that they be able to use their device wherever they traveled within the United States.
- (26) With the deployment of 3G technology, customers rapidly began to purchase smartphones. According to Commission data, 41 percent of mobile wireless consumers had a smartphone in July 2011, but this figure had grown to 55.5 percent in 2012.<sup>3</sup> According to a more recent Nielsen estimate, the percentage of mobile wireless consumers that own a smartphone had grown to as high as 64% by September 2013.<sup>4</sup> The percentage of T-Mobile customers with smartphones grew from 70% in the fourth quarter of 2012 to 81% in the fourth quarter of 2013, and 91% of T-Mobile customers who purchased a new device in the fourth quarter of 2013 purchased a smartphone.<sup>5</sup>
- (27) With increased usage of smartphones and other mobile devices, the amount of data that mobile subscribers consume has grown even more dramatically. The Commission's *Sixteenth Mobile Competition Report* estimated that "U.S. mobile data traffic [had] increased 62 percent from 2011 to 2012, and that mobile data traffic in 2012 was approximately 73 times the volume of mobile traffic in 2007."<sup>6</sup> The *Sixteenth Report* further noted that in 2012 the average U.S. mobile connection consumed an estimated 568 MB of data per month.<sup>7</sup>

---

<sup>2</sup> *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Sixth Report, 16 FCC Rcd 13350, at 28-29 (2001) (*Sixth Mobile Competition Report*); *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Fifteenth Report, 26 FCC Rcd 9964, ¶ 81(2011) (*Fifteenth Mobile Competition Report*). In addition, since 2003, all nationwide carriers have offered some version of a family plan. *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Tenth Report, 20 FCC Rcd 15908, ¶ 98 (2005); *Fifteenth Mobile Competition Report* ¶ 81 (2011).

<sup>3</sup> *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Sixteenth Report at 23 (2012) (*Sixteenth Mobile Competition Report*).

<sup>4</sup> Sean Patterson, *U.S. Smartphone Penetration Hits 64%, Young People Lead the Way* (Sept. 19, 2013) (<http://www.webpronews.com/u-s-smartphone-penetration-hits-64-young-people-lead-the-way-2013-09>). In addition, according to Nielsen, 80% of Americans who had recently bought a mobile phone (within the past three months) bought a smartphone. *Id.* Based on a separate survey, the Pew Research Center's Internet & American Life Project found that, for the period April 17, 2013 through May 19, 2013, 56% of mobile phone users surveyed reported that they used a smartphone. This was up from 35% of mobile phone users that were surveyed between April 26, 2001 and May 22, 2011. (<http://www.pewinternet.org/2013/06/05/smartphone-ownership-2013/>).

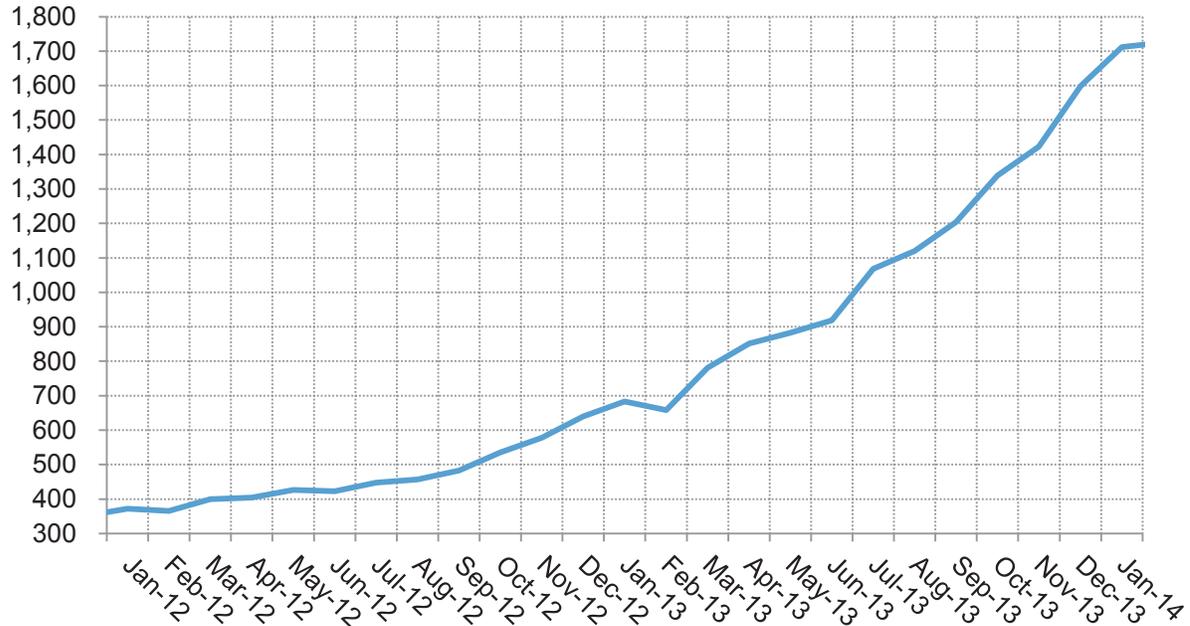
<sup>5</sup> Declaration of Dirk Mosa, May 22, 2014 ("Mosa Declaration") ¶ 4.

<sup>6</sup> *Sixteenth Mobile Competition Report*, *supra* note 3, at 175.

<sup>7</sup> *Id.*

- (28) Since release of that report, average subscriber data use appears to have continued to grow. According to T-Mobile’s internal data displayed in Figure 1, the average usage per subscriber per month was about 1,700 MB in January 2014, about 2.5 times the average usage in January 2013.

**Figure 1. T-Mobile subscribers’ average data use, MB per month**



Source: T-Mobile.

- (29) With these trends, mobile wireless consumers have come to expect to be able to use their devices for mobile data service wherever they might be. As the Commission recognized in its *2011 Data Roaming Order*,

[a]s data services increasingly become the focus of the mobile wireless services, consumers increasingly expect their providers to offer competitive broadband data services, and the availability of data roaming arrangements can be critical to providers remaining competitive in the mobile services marketplace. We agree that the availability of roaming capabilities is and will continue to be a critical component to enable consumers to have a competitive choice of facilities-based providers offering nationwide access to commercial mobile data services.<sup>8</sup>

- (30) In the *2011 Data Roaming Order*, the Commission recognized that it was unlikely that any carrier would find it feasible to deploy a truly ubiquitous national network<sup>9</sup> and that roaming therefore

<sup>8</sup> *Data Roaming Order*, *supra* note 1, 26 FCC Rcd at 5419, ¶ 15.

<sup>9</sup> *Id.* (“[T]here may be areas where building another network may be economically infeasible or unrealistic.”); *see also id.* ¶ 34 (noting that requiring host providers to offer data roaming on commercially reasonable terms and conditions “will

would remain necessary for offering national mobile data services. As the Commission observed, “providers with local or regional service areas need roaming arrangements to offer nationwide coverage.”<sup>10</sup> And even nationwide providers continue to need roaming. Addressing the continuing need for voice roaming in its *2010 Roaming Reconsideration Order*, the Commission explained:

[B]uilding another network may be economically infeasible or unrealistic in some geographic portions of licensed service areas. We find that, in some areas of the country with very low population densities, it is simply uneconomic for several carriers to build out. Further, we note that it may be significantly more costly to build out when the carrier only has access to higher spectrum frequencies where propagation characteristics are less advantageous. Indeed, every carrier, including every nationwide carrier holding licenses that cover the entire country, relies on roaming to some extent to fill in gaps in its network coverage. In particular, the record reflects that for many CMRS carriers, there are areas within their licensed service areas where there is insufficient demand to support construction in those areas by another carrier.<sup>11</sup>

- (31) Furthermore, even in areas that a carrier has built out, there can be holes in coverage for a variety of reasons, such as zoning limitations on the placement of towers.<sup>12</sup> So in some instances in order to offer its customers reliable complete coverage, a carrier may require roaming even in its own territory.
- (32) Given consumers’ desire for ubiquitous mobile data service and the economic infeasibility that all mobile data providers will be able to construct ubiquitous nationwide networks, carriers will continue to need to rely on wholesale roaming to satisfy consumer demands. This is particularly true for carriers other than AT&T and Verizon Wireless, and, as the Commission staff found in the context of the proposed merger of AT&T and T-Mobile, competition from carriers other than AT&T and Verizon is essential to preserve the competitive structure and performance of the industry.<sup>13</sup>

---

provide the requesting provider with sufficient incentive to invest in facilities, except where doing so would be economically infeasible or unrealistic, regardless of the availability of roaming agreements.”) ; *USF/ICC Transformation Order* ¶ 295 (“[T]here remain many areas of the country where people live, work, and travel that lack any mobile voice coverage, and still larger geographic areas that lack current generation mobile broadband coverage.”)

<sup>10</sup> *Data Roaming Order*, *supra* note 1, 26 FCC Rcd at 5419, ¶ 15.

<sup>11</sup> 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, 25 FCC Rcd 4181, at 4192, ¶ 23 (2010) (*2010 Roaming Reconsideration Order*).

<sup>12</sup> Mosa Declaration ¶ 5.

<sup>13</sup> *Application of AT&T Inc. and Deutsche Telekom AG for Consent to Assign or Transfer Control of Licenses or Authorizations*, WT Docket No. 11-65, Staff Analysis and Findings 11-15, 42-43 (rel. Nov. 29, 2011) (*AT&T/T-Mobile Staff Report*).

- (33) Indeed, wholesale data roaming is likely to become a more critical input over time as more mobile consumers adopt smartphones and increasingly rely on mobile data, as reflected in part in the rapid increases in the amount of data traffic they consume. And excessive prices for wholesale data roaming, especially if anticompetitively motivated, would likely correspondingly become an increasing hindrance to effective competition.

## IV. Market Power in Data Roaming Markets

### IV.A. Sources of Market Power

#### IV.A.1. Geographic areas with only one facilities-based provider

- (34) In certain areas, demand is insufficient to support the deployment of even a single network, as the Commission recognized when it established the Mobility Phase I and Mobility Phase II broadband universal service support mechanisms to provide federal support so that a single wireless carrier could deploy a mobile wireless broadband network in un-served areas.<sup>14</sup> That there are numerous un-served areas suggests that there are likely numerous other areas where it is, and will remain, economically feasible for only one carrier to deploy a network.<sup>15</sup>

#### IV.A.2. Network compatibility issues

- (35) For 2G and 3G services in the United States, mobile wireless carriers (and, in particular, the two largest and most built-out carriers) employ two incompatible 2G and 3G technologies (GSM-based technologies v. CDMA-based technologies). While multi-mode handsets potentially could roam on GSM and CDMA technologies, such handsets would raise costs and have less appealing physical characteristics such as size and battery performance.<sup>16</sup> As a result, a carrier may have only one choice of roaming provider in an area even where there are two or more built-out, but incompatible, networks.
- (36) These technological incompatibilities will not vanish with the deployment of LTE. First, today carriers deploying LTE still require their customers to use 2G or 3G when making voice calls, so the roaming provider's network must use a 2G/3G technology that is compatible with the roaming customer's handset.<sup>17</sup> Second, while VoLTE technology may enable voice calls on LTE networks sometime in the future, LTE handsets will continue to have to revert to 2G/3G technology for voice calls and data sessions where the LTE signal is too weak.<sup>18</sup> Third, because many customers

---

<sup>14</sup> *Connect America Fund et al.*, WC Docket No. 10-90 et al., Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, 17771-73, ¶¶ 295-99; (2011) (*USF/ICC Transformation Order*), *pets. for review pending sub nom. In re: FCC 11-161*, No. 11-9900 (10th Cir. filed Dec. 18, 2011).

<sup>15</sup> According to the *Sixteenth Wireless Competition Report*, as of October 2012, over 48% of total U.S. square miles had either no wireless broadband coverage or only one wireless broadband provider. This was probably an underestimate at that time, because the Mosaic data treat a census block as completely served if there is coverage anywhere within the census block. See *Sixteenth Mobile Competition Report*, *supra* note (3), at Table 9.

<sup>16</sup> Mosa Declaration ¶ 14.

<sup>17</sup> *Id.* ¶ 22.

<sup>18</sup> *Id.*

are slow to adopt the most modern handsets, carriers will need a roaming partner that continues to provide the compatible last-generation technology, so that its customers who still have legacy phones can roam outside their carrier's facilities-based service territory.<sup>19</sup> Finally, it is not clear whether technological incompatibilities may reappear when fifth (or later) generation wireless technology is deployed.

- (37) Thus, there remain, and will continue to remain, geographic pockets of monopoly in the provision of data roaming despite generally more competitive retail conditions in mobile wireless markets. These pockets of monopoly, and additional pockets of insufficient competition, are likely to give some carriers market power in supplying wholesale data roaming services to a requesting carrier. As explained below, exercise of market power in data roaming markets has significant potential to harm competition leading to higher prices and/or reduced service quality, to the detriment of consumers.

#### **IV.B. Competitive Effects from Exercise of Market Power**

- (38) A provider of wholesale data roaming services that possesses market power has an incentive to exercise this market power by raising wholesale prices above what they would be in a more competitive environment.
- (39) Such a price increase need not be expressed in a high explicit price for roaming in that local area: if (for example) the carrier charges a single uniform price for roaming across both local monopoly areas and areas with more competition, the local monopoly power may instead be expressed as a higher uniform price than the carrier could charge if all areas were subject to competition. Moreover, roaming providers with market power may be able to impose ancillary volume commitments or other contract provisions that induce the roaming carrier to pay the blended price even where a more attractive roaming price may be available from another supplier of roaming. Local monopoly may find expression in varying ways, and the Commission should be alert to this variety.
- (40) It is worth stressing that there is nothing inconsistent about recognizing that even straightforward exploitation of legitimately acquired monopoly power can significantly harm efficiency and consumers, even if such exploitation is blended or blurred, while simultaneously finding that, at the retail level, mobile wireless markets are sufficiently competitive that price regulation would be unwise and counterproductive. For example, monopoly power in an input market such as roaming can readily raise costs and prices to some or all competitors above efficient levels in a reasonably competitive downstream market, whether or not it also affects downstream competition as such.

---

<sup>19</sup> *Id.*

- (41) A purchaser of roaming services at high prices may pass on some or all of the cost to its own retail customers, either as a special charge for roaming or as part of the overall price of service. Alternatively, such carriers may be induced (as T-Mobile at least actually already has been induced) to curtail roaming either through throttling or data caps or both, and T-Mobile's experience is that consumers use significantly more data when caps and throttling limitations are removed.<sup>20</sup>
- (42) An offer of data roaming on such burdensome terms that the roaming carrier predictably responds—reasonably and in good faith, not purely as a bargaining tactic—by preventing its customers from roaming at all on that provider's network would be “tantamount” to denial of roaming. It is, of course, a matter of degree, but an offer that induces the roaming carrier to impose severe throttling or highly constraining usage caps on its customers' data roaming would seem to fall into the same category as a denial of roaming.
- (43) These potential demand responses by a wholesale purchaser of roaming services harm consumers by reducing the quality of their mobile data service while roaming, raising the prices that they pay for services, or both. Curtailment of roaming may also endanger mobile wireless consumers if they lack access to their data service during an emergency.
- (44) A further concern arises when the carriers negotiating a wholesale roaming agreement compete directly for retail customers. If there would be strong upward pricing pressure (at the retail level) following a merger of the negotiating carriers, the same economic logic would suggest that they could find it in their joint interest to raise one another's costs by mutually agreeing on above-cost roaming rates, in order to induce one another to raise retail prices.<sup>21</sup>
- (45) Another competitive risk is that, rather than attempting a “collusive” mutual raising of costs,<sup>22</sup> one carrier may find it profitable to raise the other's costs by insisting on high wholesale data roaming rates and thus induce the second carrier to raise its retail prices or compromise its service quality, for instance by throttling or capping roaming for its subscribers. This is particularly likely to be profitable if (a) the second carrier is extensively dependent on the first for data roaming, and (b) the diversion ratio from the second to the first (the fraction of the second carrier's marginal subscribers whose second choice would be the first carrier) is substantial.

---

<sup>20</sup> *Id.* ¶ 25 (describing increases in the range of 10x-20x).

<sup>21</sup> For a description of this economic logic, see JEAN-JACQUES LAFFONT & JEAN TIROLE, COMPETITION IN TELECOMMUNICATIONS Sec. 5.4 (2000). Note that the “endogenous marginal cost effect” that, as they describe, complicates and can reverse this incentive in two-way terminating access problems does not apply for roaming rates: the roaming cost for each existing customer of a network does not automatically fall when the network acquires an additional customer.

<sup>22</sup> The term “collusion” is used by Laffont and Tirole. I understand this in an economic sense of softening competition, and do not understand it to imply, or to require, that the result is at or near the monopoly price, nor that the negotiating carriers have violated the Sherman Act.

- (46) Such an anticompetitive incentive would appear particularly likely when AT&T is negotiating a wholesale data roaming agreement with T-Mobile, since AT&T is one of the two largest mobile wireless carriers with an estimated market share in 2012 of in excess of 30 percent<sup>23</sup> (and would thus gain significantly from raising rivals' costs), while T-Mobile is widely viewed as an industry maverick. As the Commission staff, in reviewing the proposed AT&T/T-Mobile merger, recognized, T-Mobile has "repeatedly acted as a pricing innovator over the past few years."<sup>24</sup> Among T-Mobile's innovative offerings, the Commission staff cited its introduction of HotSpot calling in 2007 and T-Mobile Hotspot @ Home in 2008, its offering of month-to-month postpaid plans in 2008, and its introduction of unlimited data plans with "soft" caps in 2010.
- (47) Since release of the *Staff Report*, T-Mobile has continued to be an aggressive and disruptive competitor. For example, T-Mobile's Simple Choice offerings, launched in 2013, provided simplified unlimited pricing without annual service contracts, and offered separate pricing for plans and devices to improve customer transparency.<sup>25</sup> T-Mobile also launched the Simple Global offering, which allows customers to utilize voice services at low cost, and data and text free of charge, while travelling in more than 100 countries. Most recently, T-Mobile enhanced Simple Choice offerings to include payment of early termination fees for customers that switch from other carriers.<sup>26</sup> That these innovative offerings have appealed to and benefitted consumers has been reflected in the fact that, in 2013, T-Mobile won 2 million additional postpaid customers and 400,000 prepaid customers.<sup>27</sup> In light of T-Mobile's success in winning customers away from other major carriers, including AT&T,<sup>28</sup> it would not be surprising if AT&T were to seek to raise T-Mobile's costs (or reduce the quality of its data service) by charging high wholesale roaming rates.

---

<sup>23</sup> *Sixteenth Mobile Competition Report*, *supra* note 3, at Table 12.

<sup>24</sup> *AT&T/T-Mobile Staff Report*, *supra* note 13, at 13 (2011).

<sup>25</sup> Mosa Declaration ¶ 3.

<sup>26</sup> *Id.*

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

<sup>28</sup> Diversion ratios were calculated but redacted in the public version of the Staff Report. Note that the point made in the text does not rely on either of these firms being the other's closest competitor, only on one being competitively significant for the other. A recent example of strong direct competition between T-Mobile and AT&T is AT&T's recent \$450 offer directed specifically at T-Mobile's customers (AT&T press release January 3, 2014, available at <http://www.att.com/gen/press-room?pid=25181&cdvn=news&newsarticleid=37365&mapcode>).

## V. The 2011 Data Roaming Order

- (48) In April 2011, the Commission released a Second Report and Order in the *Roaming Obligations Docket*.<sup>29</sup> That order required CMRS providers and certain other providers of mobile data services to offer data roaming arrangements on “commercially reasonable terms and conditions,” subject to specified limitations.<sup>30</sup> In the order, the Commission identified a number of goals that it sought to achieve by means of this data roaming requirement. These included: (1) allowing consumers to have seamless data coverage nationwide;<sup>31</sup> (2) enabling consumers to have a competitive choice of facilities-based providers offering nationwide access to data services;<sup>32</sup> (3) allowing providers with local or regional service areas to offer nationwide coverage;<sup>33</sup> (4) encouraging investment by local and regional providers by ensuring that they will be able to offer competitive service options “through a combination of local or regional facilities-based service and roaming arrangements;<sup>34</sup> (5) creating additional incentives for entry by “allowing network providers without a presence in an area a competitive level of local coverage during the early period of investment and buildout;<sup>35</sup> and (6) providing incentives for “those providers to invest and deploy advanced data networks, and avoid potential disincentives for those providers to invest.”<sup>36</sup>
- (49) While recognizing the importance to consumers of having nationwide data service and the need for carriers to have access to wholesale data roaming if they are to offer ubiquitous, nationwide mobile data services, the Commission rejected proposals to regulate wholesale data roaming rates. Specifically, the Commission stated that it was adopting a “general requirement of commercial reasonableness for all roaming terms and conditions, including rates . . . rather than a more specific prescriptive regulation of rates requested by some commenters.”<sup>37</sup>

---

<sup>29</sup> *Data Roaming Order*, *supra* note 1, 26 FCC Rcd 5411. In 2007, the Commission had clarified that Commercial Mobile Radio Service (CMRS) carriers had an obligation to provide automatic roaming services for interconnected voice service, push-to-talk service and text-messaging service, to other carriers upon reasonable request on just, reasonable and non-discriminatory terms pursuant to Sections 201 and 202 of the Communications Act. *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, WT Docket 05-265, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 15817, 15818 (2007) (“*2007 Roaming Order*”). Then, in 2010, in an order on reconsideration, the Commission eliminated the “home roaming exclusion.” *2010 Roaming Reconsideration Order*, *supra* note 11, 25 FCC Rcd at 4190.

<sup>30</sup> *Data Roaming Order*, *supra* note 1 at 5418, ¶ 13.

<sup>31</sup> *Id.* at 5415, ¶ 9.

<sup>32</sup> *Id.* at 5419, ¶ 15.

<sup>33</sup> *Id.*

<sup>34</sup> *Id.* at 5419-20, ¶ 16-17.

<sup>35</sup> *Id.* at 5421, ¶ 18.

<sup>36</sup> *Id.* at 5422, ¶ 21.

<sup>37</sup> *Id.* at 5423, ¶ 21.

(50) In addition, the Commission adopted four limitations to a carrier's duty to offer data roaming arrangements on commercially reasonable terms and conditions. These limitations were:

(1) providers may negotiate the terms of their roaming arrangements on an individualized basis; (2) it is reasonable for a provider not to offer a data roaming arrangement to a requesting provider that is not technologically compatible; (3) it is reasonable for a provider not to offer a data roaming arrangement where it is not technically feasible to provide roaming for the particular data service for which roaming is requested and any changes to the host provider's network necessary to accommodate roaming for such data service are not economically reasonable; and (4) it is reasonable for a provider to condition the effectiveness of a data roaming arrangement on the requesting provider's provision of mobile data service to its own subscribers using a generation of wireless technology comparable to the technology on which the requesting provider seeks to roam.<sup>38</sup>

(51) The Commission stated that, should a dispute arise during the negotiation of a data roaming agreement, parties could file either a formal or informal complaint or a petition for declaratory ruling.<sup>39</sup> The Commission explained that, with respect to remedies in complaint proceedings, damages would be excluded as a remedy with respect to data roaming claims, but not for voice roaming claims.<sup>40</sup>

(52) In assessing whether a particular data roaming offer contains commercially reasonable terms and conditions or whether the provider's conduct during negotiations is commercially reasonable, the Commission stated that it would address such disputes "on a case-by- case basis, taking into consideration the totality of the circumstances."<sup>41</sup> It went on to state:

[P]roviders can negotiate different terms and conditions, including prices, with different parties, where differences in terms and conditions reasonably reflect actual differences in particular cases. Further, providers of commercial mobile data services can negotiate commercially reasonable measures to safeguard quality of service against network congestion that may result from data roaming traffic or to prevent harm to their networks. Conduct that unreasonably restrains trade, however, is not commercially reasonable.<sup>42</sup>

---

<sup>38</sup> *Id.* at 5432-33, ¶ 43 (footnote omitted).

<sup>39</sup> *Id.* at 5449, ¶ 75.

<sup>40</sup> *Id.*

<sup>41</sup> *Id.* at 5452, ¶ 85 (footnote omitted).

<sup>42</sup> *Id.* (footnote omitted).

(53) Finally, the Commission listed seventeen factors that it might consider in determining whether particular terms and conditions were commercially reasonable.<sup>43</sup> These factors were as follows:

- “whether the host provider has responded to the request for negotiation, whether it has engaged in a persistent pattern of stonewalling behavior, and the length of time since the initial request;”
- “whether the terms and conditions offered by the host provider are so unreasonable as to be tantamount to a refusal to offer a data roaming arrangement;”
- “whether the parties have any roaming arrangements with each other, including roaming for interconnected services such as voice, and the terms of such arrangements;”
- “whether the providers involved have had previous data roaming arrangements with similar terms;”
- “the level of competitive harm in a given market and the benefits to consumers;”
- “the extent and nature of providers’ build-out;”
- “significant economic factors, such as whether building another network in the geographic area may be economically infeasible or unrealistic, and the impact of any “head-start” advantages;”
- “whether the requesting provider is seeking data roaming for an area where it is already providing facilities-based service;”
- “the impact of the terms and conditions on the incentives for either provider to invest in facilities and coverage, services, and service quality;”
- “whether there are other options for securing a data roaming arrangement in the areas subject to negotiations and whether alternative data roaming partners are available;”
- “events or circumstances beyond either provider’s control that impact either the provision of data roaming or the need for data roaming in the proposed area(s) of coverage;”
- “the propagation characteristics of the spectrum licensed to the providers;”
- “whether a host provider’s decision not to offer a data roaming arrangement is reasonably based on the fact that the providers are not technologically compatible;”
- “whether a host provider’s decision not to enter into a roaming arrangement is reasonably based on the fact that roaming is not technically feasible for the service for which it is requested;”
- “whether a host provider’s decision not to enter into a roaming arrangement is reasonably based on the fact that changes to the host network necessary to accommodate the request are not economically reasonable;”

---

<sup>43</sup> *Id.* at 5452-53, ¶ 86.

- “whether a host provider’s decision not to make a roaming arrangement effective was reasonably based on the fact that the requesting provider’s provision of mobile data service to its own subscribers has not been done with a generation of wireless technology comparable to the technology on which the requesting provider seeks to roam;” and
  - “other special or extenuating circumstances.”
- (54) The Commission is not the only regulatory body to recognize the dangers of high roaming rates. In 2012, the European Parliament and the Council of the European Union adopted a regulation governing mobile wireless roaming.<sup>44</sup> The European Parliament and the Council noted that high voice, SMS and data roaming prices can harm consumers and deter them from using mobile services when travelling outside their member state.<sup>45</sup> The EU adopted a more prescriptive approach to addressing this problem than the Commission, however.
- (55) Concluding that competition among facilities-based operators could not be relied upon to discipline wholesale and retail prices,<sup>46</sup> the EU introduced “structural measures,” requiring facilities-based operators to unbundle retail international roaming services from each of their tariff plans, so that the end-users could switch to other carriers for those international roaming services.<sup>47</sup>
- (56) Finding that it would take time for the structural measure to have an effect, the EU decided that, for a certain period of time, “maximum wholesale charges for voice, SMS and data roaming services as well as safeguard caps for those services at the retail level should be maintained on a temporary basis at an appropriate level to ensure that the existing consumer benefits are preserved during a transitional period of implementation of such structural measures.”<sup>48</sup> Thus, in addition to the structural measures, the EU adopted a glide path that capped roaming charges. Since July 1, 2013, the “safeguard cap” for wholesale data roaming has been € 0.15 per MB. Beginning on July 1, 2014, the cap will drop to € 0.05 per MB, approximately equal to seven US cents per MB at today’s exchange rate.<sup>49</sup>

---

<sup>44</sup> Regulation (EU) No. 531/2012 of the European Parliament and of the Council of 13 June 2012 on Roaming on Public Mobile Communications Networks within the Union.

<sup>45</sup> *Id.* ¶¶ 4, 34.

<sup>46</sup> *Id.* ¶¶ 22-23.

<sup>47</sup> *Id.*, Article 4.

<sup>48</sup> *Id.* ¶ 39.

<sup>49</sup> *Id.*, Article 12.

## VI. Some Benchmarks for Wholesale Roaming Rates

- (57) In this section I discuss several benchmarks that the Commission should consider in drafting prospective guidance for the industry and also in evaluating whether a proposed wholesale data roaming rate is “high” in a sense relevant to determining whether it is commercially unreasonable. Because no benchmark is perfect, the Commission should apply the proposed benchmarks cautiously and in conjunction with one another and with an analysis of competitive risks.
- (58) I offer some quantifications of the benchmarks that are based only on data available to me from public sources and from T-Mobile, and (as to my use of data supplied by T-Mobile) are also constrained by confidentiality restrictions.

### VI.A. Retail Data Prices

- (59) A natural benchmark for wholesale mobile data pricing is retail mobile data pricing. As with some of the other benchmarks discussed below, the product is basically the same; it is being sold to different customers.
- (60) Charging different prices to different customers (“price discrimination”) is normal and not inherently problematic in markets such as mobile communications. This is why I do not suggest that strong conclusions can be drawn based on this one benchmark. However, that does not mean that it is uninformative. In light of the reasons to fear anticompetitive pricing in these markets for cooperation among rivals, and in combination with other benchmarks, excessive price discrimination in the form of a *much* higher price charged to rivals than charged to customers should sharpen concerns.
- (61) Retail pricing of mobile services, including for data, is somewhat complex and nonlinear, so some analysis is required in order to translate retail offers into per-MB retail prices for mobile data. In keeping with my position that these benchmarks should be used cautiously, I calculate a high-end measure of retail pricing of data services so as to minimize “false positives.”
- (62) I describe and report such measures of retail prices for data usage for the four nationwide carriers—AT&T, Sprint, T-Mobile, and Verizon—as of February 23, 2014. My calculation indicates that the average domestic wholesale data roaming price T-Mobile pays (see below) is *several times larger* than the corresponding average retail data prices that end-users enjoy.
- (63) To put this finding in perspective, I next examine available data for wholesale roaming rates and average retail revenues for mobile voice services, and find that wholesale roaming prices for voice

were *lower* than comparable retail prices for voice even before the Commission imposed common carrier obligations for voice in 2007.

### VI.A.1. Analysis of Retail Data Prices

- (64) I examined retail plans advertised by AT&T, Sprint, T-Mobile and Verizon, as posted on their respective websites on February 23, 2014. The retail plans that I compared were: *AT&T Mobile Share<sup>®</sup> Value Plans*; *Sprint Unlimited Guarantee<sup>SM</sup> plans*;<sup>50</sup> T-Mobile's *Simple Choice* plans, and Verizon's *MORE Everything* plans. In order to ensure comparability across carriers, I examined monthly charges for retail bundles appropriate for a single device.
- (65) These retail plans are not data-only. All of the plans considered here include unlimited domestic voice minutes and unlimited domestic SMS messaging.<sup>51</sup> Consistent with the analytical goal of calculating an upper-end estimate for retail pricing of mobile data, I calculate as if those other products had no value: that is, I allocate the entire plan price to data.
- (66) Table 1 summarizes key terms of the plans I examined: the fixed monthly charge, the MB included in the retail bundle, and the overage charges that apply if the subscriber exceeds her monthly data allowance. In most cases, the overage charge is \$15 per GB, and this is "lumpy" (i.e., the user is charged \$15 for each additional GB of data or part thereof). Two of T-Mobile's plans include unlimited data but with throttled data speeds above the indicated "included" MB.

---

<sup>50</sup> One should not necessarily interpret "unlimited" literally; the Sprint plan comes with fine print that limits certain uses, notably use as a hotspot and off-network roaming. These caveats do not seriously undermine the inferences made in the text about the general level of retail pricing for mobile data.

<sup>51</sup> The T-Mobile plans I consider also include international roaming services. It was not clear from the websites consulted which, if any, plans also included a handset subsidy; by attributing the full price to data, I implicitly also attributed any amounts compensating for such subsidy to data.

**Table 1. Select retail plans of major US operators**

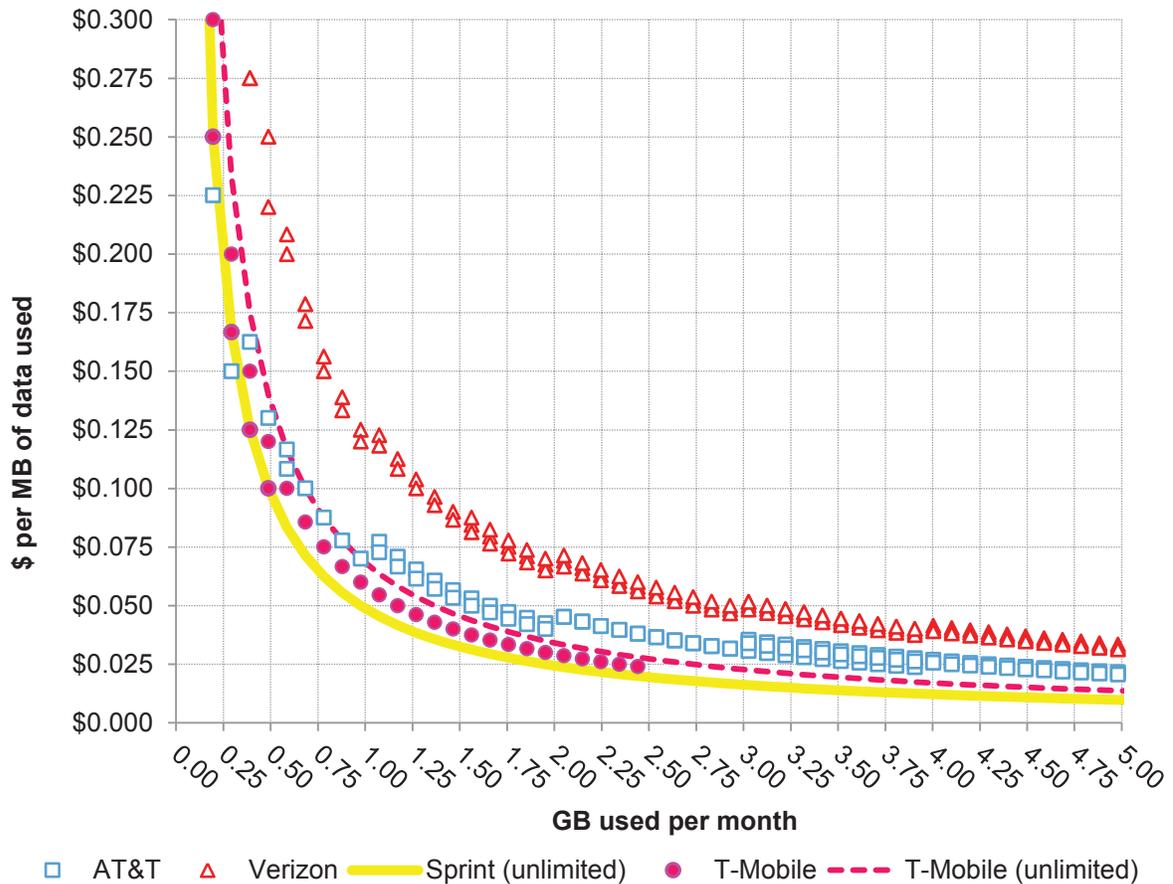
	Retail bundle price per month	Data MB included	Data overage charge
ATT, plan 1	\$45	300	\$20 for 300 MB
ATT, plan 2	\$70	1024	\$15 for 1 GB
ATT, plan 3	\$80	2048	\$15 for 1 GB
ATT, plan 4	\$95	4096	\$15 for 1 GB
ATT, plan 5	\$105	6144	\$15 for 1 GB
Verizon, plan 1	\$95	250	\$15 for 200 MB
Verizon, plan 2	\$110	500	\$15 for 500 MB
Verizon, plan 3	\$120	1024	\$15 for 1 GB
Verizon, plan 4	\$130	2048	\$15 for 1 GB
Verizon, plan 5	\$140	3072	\$15 for 1 GB
Verizon, plan 6	\$150	4096	\$15 for 1 GB
Verizon, plan 7	\$160	6144	\$15 for 1 GB
Sprint, unlimited	\$50	Unlimited	NA
T-Mobile, plan 1	\$50	500	throttled data over 500 MB
T-Mobile, plan 2	\$60	2560	throttled data over 2.5 GB
T-Mobile, unlimited	\$70	Unlimited	NA

Source: Bates White calculations from advertised retail bundles as of February 23, 2014.

- (67) The price that a user pays per MB of data usage depends both on his data usage and on the plan he chose. For various usage levels, Figure 2 reports the sum of retail prices plus applicable data overage charges for each of the plans in Table 1 on a per MB basis. This calculation allocates the *entire* monthly fee (covering voice, SMS and data) and overage charges entirely to the data actually used. For each plan, the Figure displays average retail data prices over a range of data usage levels running from half the included data allowance to twice the allowance at 100 MB increments, except that the price per used MB is calculated over the entire displayed range for the Sprint and T-Mobile unlimited plans. The Figure’s overall displayed usage range runs from zero up to 5 GB per month, or roughly three times the 1,700 MB per month that T-Mobile reports as its subscribers’ average usage.
- (68) Figure 2 illustrates that my calculated high estimate of average price per MB tends to decline as data usage increases, and that for average or above-average data users, it is largely below 10 cents per MB. More specifically, Figure 2 shows that retail customers using 1 GB per month or more can obtain data services at a cost no greater than about 12 cents per MB, even from the highest-

priced carrier (Verizon), with most carriers offering service at that level at a price less than 8 cents per MB.<sup>52</sup>

**Figure 2. Advertised domestic prices for data services sold in retail bundles, February 2014**



Source: Bates White calculations from advertised retail bundles as of February 23, 2014.

- (69) Because retail customers cannot perfectly predict their usage and may choose a less than optimal plan, it would be optimistic to take the lower envelope of each carrier’s (or the industry’s) plans in Figure 2. To address this, Table 2 displays the *maximum* cost per MB (monthly fee plus data overage charge) to a retail customer who uses 1,700 MB per month—approximately the current average usage of T-Mobile’s customers (see Figure 1)—assuming a reasonable but not optimal choice of plan. Specifically, the maximum is calculated separately for each carrier, considering only (a) plans whose included data usage is at least half of the assumed usage level (i.e.,  $1,700/2 = 850$  MB per month) but no more than twice the assumed usage level (i.e.,  $1,700*2 = 3,400$  MB per

<sup>52</sup> Because overage charges are “lumpy,” as described, this calculation depends on the choice of 100MB increment. The fact that a consumer may pay more on average if he barely over-uses his data allowance is not very relevant to the use of retail rates as a benchmark for wholesale rates.

month), and (b) plans that include unlimited data. As Table 2 displays, to a customer using 1,700 MB a month, even the most expensive carrier (Verizon) charges only about eight cents per MB, and the other carriers, including AT&T, charge no more than five cents per MB even on their most expensive of the plans considered. Again, recall that these calculations attribute the entire package price to mobile data.

**Table 2. Maximum retail costs per MB for a customer who uses 1,700 MB per month**

Carrier	Retail cost per MB used
AT&T	\$0.050
Verizon	\$0.082
Sprint	\$0.029
T-Mobile	\$0.041

Source: Bates White calculations from advertised retail bundles as of February 23, 2014.

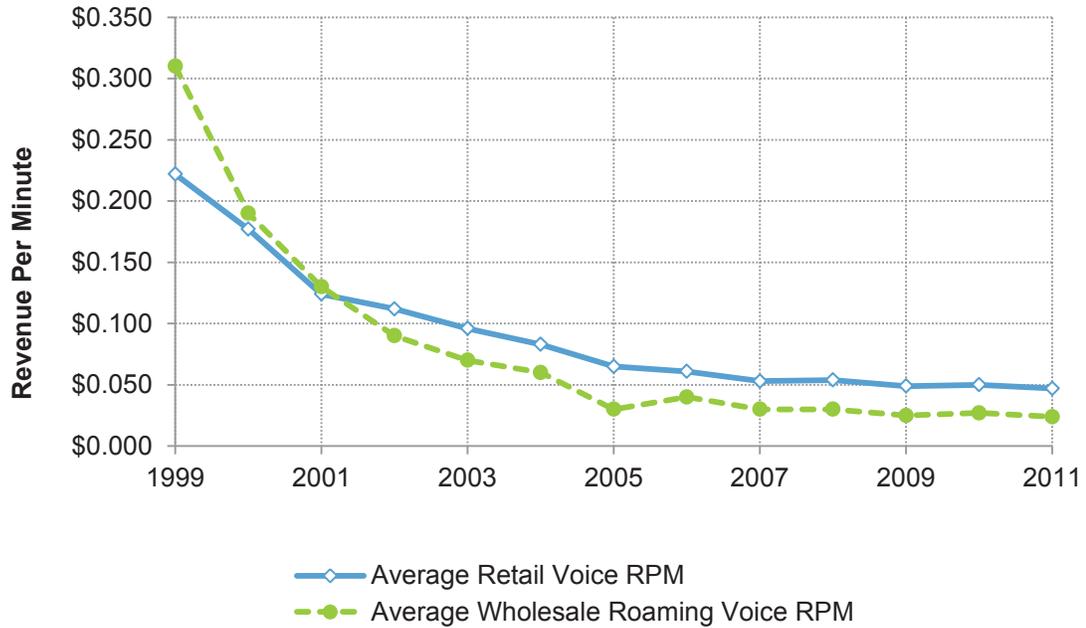
- (70) As will be seen below, these prices are a fraction of the average domestic wholesale price for data roaming services that T-Mobile paid to other operators in 2013.
- (71) Table 6 below shows that this average wholesale roaming rate was about 30 cents per MB, a figure 3.6 times the retail rate for Verizon, and 6 times the retail rate for AT&T in Table 2.

### VI.A.2. Average Revenue per Minute and Average Wholesale Roaming Rates for Mobile Voice Services

- (72) To help put the comparison of wholesale data roaming rates to retail pricing of data in perspective, I examined a similar comparison for mobile voice services. In the Commission’s *Sixteenth Mobile Competition Report*, the Commission reports both the mobile wireless voice revenue per minute and average roaming revenue per minute.<sup>53</sup> These are reproduced in Figure 3.

<sup>53</sup> *Sixteenth Mobile Competition Report*, *supra* note 3, at Table 38 (retail Revenue Per Minute, RPM) and Table 41 (roaming RPM). The FCC calculates *retail RPM* as follows: “Voice RPM is calculated by dividing an estimate of average monthly revenue per subscriber (often referred to as average revenue per unit, or “ARPU”) for voice services by average monthly minutes of use (MOU) per subscriber for the equivalent period, obtaining an estimate of revenue per minute.” *Id.* ¶ 267. “To generate Voice RPM, we subtracted wireless data revenues, derived from CTIA’s survey, from ALMB [Average Local Monthly Bill] (we assumed this was the same percentage of wireless data revenues in CTIA’s measure of total service revenues), then we divided that number by CTIA’s average MOUs per month. [...] The average monthly minutes of use figure reflects voice minutes used and captured as network traffic, rather than minutes paid for as part of a monthly service package.” *Id.* n.828. The FCC calculates *retail RPM* as follows: “Inter-carrier roaming rates are set by contractual agreements that are confidential, and particular rates vary across agreements depending on the terms negotiated by service providers. However, CTIA data on roaming revenues and roaming minutes of use (MOUs) can be used to derive a metric for average voice roaming revenue per minute. CTIA reports “outcollect” roaming revenues, which are the revenues generated by roamers inside the providers’ home coverage areas. We note that CTIA’s roaming revenue estimates include revenue from both voice and data roaming services, while the roaming MOU data include traffic from only voice roaming services. [...] We derive an average roaming RPM by dividing reported annual roaming revenues by reported annual roaming MOUs. This aggregate proxy for inter-carrier roaming rates is

**Figure 3. Domestic Voice Revenue Per Minute, retail and wholesale roaming**



Source: FCC.

- (73) As is clear from Figure 2, wholesale voice roaming prices have been below retail average revenue per minute consistently since 2002. In particular this was true even before the Commission imposed common carrier obligations on CMRS providers of voice roaming services in 2007. As discussed below,<sup>54</sup> the same is not true for data roaming. Average wholesale data roaming rates are very substantially higher than current retail rates.

## VI.B. Roaming agreements with foreign carriers

### VI.B.1. Prices T-Mobile charges foreign carriers for data roaming in the US

- (74) A second benchmark for commercially reasonable rates for domestic wholesale roaming can be developed from rates that T-Mobile has negotiated with non-affiliated<sup>55</sup> foreign carriers that apply when the foreign carriers' customers roam in the United States. This benchmark is attractive for

---

likely to somewhat overstate average revenue per minute of voice roaming service because the numerator includes revenue from both voice and data services, while the denominator includes only voice roaming MOUs. Without separate data for voice and data roaming revenue and traffic, we do not know the degree to which this estimate of average voice roaming RPM is overstated." *Id.* ¶¶ 273-274.

<sup>54</sup> See § VI.D *infra*.

<sup>55</sup> All calculations in this section exclude prices charged to Deutsche Telekom in Germany (T-Mobile USA's parent) and its subsidiaries (T-Mobile companies in Austria, Croatia, Czech Republic, Hungary, Macedonia, Montenegro, Netherlands and Slovakia).

two reasons. First, foreign carriers (who predominantly use GSM technology) often have a choice of at least two U.S. roaming partners—AT&T and T-Mobile—and possibly can roam with regional carriers in some regions. Second, because (with some caveats in the case of international alliances) foreign carriers do not compete against domestic carriers for customers in the United States, domestic carriers have little incentive to raise costs for these carriers in order to limit retail competition.<sup>56</sup>

- (75) In 2013, there were 450 international operators<sup>57</sup> that purchased wholesale US data roaming traffic from T-Mobile. Of these, 298 purchased US roaming through discount agreements negotiated with T-Mobile, usually on a reciprocal basis.<sup>58</sup> Agreements are typically for one year or longer. Negotiated rates account for more than 98% of the total data roaming volume that T-Mobile supplies to foreign carriers.
- (76) The volume weighted distribution of wholesale prices that T-Mobile charges international operators for data roaming in the US through negotiated discount agreements is summarized in Table 3 and plotted in Figure 4.<sup>59</sup> For 2014, here and below, I have reported forecasts supplied to me by T-Mobile. In his Declaration, Mr. Mosa explains that these are T-Mobile's internal forecasts prepared for the purpose of business decisions, and that in the past, similar forecasts prepared in the same manner have turned out to be generally accurate within 5 percent.<sup>60</sup>

---

<sup>56</sup> As noted above, it is my understanding that most data roaming agreements between carriers cover roaming traffic in both directions.

<sup>57</sup> In computing the number of international operators purchasing US data roaming, I counted the unique country-specific roaming partner billing codes. A given international parent company operating in multiple countries (for instance, Vodafone) thus accounts for more than one international operator. There are also rare cases where a given parent company has multiple billing codes within a certain country — for instance, Everything Everywhere in the United Kingdom has two, and thus accounts for two of the international operators reported.

<sup>58</sup> See Mosa Declaration ¶ 28. The remaining 152 operators operate under the standard Inter-Operator Tariffs (IOTs), which T-Mobile offers to any member of the GSM Association. The majority of foreign carriers that operate under IOT rates have data roaming volumes on T-Mobile's network that are very small and do not justify negotiating a roaming discount agreement. *Id.*

<sup>59</sup> Some of the actual and forecasted average rates used in this calculation reflect the fact that the foreign carrier committed to purchase a larger volume of roaming services than it actually used or is expected to use. In some cases the foreign carrier has made reciprocal agreements with T-Mobile for unlimited roaming for a fixed fee. See Mosa Declaration ¶ 29.

<sup>60</sup> Mosa Declaration ¶¶ 7-8.

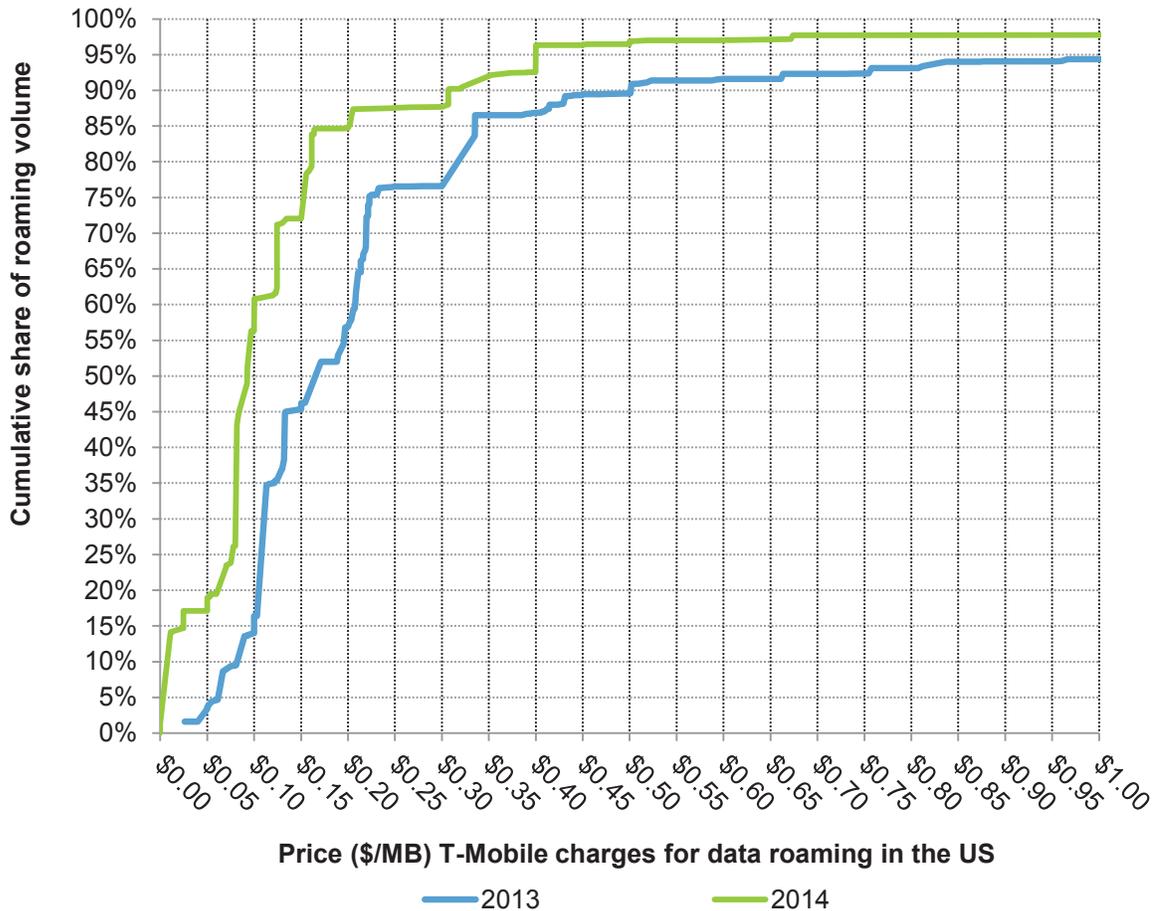
**Table 3. Data roaming prices T-Mobile charges international operators in the US, 2013, and T-Mobile's projections for 2014**

\$ per MB	Average	Median	75% Percentile	80% Percentile	85% Percentile	90% Percentile	95% Percentile
2013	\$0.343	\$0.171	\$0.223	\$0.335	\$0.335	\$0.502	\$1.150
2014*	\$0.204	\$0.093	\$0.156	\$0.161	\$0.202	\$0.307	\$0.400

\* Based on actual values through January 2014 and T-Mobile forecasts for the rest of the year.

Source: Bates White calculations based on T-Mobile data.

**Figure 4. Data roaming prices T-Mobile charges international operators in the US, 2013, and T-Mobile's projections for 2014**



Note: 2014 distribution is calculated from actual values for January 2014 and T-Mobile forecasts for the rest of 2014.

Source: Bates White calculations based on T-Mobile data.

- (77) Figure 4 highlights how T-Mobile has renegotiated its contracts with more and more international operators for 2014 to provide substantially lower data roaming rates. Several of these contracts allow the international operator to enjoy unlimited use of T-Mobile’s data network in 2014 for a fixed dollar amount under reciprocal terms, with the pro-consumer result that, at least during the contract term, marginal costs become zero.<sup>61</sup> See Table 4, which presents the distribution of average prices that T-Mobile projects it will receive based on actual usage for January 2014 and its own projections of usage for the remainder of 2014.

**Table 4. Distribution of average data roaming prices T-Mobile expects to charge international operators in the US in 2014, by type of contract**

Type of contract	Roaming Data Volume (MB mil)	Average	Median	75% Percentile	90% Percentile
Unlimited use	143.8	\$0.154	\$0.092	\$0.124	\$0.161
Other negotiated terms	23.5	\$0.509	\$0.204	\$0.400	\$0.400
<b>Total</b>	<b>167.3</b>	<b>\$0.204</b>	<b>\$0.093</b>	<b>\$0.156</b>	<b>\$0.307</b>

Note: Calculated from actual values for January 2014 and T-Mobile forecasts for the rest of 2014. The distribution is calculated from actual and projected roaming quantities at each price. I understand that with minor exceptions the contracts are in place and the forecasts concern usage. See Mosa Declaration ¶ 8.

Source: Bates White calculations based on T-Mobile data.

## VI.B.2. Prices T-Mobile pays for data roaming outside the US

- (78) The negotiated rates that T-Mobile charges non-affiliated foreign carriers for data roaming when the foreign carriers’ customers roam in the United States are part of contracts that also set the rates T-Mobile pays for data roaming services that T-Mobile purchases from these foreign carriers.
- (79) In this section, I report the average negotiated prices T-Mobile pays for international data roaming services. Of course, prices in foreign markets in part reflect conditions there, which may differ in a variety of ways from US market conditions. However, it should be relevant to understand roaming negotiations in other market settings. Moreover, these prices result from the same agreements as the prices described in VI.B.1, and are therefore helpful in understanding those agreements.
- (80) The distribution of data roaming rates that T-Mobile pays to foreign operators for roaming outside the US is summarized in Table 5. Comparison of Table 5 with Table 3 shows that in 2013 (measuring either by median price or by average price) T-Mobile paid about 4 cents per MB less for international data roaming abroad than it charged international operators for roaming in the US. Table 5 also displays T-Mobile’s forecast that it will pay an average price of 7.8 cents per MB

<sup>61</sup> Mosa Declaration ¶ 30.

in 2014—more than 12 cents less than the average it expects to charge foreign carriers, and a median price of 3 cents per MB—more than 6 cents less than the median price T-Mobile expects to charge foreign carriers.

**Table 5. Data roaming rates that T-Mobile pays to foreign operators, 2013 and projection for 2014**

\$ per MB	Average	Median	75% Percentile	80% Percentile	85% Percentile	90% Percentile	95% Percentile
2013	\$0.297	\$0.134	\$0.197	\$0.321	\$0.407	\$0.500	\$0.816
2014*	\$0.078	\$0.030	\$0.050	\$0.060	\$0.070	\$0.100	\$0.400

\* Based on actual values for January 2014 and T-Mobile forecasts for the rest of 2014.

Source: Bates White calculations based on T-Mobile data.

- (81) These differences between forecast price charged and forecast price paid in 2014 may be due in part to an asymmetrical effect of unlimited-use reciprocal contracts. I understand that T-Mobile has recently negotiated a substantial number of such contracts, and recently (late 2013) has launched a retail plan (Simple Global) that passes through those favorable (marginal) wholesale terms by allowing T-Mobile subscribers to enjoy free data roaming (and SMS) services abroad in more than 100 countries.<sup>62</sup> However, foreign carriers appear to have been slower to offer such retail plans to their customers for roaming on T-Mobile’s network. As a consequence, T-Mobile’s subscribers are expected to generate a much larger volume of traffic than their foreign counterparts and thus achieve much lower blended costs per MB under the same contractual terms.<sup>63</sup>

## VI.C. Wholesale Rates T-Mobile Charges to MVNOs

- (82) A third possible benchmark is to consider the rates that facilities-based carriers charge MVNOs for data. The T-Mobile network hosts a handful of Mobile Virtual Network Operators, to which it provides “permanent data roaming services.” Providing data services to MVNOs is similar to providing data roaming services in that the provider of the network services—in this case T-Mobile—is allowing another carrier’s customers to use its network to retrieve and deliver data. In addition, the host facilities-based networks that supply the MVNOs may be less likely to have incentives to raise rivals’ costs, because there is reason to think they do not perceive the MVNOs to be close competitors. As the Commission has pointed out, MVNOs tend to target their service

<sup>62</sup> Mosa Declaration ¶ 3. Free international data roaming under this plan is available at 2G data speeds; faster speeds are also available.

<sup>63</sup> *Id.* ¶ 31 (describing it as “multiples larger”).

offerings at specific demographic, lifestyle, and market niches,” such as consumers “who are low income, are relatively price sensitive, do not want to commit to multi-year subscription contracts, have low usage needs, or do not want to buy a bundle that contains unwanted data services.”<sup>64</sup> As a result, the MVNOs may be seen as increasing “the range of services offered by the host facilities-based provider by targeting certain market segments, including segments previously not served by the hosting facilities-based provider,” instead of directly competing against it.<sup>65</sup>

- (83) T-Mobile has provided me with certain data on the rates that it has charged in the last five years to MVNOs for mobile data. I am informed that the data cannot be reported here because they are confidential, but that it does not violate confidentiality to report that those rates have been falling over time and that actual average price per MB was below 3 cents by 2013.

## VI.D. Domestic Wholesale Data Roaming Rates

- (84) Another intuitive benchmark for evaluating the commercial reasonableness of wholesale roaming rates is to compare a proposed wholesale roaming rate to other negotiated wholesale roaming rates. Like the other benchmarks, this one should be used with caution. First, as a matter of logic, such a comparison addresses the question of whether the proposed rate is similar to those other rates. However, if some of the comparison agreements were not themselves commercially reasonable, then similarity need not imply reasonableness. Second, even if the comparison agreements are reasonable, an unreasonable demand might appear only modestly different if it involves a blended rate that covers both areas where the roaming provider holds substantial market power and areas where it faces competition from other providers of wholesale data roaming services. Third, there has been a strong downward trend in wholesale data roaming rates in recent years, so while a wholesale data roaming rate negotiated a year ago might have been commercially reasonable at that time, it may not reflect current market conditions. Finally, I understand that at least T-Mobile has recently been negotiating wholesale data roaming agreements that, for a fixed fee, provide either a large bucket of MBs or unlimited data roaming. Under these plans, the marginal cost (to the purchasing carrier) of data roaming, which is the relevant cost for such decisions as whether to limit customers’ roaming, is likely to be significantly lower than the average cost of roaming (and perhaps zero). Despite such issues, it can be informative to examine whether a proposed rate is comparable to this benchmark.
- (85) In this section, I accordingly report data on the prices that T-Mobile has been paying for domestic wholesale data roaming, and the associated volumes.

---

<sup>64</sup> See *Fifteenth Mobile Competition Report*, *supra* note 2, ¶ 32.

<sup>65</sup> *Id.* ¶ 33. See also *Sixteenth Mobile Competition Report*, *supra* note 3, ¶ 31.

- (86) Table 6 presents the average rate that T-Mobile has paid for wholesale domestic data roaming in the last six years (2008-2013), and its forecasts of the average rate it expects to pay for 2014. A monthly series of average prices is displayed in Figure 5. I note that the average domestic wholesale data roaming rate that T-Mobile paid in 2013 is 3.6 times the maximum retail rate that Verizon charges a user of 1,700 MB per month, six times the rate AT&T charges, over seven times the rate that T-Mobile charges, and over ten times Sprint's maximum rate.<sup>66</sup> Similarly the average domestic wholesale roaming rate that T-Mobile paid in 2013 is more than ten times the average rate that T-Mobile charged MVNOs during that year.

**Table 6. T-Mobile's domestic wholesale data roaming purchases, 2008-2013, and T-Mobile's forecast for 2014.**

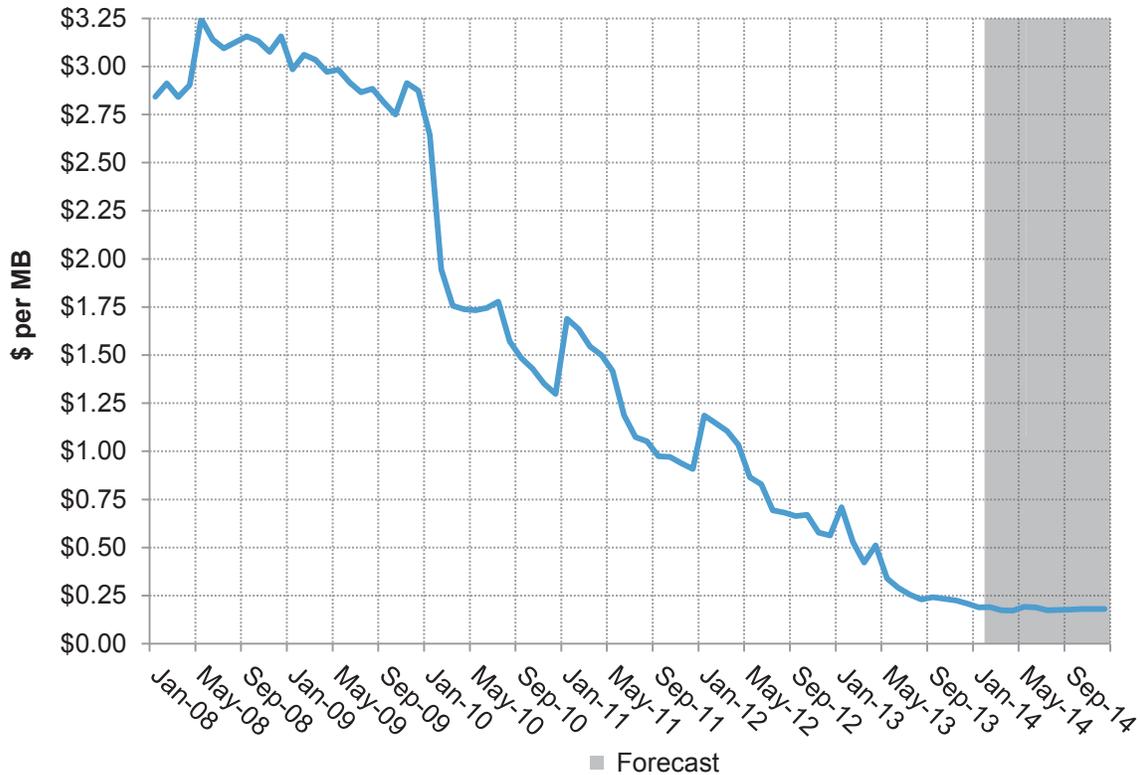
Year	Volume (MB mil)	Average Price (\$ per MB)	Roaming volume as % of T-Mobile subscribers' usage
2008	30.36	3.060	1.12%
2009	54.09	2.910	0.52%
2010	105.97	1.660	0.27%
2011	171.63	1.197	0.18%
2012	144.01	0.859	0.09%
2013	266.53	0.300	0.06%
2014*	646.54	0.181	0.16%

\* Actual values up to January 2014, forecasts for the remaining months.

Source: Bates White calculations based on T-Mobile data.

<sup>66</sup> See Table 2, *supra*.

**Figure 5. Average domestic wholesale data roaming prices T-Mobile pays, 2008-2013, and T-Mobile's projections for 2014**



Note: Actual values through January 2014, forecasts for the rest of the period.

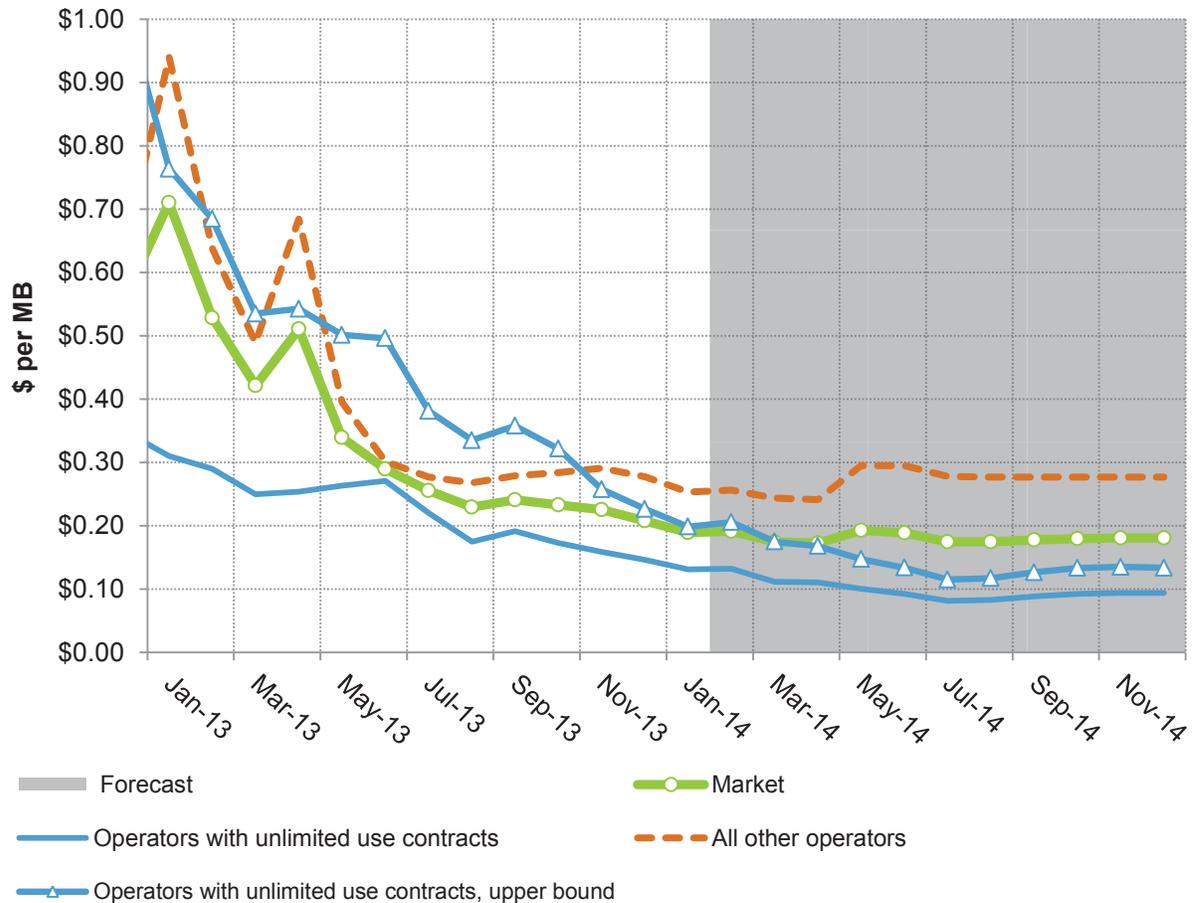
Source: Bates White calculations based on T-Mobile data.

- (87) Figure 6 shows the same data for average wholesale price that T-Mobile pays for data roaming as in Figure 5, except broken down by type of contract. The figure plots separately the average rates under roaming agreements with unlimited usage in exchange for a flat fee on one hand, and all other agreements on the other. As displayed in the figure, wholesale roaming agreements with unlimited usage have involved lower average wholesale roaming rates than have more traditional agreements.<sup>67</sup> And (at least during the contract term) the marginal cost of an additional MB under an unlimited agreement is zero, making it more likely that a carrier will, for instance, offer consumers unlimited roaming.<sup>68</sup>

<sup>67</sup> In the Figure, I show two versions of average prices for the unlimited-usage contracts: the first uses T-Mobile's own internal allocation of roaming revenues between data services and other roaming services, while the second, as an upper bound, allocates all roaming revenues to data services.

<sup>68</sup> The lower average rates may be due, at least in part, to this difference. To illustrate, suppose that in 2013 carrier A buys ten million MB from carrier B at 10 cents per MB, for a total payment of \$1 million. In 2014, carrier A agrees to pay \$1.5 million for unlimited data roaming, and allows its subscribers unlimited roaming on carrier B's network, causing their usage to expand to 30 million MB. The average price per MB paid by carrier A falls from 10 cents to 5 cents, even as—and in a sense because—the marginal price falls to zero. Notice that carrier A and its subscribers are jointly better

**Figure 6. Average domestic wholesale data roaming prices T-Mobile paid, 2013, and T-Mobile's projections for 2014, by type of contract**



Note: Actual values through January 2014, forecasts for the rest of the period.

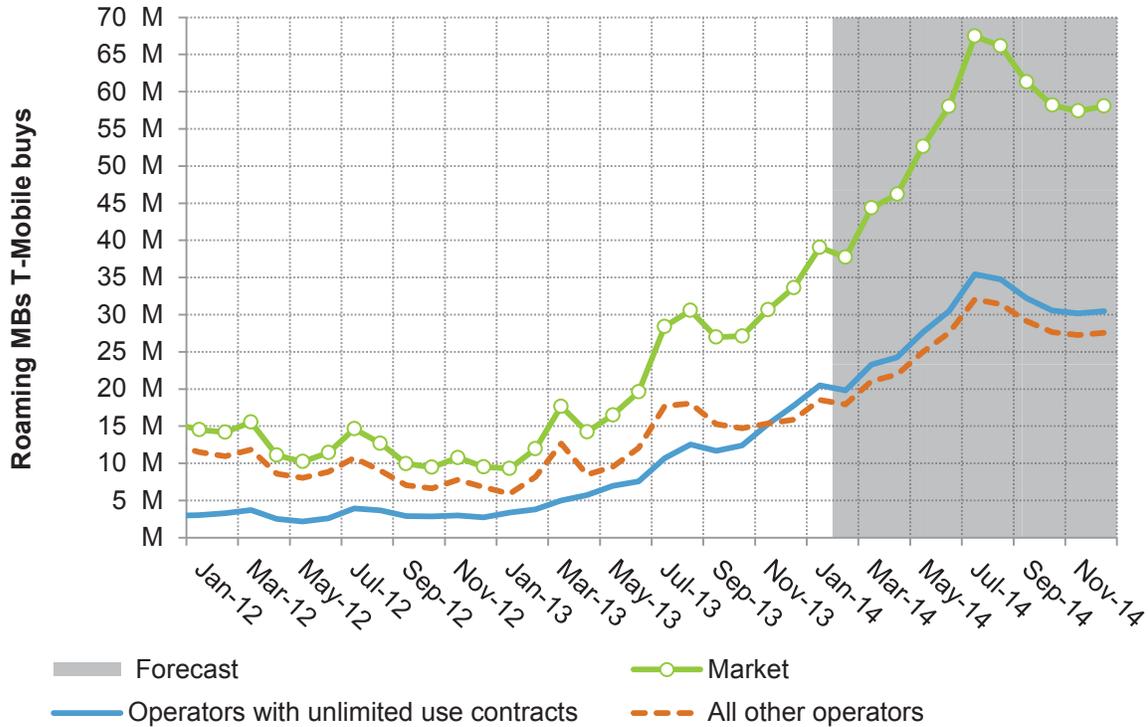
Source: Bates White calculations based on T-Mobile data.

- (88) Figure 7 shows the volumes of data roaming that T-Mobile has purchased since January 2012 and its projections of the volumes it will purchase through October 2014. Like Figure 6, the figure distinguishes between (i) the operators with which T-Mobile had contracts allowing unlimited data usage for a flat monthly fee,<sup>69</sup> and (ii) all other operators.

off provided that A's subscribers value the incremental 20 million MB at more than \$0.5 million; and carrier B is also better off provided that (a) its incremental costs of 20 million MB are below \$0.5 million and, critically, that (b) it does not prefer to weaken carrier A by denying A and A's subscribers the benefit of the additional roaming.

<sup>69</sup> I understand that T-Mobile has had such a contract with at least one of these operators since about mid-2012, and with all since about mid-2013. With one of these operators, the contract is not explicitly unlimited, but T-Mobile internally classifies it as unlimited, because the monthly commitment is large enough to cover all anticipated data roaming.

**Figure 7. Domestic wholesale data volumes T-mobile buys, 2013 and T-Mobile’s projections for 2014, by type of contract**



Note: Actual values through January 2014, forecasts for the rest of the period.

Source: Bates White calculations based on T-Mobile data.

- (89) Table 7 summarizes the volume of T-Mobile’s purchases of wholesale data roaming during the period 2008-2013 and T-Mobile’s projections for 2014, broken down by whether the roaming was provided under an unlimited roaming contract or a traditional contract. The table also summarizes the average prices that T-Mobile paid during the period 2008-2013 and its forecast of the average prices it will pay during 2014. Again, these prices are broken down between “unlimited usage contracts” and other contracts, where the average prices for unlimited usage contracts are computed based on T-Mobile’s allocation of the flat fee to data services.

**Table 7. Historical and future purchases from providers of wholesale data roaming to T-Mobile, 2008-2013, and T-Mobile's projection for 2014, by type of contract**

MB (millions)	2008	2009	2010	2011	2012	2013	2014
Unlimited use contracts	NA	NA	NA	NA	4.6	100.2	339.6
Other contracts	30.4	54.1	106.0	171.6	139.5	166.3	307.0
<b>Total</b>	<b>30.4</b>	<b>54.1</b>	<b>106.0</b>	<b>171.6</b>	<b>144.0</b>	<b>266.5</b>	<b>646.5</b>

\$ per Mb	2008	2009	2010	2011	2012	2013	2014
Unlimited use contracts	NA	NA	NA	NA	0.285	0.183	0.098
Other contracts	3.060	2.910	1.660	1.197	0.878	0.370	0.273
<b>Total</b>	<b>3.060</b>	<b>2.910</b>	<b>1.660</b>	<b>1.197</b>	<b>0.859</b>	<b>0.300</b>	<b>0.181</b>

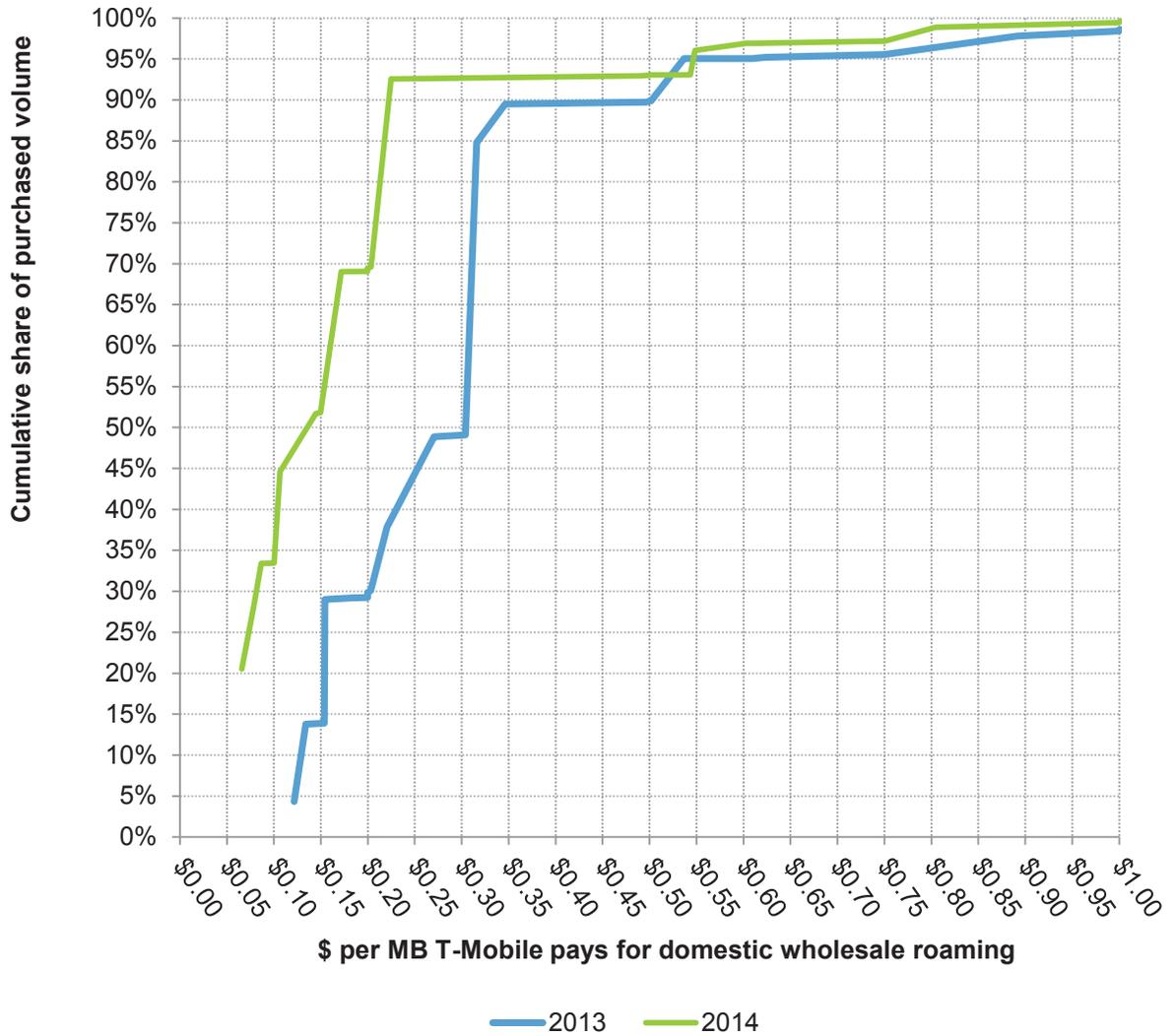
Note: Actual values through January 2014, T-Mobile's internal forecasts for the rest of the period.

Source: Bates White calculations based on T-Mobile data.

- (90) Figure 8 shows the volume weighted distribution of wholesale prices that T-Mobile pays domestic operators for data roaming in the US.<sup>70</sup> T-Mobile forecasts that the median price it will pay in 2014 is below 15 cents per MB, and that more than 90% of the volume purchased will be bought at an average price below 25 cents per MB.

<sup>70</sup> That is, for any given price on the horizontal axis, the curve indicates what percentage of data roaming volume is priced below that given price.

**Figure 8. Distribution of domestic wholesale prices T-Mobile pays, 2013 and T-Mobile's projections for 2014**



Note: Actual values through January 2014, T-Mobile's internal forecasts for the rest of the period.

Source: Bates White calculations based on T-Mobile data.

## VII. Recommendations and Conclusion

- (91) As described above, data roaming is an increasingly essential input to the provision of the nationwide mobile data services that consumers increasingly demand. It is especially essential to carriers other than AT&T and Verizon, and the Commission is well aware of the competitive importance of preserving the ability and incentives of other carriers to compete effectively. In part because of technology compatibility issues, there are pockets of monopoly in providing data roaming to a given requesting carrier, and such monopoly can be exploited profitably—not always in transparent ways—to the detriment of retail competition and of consumers.
- (92) Accordingly, I recommend that as the Commission applies its Data Roaming Order and develops guidance for the industry (prospectively and/or in the context of specific disputes), it should first examine relevant competitive conditions, both (a) as to the supply of data roaming that would serve the requesting carrier's needs, and (b) as to downstream retail competition between the potentially contracting carriers, notably whether there is a substantial risk either that the parties would find it jointly profitable to raise one another's marginal costs, or that one party would find it very profitable to raise the other's.
- (93) In conjunction with such an examination of competitive conditions, I recommend that the Commission compare proposed terms to a variety of benchmarks. Like the Commission, I do not offer a single theory of the appropriate price for data roaming, nor do I propose a single focus on one benchmark. Accordingly, I described above a number of benchmarks that the Commission may find illuminating.



May 19, 2014

**EXHIBIT 2**  
**Reply Declaration of**  
**Joseph Farrell, D.Phil.**  
**In Support of Petition for Expedited**  
**Declaratory Ruling of T-Mobile USA, Inc.**

**REPLY DECLARATION OF JOSEPH FARRELL, D.PHIL.**  
**IN SUPPORT OF PETITION FOR DECLARATORY RULING OF T-MOBILE USA, INC.**  
**(WT Docket No. 05-265)**

**August 20, 2014**

# Table of Contents

I. Introduction .....	1
I.A. Summary of initial declaration .....	1
I.B. Summary of this reply .....	2
II. AT&T and Verizon fail to address the problem of raising rivals' costs strategies. ....	5
III. Responses to particular issues and arguments raised by the parties .....	9
III.A. The downward trend in roaming rates does not prove that rates are commercially reasonable .....	9
III.B. That AT&T is a net purchaser of roaming does not imply that it will seek to lower roaming rates overall .....	10
III.C. Employing benchmarks to evaluate the reasonableness of roaming rates would not eliminate build-out incentives .....	11
III.D. That roaming agreements have been reached does not mean that the terms are reasonable. ....	12
III.E. Criticisms of particular proposed benchmarks .....	13
IV. Conclusion.....	14

## I. Introduction

- (1) I have been asked by counsel for T-Mobile to respond to certain arguments made by AT&T and Verizon in the above-captioned proceeding and to highlight certain issues that they fail to address. Before turning toward this discussion, however, I summarize what I said in my initial declaration.

### I.A. Summary of initial declaration

- (2) Consumers have come to expect nationwide voice and data coverage in their mobile plans, and carriers must provide such coverage if they are to remain competitive. But no carrier has a truly nationwide ubiquitous network. This is in part due to the fact that (as the Commission recognized in the *Data Roaming Order*) in certain parts of the country it may be economically infeasible for more than one carrier to build out its network. Accordingly, all mobile providers have to rely on roaming. Moreover, with the widespread adoption of smart phones, data roaming services have become increasingly important for retail competition among wireless carriers.
- (3) While competition in offering wholesale data roaming exists in most urban areas, the high cost of building out networks means that there exist “pockets of monopoly” in certain areas (either because there is only one carrier that has built out its network or because there is only one carrier that employs a technology compatible with the carrier seeking roaming). These pockets of monopoly give some carriers (large and small) a degree of market power in wholesale data roaming markets.
- (4) Where the seller of wholesale roaming services also competes with the roaming purchaser in retail markets, the roaming provider may have additional incentives to raise its rival’s costs even higher than it would charge if it were not competing. High wholesale rates will normally induce the purchasing carrier either to raise its retail rates or limit its customers’ use of roaming (or both). These effects will harm consumers even though the downstream retail market may remain reasonably competitive.
- (5) Recognizing this possibility, the Commission, in the *Data Roaming Order*, stated that, in evaluating whether a rate is commercially unreasonable, it would consider “the level of competitive harm in a given market and the benefits to consumers.”<sup>1</sup> It further stated that it also

---

<sup>1</sup> *Reexamination of Roaming Obligations Of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, WT Docket No. 05-265, Second Report and Order, 26 FCC Rcd 5411, 5452-53, ¶ 86 (2011) (“*Data Roaming Order*”).

would consider “whether the terms and conditions offered by the host provider are so unreasonable as to be tantamount to a refusal to offer a data roaming arrangement.”<sup>2</sup>

- (6) In my initial declaration, I proposed that the Commission, in evaluating whether a proposed data roaming rate (or agreement) is commercially reasonable, should be especially concerned about high rates charged to a significant retail competitor that lacks adequate alternative roaming providers. To address this concern, I proposed that the Commission provide prospective guidance and predictable enforcement criteria to aid in identifying rates likely to have been influenced by such localized monopoly power and raising rivals costs strategies. I also noted that the effects of local market power may be blended into a single nationwide roaming rate that covers both areas of monopoly and areas where competing data roaming providers are present.
- (7) I also discussed several benchmarks that the Commission should consider in drafting prospective guidance for the industry and also in evaluating whether a proposed wholesale data roaming rate is “high” in a sense relevant to determining whether it is commercially unreasonable. In discussing these benchmarks, I acknowledged that none of these benchmarks is, or can be, ideal, but that they will provide guidance when analyzed in the context of overall competitive conditions relevant to a particular individualized negotiation.

## **I.B. Summary of this reply**

- (8) As discussed in more detail below, neither AT&T nor Verizon directly address the issue of whether a provider of wholesale data roaming services may have an incentive to raise rivals’ costs or whether the Commission should consider this possibility in evaluating the commercial reasonableness of wholesale data roaming rates. Yet the possibility that a firm with market power might find it attractive to raise rivals’ costs is well-accepted by antitrust economists and by the Commission. And, as I explained in my initial declaration, the fact that certain mobile providers have market power over wholesale data roaming services in particular areas, and that they compete with other mobile data providers in the downstream retail market for mobile data services, suggests that those providers may have the ability and incentive to engage in raising rivals’ costs strategies, either unilaterally or jointly.
- (9) Because of this, I recommended that the Commission, in considering whether proposed wholesale data roaming rates are commercially reasonable, should consider multiple factors, including relevant competitive conditions (*e.g.*, whether the provider of the wholesale roaming may have market power and whether it may have an incentive to use that market power to raise rivals’ costs).

---

<sup>2</sup> *Id.*

- (10) I also explain why, for a number of reasons, AT&T's argument that roaming costs represent only a small fraction of T-Mobile's revenues and therefore do not reflect anticompetitive effects is flawed.
- (11) AT&T's and Verizon's argument that the downward trend in wholesale roaming rates is evidence that those rates are commercially reasonable is likewise flawed. As a matter of economic logic, a downward trend in prices does not disprove the presence of market power or prove that prices are commercially reasonable. More specifically, the downward trend in rates may reflect the introduction of improved, lower-cost technology, exogenous increases in consumer demand, and changes in mobile data pricing that are intended to take advantage of the elasticity of consumer demand. Given these developments, which should lower the marginal cost of providing mobile data service, even a monopoly provider of data roaming would lower wholesale roaming rates. Thus, the downward trend in roaming rates does not imply that the lower rates are commercially reasonable.
- (12) AT&T's argument that, because it is a net payer of roaming, it has an incentive to seek low roaming rates is wrong for two reasons. First, AT&T is not constrained to seek the same roaming rate for all its roaming agreements and thus could readily seek a low rate where it was a net payer and a high rate where it was a net payee. Second, even if it were so constrained, AT&T's argument focuses only on the effect of the roaming rate on AT&T's net roaming revenues. The raising rivals' cost literature makes clear, however, that, in considering whether a firm with market power has the incentive to raise a rival's costs, one should consider the effect of such an increase on the firm's total profits.
- (13) AT&T argues that adopting the benchmarks I proposed "would *undermine* the rules by eliminating incentives for investment and encouraging the use of roaming as resale." This argument appears to assume that every carrier seeking roaming is on the margin between using roaming and building a network. But that is not the case; carriers seeking roaming have other options besides building out in a particular area where a roaming provider has demanded unreasonably high rates. They instead could decide to not provide service at all in that area, or to cap or throttle customers' roaming usage. In practice, many carriers make those alternative choices. In addition, as the Commission pointed out in its *Data Roaming Order*, the availability of wholesale data roaming may actually increase incentives for network investment by ensuring that providers can offer a competitive level of network coverage.
- (14) AT&T and Verizon argue that the fact that dozens of roaming agreements have been negotiated under the new data roaming rules means that there is no need for the Commission to offer guidance on what is "commercially reasonable." This argument, which the Commission previously rejected, is flawed for at least two reasons. First, the fact that agreement was finally reached says nothing about possible delays or costs incurred in negotiating that agreement.

Second, and more importantly, the existence of signed roaming agreements says nothing about whether the terms are reasonable. If a provider of wholesale roaming with market power were demanding excessive rates (even above the monopoly price), we would expect the purchaser to agree if the alternative were even worse, such as that it could not offer nationwide data coverage. Similarly, the absence of complaints filed with the Commission does not mean that roaming providers are not demanding excessive roaming rates. Filing a complaint is an expensive and frequently time-consuming process.

- (15) Moreover, the lack of complaints may reflect a lack of confidence in how the Commission would respond to a complaint, which in turn may be due to the need for guidance under the Commission's *Data Roaming* rules, including benchmarks and analysis of the sort that I identified.
- (16) AT&T and Verizon also present various criticisms of the specific benchmarks I proposed, but they mischaracterize how I proposed that those benchmarks be employed. I made clear that that none of these benchmarks is, or can be, ideal standing alone, and that there are measurement issues associated with the benchmarks. I recommended that the Commission apply the benchmarks cautiously and in conjunction with one another and together with an analysis of competitive risks. I did not recommend that the Commission rely on a single benchmark exclusively or that it treat a particular benchmark as constituting a ceiling on what is a commercially reasonable rate.

## II. AT&T and Verizon fail to address the problem of raising rivals' costs strategies.

(17) In their comments, neither AT&T nor Verizon directly address the issue of whether a provider of wholesale data roaming services may have an incentive to raise rivals costs or whether this is a relevant factor that the Commission should consider in evaluating the commercial reasonableness of wholesale data roaming rates. As I discuss below, the Commission traditionally has been, and should continue to be, concerned about raising rivals' costs strategies that undermine competition and harm consumers.

(18) The possibility that a firm with market power might seek to raise its rivals' costs is well accepted by antitrust economists. As Salop and Scheffman explain:

It is better to compete against high-cost firms than low-cost ones. Thus, raising rivals' costs can be profitable even if the rival does not exit from the market. Nor is it necessary to sacrifice profits in the short run for "speculative and indeterminate" profits in the long run. A higher-cost rival quickly reduces output, allowing the predator to immediately raise price or market share.<sup>3</sup>

(19) Where a firm with market power over an essential input also competes in downstream retail markets, it may have an incentive to raise the price of the input to its downstream retail competitors so as to cause them to raise their prices or restrict their output. As Salop and Scheffman explain:

Under appropriate conditions, a dominant firm finds backward integration to be a cost-effective way to raise downstream prices. If the upstream merger partner has some market power, input price increases to downstream rivals (perhaps to a level above the monopoly price) will raise their costs, allowing the dominant firm to increase price or output. Upstream profits are sacrificed but down-stream profits rise disproportionately.<sup>4</sup>

---

<sup>3</sup> Steven Salop & David Scheffman, "Raising Rivals' Costs," *American Economic Review: Papers and Proceedings*, 73, No. 2 (1983) (Salop & Scheffman (1983)): 267; see also Steven Salop & David Scheffman, "Cost-Raising Strategies," *Journal of Industrial Economics* 36, No. 1 (1987): 19-34 ("Such [raising rivals' costs] strategies may be profitable whether or not the rivals exit, since higher cost rivals have an incentive to cut back output and raise prices immediately, which may make it possible for the predator to reap gains even in the short run."); Thomas Krattenmaker & Steven Salop, "Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price," *Yale Law Journal* 96, No. 2 (1986).

<sup>4</sup> Salop & Scheffman (1983) at 268.

- (20) Finally, unlike predatory pricing, “classical, single firm market power . . . in the relevant [downstream] *output* market is *not* essential for the success of cost-raising strategies, since even perfect competitors can benefit if rivals have higher costs.”<sup>5</sup>
- (21) Although the Commission has not always used the phrase “raising rivals’ costs,” it has long been concerned with the possibility that a firm with market power over an essential input, would raise the price of that input so as to exclude or disadvantage downstream competitors. This was particularly true when the Commission was introducing competition into previously regulated monopoly markets or allowing incumbent LECs into competitive markets. For example, in implementing the *Telecommunications Act of 1996*, the Commission recognized that incumbent local exchange carriers (ILECs) “have little incentive to facilitate the ability of new entrants . . . to compete against them.”<sup>6</sup> In particular, the Commission pointed out that ILECs have the “incentive and ability to engage in many kinds of discrimination, including delaying the provision of “interconnection or access to unbundled network elements or degrading the quality of access.”<sup>7</sup> Similarly, in implementing Section 272 of the *Telecommunications Act of 1996*, the Commission recognized that a carrier may be able to “raise prices by increasing its rivals' costs or by restricting its rivals' output through the carrier's control of an essential input, such as access to bottleneck facilities, that its rivals need to offer their services.”<sup>8</sup> And it explained that “raising rivals' costs [strategies]. . . could also delay the introduction of new technologies or degrade the quality of service that a BOC affiliate's interLATA competitors would otherwise provide.”<sup>9</sup>
- (22) Where the Commission has suspected that a regulated telephone company may have the incentive and ability to engage in raising rivals’ costs strategies, it has imposed various types of “competitive safeguards” intended to prevent the firm having market power over an input from raising rivals’ costs or foreclosing them from the market. These competitive safeguards have included, in particular, accounting requirements, nondiscrimination requirements, performance reporting requirements, and rate regulation of the essential inputs.
- (23) The Commission’s concern with possible raising rivals’ costs strategy has not been limited to common carrier regulation, however. The Commission has identified possible raising rivals’ costs

---

<sup>5</sup> Steven Salop & David Scheffman, “Cost-Raising Strategies, *Journal of Industrial Economics* 36, No. 1 (1987): 19-20 (emphasis added).

<sup>6</sup> *In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499 at ¶ 307 (1996).

<sup>7</sup> *Id.*

<sup>8</sup> *In re Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as amended*, Notice of Proposed Rulemaking, 11 FCC Rcd 18877 at ¶131 (1996).

<sup>9</sup> *Id.* at n. 241.

concerns when evaluating mergers, including cable and media mergers,<sup>10</sup> and in assessing forbearance petitions.<sup>11</sup>

- (24) Although the Commission has never applied to the mobile wireless industry the kind of stringent regulation it applied to incumbent telephone companies (and I did not recommend that it do so here), that does not mean that it should not be concerned about identifying and addressing anticompetitive behavior, including raising rivals' costs strategies, if and when they arise. As I explained in my initial declaration, the facts that certain mobile providers have market power over wholesale data roaming services in particular areas, and that they compete with other mobile data providers in the downstream retail market for mobile data services, suggests that those providers may have the incentive to engage in raising rivals' costs strategies.
- (25) Only AT&T attempts to address the possibility that wholesale roaming rates could be used to raise rivals' costs, and its attempt fails to grapple with the essence of the raising rivals' costs concern. AT&T claims that T-Mobile's raising rivals' cost theory is "far-fetched," because "T-Mobile's roaming costs are only a tiny fraction (less than half of one percent) of its total service revenues." It adds that "[i]t is simply not plausible that T-Mobile's roaming arrangements are harming it competitively, and in fact, T-Mobile has been experiencing record growth during the past two years."<sup>12</sup>
- (26) AT&T's argument is unpersuasive for several reasons. First, AT&T offers no reason to believe that total costs or total revenues are a useful calibration for roaming costs, unless AT&T is suggesting that the Commission should limit concerns about raising rivals' costs to cases where the affected firm is likely to exit—and, as the quotes above remind us, that would be an unwarranted and dramatic limitation.
- (27) Second, as the raising rivals' cost literature makes clear, when a firm with market power raises a rival's costs, the rival may raise prices or reduce output or both. Here, T-Mobile's understandable market response to high roaming rates is to reduce output—specifically by not offering roaming or

---

<sup>10</sup> See, e.g., *In re NewsCorp. and DirecTV Group, Transferors, and Liberty Media Corp., Transferee, For Authority to Transfer Control*, Memorandum Opinion and Order, 23 FCC Rcd 3265 at ¶ 66 (2008) (“[W]here a firm that has market power in an input market acquires a firm in the downstream output market, the acquisition may increase the incentive and ability of the integrated firm to raise rivals' costs either by raising the price at which it sells the input to downstream competitors or by withholding supply of the input from competitors.”); *In re Applications for Consent to the Assignment and/or Transfer of Control of Licenses; Adelphia Communications Corporation, Assignors, to Time Warner Cable Inc.*, Memorandum Opinion and Order, 21 FCC Rcd 8203 ¶ 71 (2006) (“[V]ertical transactions also can have anticompetitive effects. In particular, a vertically integrated firm that competes both in an upstream input market and a downstream output market may have the incentive and ability to (1) foreclose rivals from inputs or customers or (2) raise the costs to rivals generally.”).

<sup>11</sup> *In re Petition of Qwest Corp. for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd 8622 ¶ 120 (2010) (denying requested forbearance relief on the ground, *inter alia*, that “[t]he record here does not demonstrate that Qwest no longer possesses exclusionary market power.”).

<sup>12</sup> AT&T Comments at p. 12 (footnote omitted).

by limiting or throttling its customers' roaming on networks with high roaming costs. Not surprisingly, these natural responses reduce the quality of T-Mobile's service (which is equivalent to a price increase) and thus harms those customers who roam on high-cost networks. And T-Mobile's actual or natural response, not another presumably less profitable response, is what determines the effect of high roaming rates on consumers and competition.<sup>13</sup>

- (28) Third, the fact that T-Mobile's roaming costs represent only a small percentage of its total revenues reflects the fact that it has responded to the high rates by not offering service or throttling. Had it not, its roaming costs likely would have been significantly higher. As I stated in my initial declaration, at some point a roaming price high enough to induce the requesting carrier to severely limit its customers' usage can become tantamount to a refusal to provide roaming.
- (29) Fourth, as I indicated in my initial declaration, it is not necessary that the provider of wholesale data roaming explicitly charge a high roaming price in the local area where it has market power for it to raise rivals' costs. Rather, for example, the provider of wholesale data roaming could charge a single uniform price for wholesale roaming across both local monopoly areas and areas with more competition. The local monopoly power would then be expressed as a higher uniform wholesale price relative to what the carrier would charge if all areas where it provided roaming were subject to competition. It is my understanding that such a blend is in fact the pricing structure contained in the agreement between AT&T and T-Mobile.
- (30) Finally, AT&T's suggestion that T-Mobile's recent growth is inconsistent with AT&T's raising roaming rates as part of a raising rivals' cost strategy appears based on a false premise. This argument assumes the wrong "but for" world. The relevant comparison is not between T-Mobile's current growth rate and a zero growth rate. It very well could be that T-Mobile's growth rate would have been higher if wholesale data roaming rates were closer to competitive levels.

---

<sup>13</sup> Cf. AT&T Comments at note 28.

### III. Responses to particular issues and arguments raised by the parties

#### III.A. The downward trend in roaming rates does not prove that rates are commercially reasonable

- (31) AT&T asserts that the wholesale roaming “rate [that] T-mobile pays AT&T today has fallen more than 70 percent since 2011,” and suggests that this is evidence that the rates are reasonable.<sup>14</sup> Similarly, Verizon, pointing to data showing that the average domestic roaming rates paid by T-Mobile have been declining since 2008, suggests that “market forces . . . are working to ensure steady and significant decline in data roaming rates.”<sup>15</sup> That average wholesale roaming rates have been declining over time does not necessarily imply that the rates in any particular agreement, or at any point in time, are reasonable.
- (32) There are a number of reasons why average wholesale rates have declined over time. In particular, in recent years, mobile providers have transitioned from 2G to 3G and more recently to 4G LTE networks, and each new generation of technology has been more efficient and less costly (on a per-megabit basis) than the previous generation. Similarly, as I discussed in my initial report, there has been a dramatic increase in consumer data usage, surely due in part to faster network speeds, improved smart phones, and more varied mobile content and applications, all of which have tended to increase consumer demand. In addition, mobile providers, apparently recognizing the elastic nature of consumer demand, have changed their pricing structures to encourage greater usage (both on the providers’ own networks and while roaming).<sup>16</sup> Given the fixed costs and economies of scale associated with wireless data networks, the increased usage also means that the average per-megabit cost should have declined.<sup>17</sup>
- (33) Given these factors, which also would explain the downward trend in wholesale roaming rates, the question becomes whether this downward trend tells us anything about the commercial reasonableness of any particular wholesale rate. And the answer is clearly no. Even a monopolist has incentives to reduce prices when costs are falling significantly. If there were a single

---

<sup>14</sup> AT&T Comments at 11.

<sup>15</sup> Verizon Comments at 8.

<sup>16</sup> As I noted in my initial declaration, mobile data providers’ recognition of the elastic nature of consumer demand is beginning to be reflected in certain roaming agreements, where both the roaming provider and the purchaser of roaming recognize that it may be in their joint interest to reduce wholesale roaming rates. Thus, for example, T-Mobile has been able to negotiate several roaming agreements recently that, for a fixed fee, provide either a large bucket of MBs or unlimited data roaming. Farrell Declaration at 30.

<sup>17</sup> See generally Mosa Declaration at para. 21.

monopoly provider of wholesale roaming, which set roaming rates at monopoly levels and which did not compete in retail mobile data markets, we would expect to see the same downward trend, given the changes in technology and significant increases in demand and in carriers' willingness to offer unlimited or much less limited roaming if they can obtain roaming at lower rates. Similarly, if the monopoly provider of roaming were also competing in the downstream retail market and setting roaming rates above the monopoly level in order to raise rivals' costs, we should again expect to see roaming rates decline given such changes. Thus, a decline over time in wholesale roaming rates does not tell us whether providers of roaming have been engaging in raising rivals' costs strategies or whether those rates should be deemed commercially reasonable.

### **III.B. That AT&T is a net purchaser of roaming does not imply that it will seek to lower roaming rates overall**

- (34) AT&T argues that because it is a net purchaser of roaming, it “has no incentive to seek high data roaming rates.”<sup>18</sup> It adds that, “even if AT&T is not a net payor in a particular relationship, those rates will inform negotiations in other contexts where ATT is a net payor.”<sup>19</sup> This argument is unpersuasive for two separate reasons.
- (35) First, it is not clear why AT&T would seek a lower rate in a roaming agreement where it is a net payee, just because overall it is a net payer. As I understand it, roaming agreements are individually negotiated and generally subject to strict confidentiality provisions. This suggests that AT&T, in each negotiation, would seek to negotiate an individual roaming rate that is in its best interests given the particular circumstances of the negotiation. Given the strict confidentiality provisions in these agreements, I see no reason why AT&T should feel compelled to seek the same roaming rate in all roaming negotiations. And AT&T has presented no evidence that it does.
- (36) Second, this argument assumes that, when negotiating roaming agreements, AT&T is only concerned about its net roaming revenue (or cost). But that ignores the possible spill-over effects of roaming rates on AT&T's retail revenues. As the raising rivals' cost literature makes clear, a firm with market power in an input market may seek to raise its rivals' costs and its own if, as a result, downstream prices will rise, thus causing an increase in the firm's downstream profits. Thus, assuming AT&T seeks to maximize its profits, it will seek higher roaming rates (even if it is a net payer of roaming) if by doing so its total profits (including both those from roaming and from retail sales) will rise. Thus, the fact that AT&T is a net payer of roaming does not tell us whether it will have an incentive to raise wholesale roaming rates.

---

<sup>18</sup> AT&T Comments at 19 and n. 32.

<sup>19</sup> AT&T Comments at 19.

### III.C. Employing benchmarks to evaluate the reasonableness of roaming rates would not eliminate build-out incentives

- (37) AT&T argues that “resort to the particular benchmarks T-Mobile favors . . . would *undermine* the rules by eliminating incentives for investment and encouraging the use of roaming as resale.”<sup>20</sup> AT&T further argues that “using retail or resale rates that reflect the blended cost of serving urban, suburban and rural customers as a benchmark would be particularly inappropriate for a requesting provider like T-Mobile that uses roaming services almost exclusively in rural areas, because such low rates would act as an especially powerful disincentive for T-Mobile to build out in such areas.”<sup>21</sup>
- (38) Although the logic of this argument is not completely clear, AT&T appears to be suggesting that any reduction in wholesale data roaming rates would reduce or eliminate T-Mobile’s and other providers’ incentives to build out. This seems to assume that every carrier seeking roaming is on the margin between using roaming and building a network. But in a particular area where the roaming provider demands unreasonably high wholesale rates, a carrier has other options besides building out. The response may instead be to not provide roaming service to its customers in that area, or to cap or throttle such roaming. And indeed, we see evidence that carriers frequently are choosing to cap and throttle (or deny service altogether) in these areas.<sup>22</sup>
- (39) Moreover, the logical consequence of AT&T’s claim is that there should be no roaming regulation, or possibly even no roaming at all. But the Commission has already concluded that that is not the best policy for consumers.
- (40) For a variety of reasons, including some that reflect economic efficiency, a mobile provider may decide not to build out. For example, a mobile provider may lack spectrum in particular areas where its customers travel. Even if a provider has spectrum, it may be simply uneconomic to build out. In rural and less densely populated areas, a mobile provider may never recover its investment if it attempts to deploy network infrastructure, and because of this we find no network deployment or deployment by only a single carrier in much of the United States. As I pointed out

---

<sup>20</sup> AT&T Comments at 4-5.

<sup>21</sup> *Id.* at 5.

<sup>22</sup> For example, Sprint reserves the right, without notice, to deny, terminate, modify, disconnect or suspend service if off-network usage in a month exceeds 100 or 300 megabytes or (based on plan terms) a majority of kilobytes.” ([https://shop2.sprint.com/en/legal/os\\_general\\_terms\\_conditions\\_popup.shtml](https://shop2.sprint.com/en/legal/os_general_terms_conditions_popup.shtml)) (accessed August 12, 2014) AT&T’s terms and conditions state that a subscriber’s “offnet data usage allowance is equal to the lesser of 24 megabytes or 20% of the kilobytes included with your plan.” (<http://www.att.com/shop/en/legal/terms.html?toskey=wirelessCustomerAgreement>) (accessed August 12, 2014) US Cellular reduces data speed for all its data plans when “roaming usage exceeds 200 MB.” (<http://www.uscellular.com/data/data-management/index.html>) (accessed August 12, 2014) Metro PCS’s terms and conditions concerning roaming state that, “if your usage each month is not predominantly in our service area, we may terminate your Service or restrict your ability to receive Service outside the areas served by our network.” (<https://www.metropcs.com/terms-conditions/terms-conditions-service.html>) (accessed August 12, 2014).

in my initial declaration, according to the *Sixteenth Wireless Competition Report*, as of October 2012, over 48% of total U.S. square miles had either no wireless broadband coverage or only one wireless broadband provider.<sup>23</sup>

- (41) Finally, as the Commission pointed out in the *Data Roaming Order*, the availability of data roaming may actually increase incentives for network investment by “ensuring that providers wanting to invest in their networks can offer subscribers a competitive level of mobile network coverage.”<sup>24</sup>
- (42) Verizon, citing a declaration by Dr. Gregory L. Rosston filed in 2006 in a proceeding addressing voice roaming, argues that “linking roaming rates to MVNO rates would similarly reduce incentives to lower MVNO rates and reduce incentives to innovate.”<sup>25</sup> Verizon’s citation to Dr. Rosston’s declaration is inapt for at least three reasons. First, Dr. Rosston was criticizing a proposal that would have capped wholesale voice roaming rates at the lowest retail rate for voice that a carrier offered. I did not propose, however, that any one benchmark should be used as a cap. Second, Dr. Rosston appeared to assume that, as long as the downstream retail market were competitive, consumers could not be harmed by a carrier’s demanding high wholesale roaming rates. Although the logic of Dr. Rosston’s argument is not completely clear, he appears to ignore the fact that carriers with market power might have an incentive to raise rivals’ costs and that this could result in higher downstream retail rates. Such a price rise would harm consumers. Finally, Dr. Rosston’s stress on the possibility that linking roaming rates to retail rates would raise retail rates presumes that there is a stronger incentive to insist on high roaming rates than to compete effectively in the retail market.

### **III.D. That roaming agreements have been reached does not mean that the terms are reasonable.**

- (43) AT&T and Verizon argue that the fact that dozens of data roaming agreements have been negotiated under the new rules means that there is no need for the Commission to offer guidance on what constitutes “commercially reasonable” terms and conditions.<sup>26</sup> AT&T and Verizon made this same argument in the *Data Roaming* proceeding, where they opposed the adoption of any data roaming rules. The Commission rejected that argument then, finding that “providers have

---

<sup>23</sup> This was probably an underestimate at that time, because the Mosaic data treat a census block as completely served if there is coverage anywhere within the census block. *See Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Sixteenth Report (2012) (*Sixteenth Mobile Competition Report*), at Table 9.

<sup>24</sup> *Data Roaming Order*, 26 FCC Rcd at ¶ 17.

<sup>25</sup> Verizon Comments at 10.

<sup>26</sup> AT&T Comments at 1 & 10; Verizon Comments at 1.

encountered significant difficulties obtaining data roaming arrangements on advanced “3G” data networks, particularly from the major nationwide providers.”<sup>27</sup>

- (44) For several reasons, it should likewise reject that argument here. First, the fact that agreement was finally reached says nothing about possible delays or costs incurred in negotiating that agreement. Second, and more importantly, the existence of signed roaming agreement says nothing about whether the terms are reasonable. We see purchasers entering into agreements with monopolists every day. And to the extent that a provider of wholesale roaming with market power was demanding rates above the monopoly price, we would expect the purchaser to agree if the alternative was that it could not offer nationwide data coverage and thus could not compete.
- (45) Nor does the absence of complaints filed with the Commission mean that individualized negotiations are resulting in rates that are always commercially reasonable. Filing a complaint is an expensive and frequently time-consuming process. Moreover, the lack of complaints may reflect a lack of confidence in how the Commission would respond to a complaint. To the extent that the Commission provides guidance on what constitutes commercially reasonable roaming rates and how it would evaluate roaming disputes, this could reduce the current uncertainty and help carriers decide whether to file a complaint. Moreover, to the extent that the lack of complaints means that there is no problem and that no carriers are trying to charge excessive roaming rates, then reasonable guidance about what *would* be a problem should do no harm.

### **III.E. Criticisms of particular proposed benchmarks**

- (46) AT&T and Verizon present various criticisms of the benchmarks I proposed, but they appear to misconstrue or mischaracterize how I believe these benchmarks should be employed in evaluating the commercial reasonableness of a proposed roaming rate. In my initial declaration, I pointed out and explained why none of these benchmarks is, or can be, ideal standing alone. Nevertheless, given the risks that roaming providers with market power might charge excessive roaming rates that harmed both competition and consumers, I advised that the Commission should apply the benchmarks cautiously and in conjunction with one another and with an analysis of competitive risks. I did not recommend that the Commission rely on a single benchmark exclusively or that it treat a particular benchmark as constituting a ceiling on what is a commercially reasonable rate.

---

<sup>27</sup> *Data Roaming Order*, 26 FCC Rcd at ¶ 24 (footnote).

## IV. Conclusion

- (47) Neither AT&T nor Verizon, the only two parties opposing T-Mobile's petition or questioning my earlier analysis, dispute the fact that there are pockets of monopoly in the provision of wholesale data roaming or that roaming providers that possess market power over wholesale roaming may have the incentive and ability to raise rivals' costs. Nor do they challenge the fact that certain wholesale roaming rates are sufficiently high as to induce retail mobile data providers to cap or throttle their customers' roaming usage.
- (48) It is for these reasons that I recommended that the Commission provide prospective guidance and predictable enforcement criteria for evaluating the commercial reasonableness of wholesale data roaming terms and conditions. I further recommended that, in such evaluations, the Commission should consider relevant competitive conditions, including whether the provider of the wholesale roaming may have market power and whether it may have an incentive to use that market power to raise rivals' costs. In conjunction with such an examination of competitive conditions, I also recommended that the Commission compare proposed terms to a variety of benchmarks. I did not recommend that the Commission rely on a single benchmark or use that benchmark as a ceiling on what constitutes commercially reasonable terms and conditions. Nor did I recommend rate regulation. Rather, I suggested that the Commission should apply those benchmarks cautiously and in conjunction with one another and with an analysis of competitive conditions. Nothing in AT&T's or Verizon's comments has persuaded me to change my views.

August 20, 2014

/s/ Joseph Farrell

Joseph Farrell

IX. Other Requirements of Section 1.721 of the Rules

C. Declarations (Confidential and Not for Public Inspection in Part)

2. Declaration of Martyn Roetter (For Public Inspection )

**AVAILABLE FOR PUBLIC INSPECTION**

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In the Matter of )  
 )  
WORLDCALL INTERCONNECT, INC. )  
a/k/a EVOLVE BROADBAND, )  
Complainant. )  
 )  
v. )  
 )  
AT&T MOBILITY LLC )  
Defendant )

File No. \_\_\_\_\_

**DECLARATION OF MARTYN ROETTER**

## The Reasonableness of the RWA Roaming Agreement

1	Verification .....	3
2	Summary .....	4
3	Declarant’s Background and Qualifications .....	4
4	Impact on Market Entry and Competition .....	6
5	Implications for Emerging Machine-to-Machine (M2M) and “Internet of Things” Services .....	7
6	Impact on AT&T.....	11
7	Absence of Restraints.....	11
8	Pricing.....	12
9	U.S. retail data prices .....	13
10	Canadian retail data prices.....	14
11	European Retail Data Prices .....	17
12	Financial Implications for AT&T of the RWA Roaming Agreement .....	18
13	Safeguards against Unreasonable Use of Roaming by a Requesting Carrier.....	22
14	Absence of Provisions allowing Harmful and Unilateral Conduct.....	22
15	Impact on Customers.....	22
16	Conclusion.....	24

17

1 **Verification**

2 I, Martyn Roetter, hereby declare under penalty of perjury, that I have personal  
3 knowledge that the facts set forth below are true and accurate. The factual assertions made and  
4 conclusions expressed herein are based on my experience in the industry, my analysis of public  
5 information regarding prices and terms and conditions for roaming, my understanding of  
6 current and contemplated service offerings and the particular situation facing smaller and/or  
7 rural providers with relatively small geographic areas where they have spectral authorizations.

8 I have reviewed the RWA contract template and the AT&T Mobility contract template  
9 and am providing two declarations. The first is a public document discussing the RWA contract  
10 and providing a general analysis of the issues that have been identified to date. The second is a  
11 confidential document discussing the AT&T Mobility contract, and a more specific analysis of  
12 the issues in terms of the particular AT&T Mobility proposals in comparison to the RWA results.

13

1 **Summary**

2 My opinion that the RWA roaming agreement terms, conditions and prices are  
3 commercially reasonable<sup>1</sup> is based on the following findings regarding its terms and conditions.

4 These terms and conditions:

- 5 1. Are permissive of market entry and competition, and indeed necessary for  
6 market entry of a new local or regional wireless carrier, or for these carriers' efficient  
7 exploitation of a spectrum license in a new band, so as to support the policy of  
8 stimulating competition in the U.S. wireless market. Residential and business wireless  
9 customers today expect and demand mobility and ubiquitous nationwide (if not  
10 international) service. Operators with spectrum that covers limited geographic footprints  
11 are dependent on national roaming services to attract customers from within their  
12 licensed areas and to justify the investments necessary to meet the obligations  
13 (including build out requirements) attached to their licenses, as well as to provide  
14 national coverage.
- 15 2. Do not impose any material constraints on the ability of the serving national  
16 carrier to provide service to its own customers, and to compete, while allowing a  
17 reasonable profit margin on the roaming services it provides.
- 18 3. Include safeguards against arbitrage by the requesting carrier on its use of  
19 roaming services by requiring that the requesting carrier directly handle the majority of  
20 its customers' traffic.
- 21 4. Prevent either party from abrogating the operation of the roaming agreement at  
22 their sole discretion in ways that lead to unjustifiable harmful and potentially irreparable  
23 consequences for the other party.
- 24 5. Are consistent with the terms and conditions in roaming agreements between  
25 other operators that have been found to be mutually satisfactory.

26 In my opinion the RWA agreement terms, conditions and prices are commercially reasonable.<sup>2</sup>

27 **Declarant's Background and Qualifications**

28 I am a management consultant and advisor to high technology business executives,  
29 regulators, and investors on matters involving products, markets, competitors, sales channels,

---

<sup>1</sup> I understand that some aspects of the roaming relationship between WCX and AT&T will or may involve "automatic roaming" for interconnected voice and data and text-messaging. I further understand that the legal tests and standards for those services are different and higher, to-wit "reasonable and not unreasonably discriminatory." I am not a lawyer, but in my expert opinion the RWA terms would also meet this standard where it applies.

<sup>2</sup> My analysis and conclusions regarding whether the roaming agreement proposed to WCX by AT&T are commercially reasonable is contained in a separate confidential document.

1 and technology. My work frequently involves the application of global, multidisciplinary  
2 perspectives in dealing with the complexities of challenges whose outcomes depend upon the  
3 interactions between business and market dynamics, technologies, and finance, as well as  
4 regulation and public policy. I have extensive business experience in Europe, the Americas, Asia  
5 and elsewhere and have contributed to the foundation and growth of several new services  
6 businesses. I have over 30 years of consulting experience with Arthur D. Little, PA Consulting  
7 and others as well as since 2002 my own sole proprietorship - MFRConsulting. I am also  
8 associated as a Senior Adviser with the South Africa-based BMI-TechKnowledge (see for example  
9 [www.bmi-t.co.za/?q=content/bmi-t-navigator](http://www.bmi-t.co.za/?q=content/bmi-t-navigator)).

10 I have been active both independently and on behalf of clients and investors in the  
11 mobile sector in contributing to filings in several major Dockets including WT 05-265  
12 (Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers) at the  
13 Federal Communications Commission over the past few years.

14 I was a Vice President and Partner at Arthur D. Little, Inc., based in Cambridge,  
15 Massachusetts and founded the European arm of the company's TIME (Telecommunications,  
16 Information, Media, and Electronics) practice in Europe from a base in Paris. I later led this  
17 practice at various times in North America and at the global level. I served as a member of the  
18 Board of Directors and Chairman of the Compensation Committee of Allen Telecom (a leading  
19 global supplier of wireless subsystems) from 1998 until its acquisition by Andrew Corp. in 2003. I  
20 have published in the business, financial, and trade press and academic journals on issues  
21 affecting the communications and information industries, and co-authored several books on the

1 uses of information technology. I am a member of the IEEE and the IEEE Communications  
2 Society.

3 I was educated in England, Germany, and the U.S., and hold a doctorate in physics from  
4 the University of Oxford.

### 5 **Impact on Market Entry and Competition**

6 Even though customers tend to purchase service where they primarily reside or conduct  
7 significant business, the relevant market for mobile services is national. It is not local or  
8 regional. Residential and business wireless customers today expect and demand mobility and  
9 ubiquitous nationwide (if not international) service. The marketing and sales material and  
10 messages of the national facilities-based carriers and the smaller facilities-based carriers with  
11 geographically limited spectrum footprints, along with MVNO resellers, demonstrate this  
12 reality.<sup>3</sup>

13 Smaller carriers can only offer national coverage if they have access to national roaming  
14 services in areas outside their own spectrum footprints. A carrier with only limited geographic  
15 coverage through exploitation of its own spectrum licenses that does not have access to  
16 reasonable roaming agreements that cover the rest of the country will be unable to offer  
17 national service to customers, and will be unable to compete. Its fate will be either bankruptcy  
18 or sale to a national carrier. In particular, a new carrier or a carrier seeking to deliver the  
19 maximum value to customers through capacity available on additional frequencies in a  
20 geographically limited license it has acquired faces a significant barrier to entry, or a significant

---

<sup>3</sup> See for example the coverage maps of US Cellular (<http://www.uscellular.com/coverage-map/coverage-indicator.html>) and Cspire (<http://www.cspire.com/coverage/>) compared with AT&T (<http://www.att.com/maps/wireless-coverage.html#fbid=MCoXIA90dQz>).

1 reduction in the value of this frequency to its business and to its customers, if in either case the  
2 carrier cannot offer national coverage via roaming services that use the same frequencies and  
3 technology as in its own spectrum footprint.

#### 4 **Implications for Emerging Machine-to-Machine (M2M) and “Internet of Things” Services**

5 The mobile sector is anticipating rapid growth in significant value-creating M2M  
6 applications and services delivered over mobile networks, as is evident in a recent (February  
7 2014) report published by the GSM Association.<sup>4</sup> Key findings in the GSMA report that are  
8 relevant to the circumstances and business model of WCX are presented below.<sup>5</sup>

- 9 • Between 2010 and 2013, 120 million M2M connections were added globally  
10 (38% CAGR) reaching a total of 195 million in Q4 2013. Globally, M2M  
11 connections account for 2.8% of total mobile connections in 2013, up from 1.4%  
12 in 2010. In North America almost one in ten mobile connections is M2M. Global  
13 M2M connections are forecast to reach a quarter of a billion (250 million) in  
14 2014.
- 15 • Several operators surveyed by the GSMA highlighted the fact that the M2M  
16 market is moving from a period of market development towards a commercial  
17 deployment phase and have restructured their M2M business activities over the  
18 last year to reflect the ‘strategic importance’ of M2M to their organizations.
- 19 • Major vertical M2M market opportunities identified include automotive  
20 (relatively short term) and health care (medium to long term).

21 Several of the most promising and innovative opportunities for M2M applications  
22 services – automotive and health care are two examples – involve devices that may well spend a  
23 significant and unpredictable proportion of time outside the license area of a small carrier such  
24 as WCX. If WCX must strictly limit M2M communications because of severe restrictions on the  
25 proportion of total traffic, because of caps on number of M2M devices in relation to all devices

---

<sup>4</sup> “From concept to delivery: The M2M Market today,” February 2014,  
<https://gsmaintelligence.com/files/analysis/?file=140217-m2m.pdf>.

<sup>5</sup> The GSMA M2M definition only includes SIM connections that enable mobile data transmission between machines. It does not count SIMs used in computing devices in consumer electronics such as smartphones, dongles, tablets, e-readers, routers and hotspots.

1 or generally in terms of the time they can spend in a roaming mode then WCX will be excluded  
2 from participating in M2M opportunities. WCX will lose the incentive to support initiatives  
3 aimed at introducing innovative M2M capabilities that may be overlooked by large national  
4 carriers, as exemplified by an M2M service targeting rural areas in particular. A good example of  
5 a rural M2M application is automated monitoring of the lactation cycle of cows so as to reduce  
6 the proportion of missed insemination times. Research has shown that farmers can reduce  
7 missed insemination episodes from 50% to 10% using M2M.<sup>6</sup> Cows tend to wander about, and  
8 will not know if they have crossed some imaginary boundary or a device they are carrying goes  
9 out of WCX's coverage and into AT&T's coverage. They tend to move in groups, so a lot of  
10 devices would do the same thing. Cows cannot be trained to stay on WCX's network.

11 AT&T may not be interested in supporting rural-focused services, given its tendency to  
12 pay more attention to urban service related activity. That is their choice to make. The RWA  
13 proposal guarantees that WCX and other small providers that serve rural areas will not be  
14 prevented from offering M2M services that will benefit farmers and other rural users and hence  
15 society in general. RWA agreement Section 5 (Services) states:

16 [N]either Party may limit or condition Authorized Users' Data Roaming in  
17 any manner that prohibits or diminishes the ability of either Party to: (1) provide  
18 M2M and/or Internet of Things services; (2) act as a wholesaler of Data Services  
19 or provide access to Data Services to resellers; or (3) establish MVNO  
20 relationships. Further, neither Party may require or precondition any network  
21 build-out or any other network or launch requirement that exceeds in any way  
22 any build-out requirement established by the FCC.

23 The GSMA has anticipated and developed a mechanism to accommodate a market  
24 environment that enables M2M product suppliers to produce solutions that work with multiple

---

<sup>6</sup> <http://www.rcrwireless.com/20140805/opinion/reality-check-viva-text-messaging?elq=dd5e86fc24cd4121b42b24573e71a797&elqCampaignId=2877>.

1 operators for the sake of convenience, flexibility and economies of scale. As the GSMA points  
2 out, in some devices or pieces of equipment such as anti-theft modules in cars, utility meters,  
3 personal or property tracking devices or security modules, the SIM (Subscriber Identification  
4 Module) card has to be inserted in the machine and hermetically sealed during the  
5 manufacturing process. At this time, it is often unknown which mobile operator will be  
6 operating the M2M service. This situation differs from the traditional mobile telephony market  
7 where the mobile operator usually purchases SIM cards in bulk, installs its credentials on them,  
8 and then inserts these cards into the mobile phones. The mobile industry through the GSMA  
9 has produced the 'Embedded SIM' specification to enable remote 'over the air' provisioning and  
10 management of SIMs in M2M devices. This solution is designed to enable all operators to  
11 participate conveniently in and thereby speed adoption of M2M services in order to open up  
12 opportunities for new services and applications in new industry verticals.

13           Recent announcements by the mobile satellite operator Iridium produce additional  
14 evidence for the growth of M2M services and applications and the wide area coverage that  
15 customers are looking for and need. Iridium reported commercial M2M data ARPU of \$17 in the  
16 second quarter of 2014.<sup>7</sup> It also recorded an 18% growth year-on-year in commercial M2M  
17 subscribers.<sup>8</sup>

18           Therefore, a business model and plans for small as well as large operators will and  
19 should naturally include, as WCX's does, a growing role for M2M services and applications. AT&T

---

<sup>7</sup> <http://investor.iridium.com/releasedetail.cfm?ReleaseID=863249>.

<sup>8</sup> [http://www.satellitetoday.com/telecom/2014/08/01/iridium-sees-major-m2m-growth-keeps-pace-with-iridium-next/?hq\\_e=el&hq\\_m=2924229&hq\\_l=10&hq\\_v=136e6b3268](http://www.satellitetoday.com/telecom/2014/08/01/iridium-sees-major-m2m-growth-keeps-pace-with-iridium-next/?hq_e=el&hq_m=2924229&hq_l=10&hq_v=136e6b3268).

1 itself has clearly identified M2M services and applications as very important in its plans and as  
2 providing great value to its customers,<sup>9</sup> a position and conclusion that WCX has also reached.

3 By providing commercially reasonable terms and conditions to small carriers the RWA  
4 Roaming Agreement enables WCX and other carriers to offer more traditional mobile service as  
5 well as new M2M services, as part of the necessary national coverage. This Agreement supports  
6 and contributes to the goal of ensuring that small carriers can compete and innovate fairly on  
7 their own merits, and that the licenses they hold will be exploited to deliver the maximum  
8 possible value to customers. Furthermore it will stimulate investment in and growth of rural  
9 broadband networks and services. Unless small rural carriers can obtain reasonable roaming  
10 services (in terms of prices and conditions) they will find it difficult to obtain all the funding they  
11 need for network and other investments since due diligence by lenders and other sources of  
12 funds will reveal that their business plans or models are not viable absent such access to  
13 national coverage via roaming. In contrast high roaming rates – well above retail as advocated  
14 by AT&T in a recent filing with the Commission<sup>10</sup> – that severely harm or even destroy the  
15 viability of a rural carrier’s business model will discourage investments in its network and in the  
16 development and provision of new and improved services designed to meet the specific needs  
17 of rural communities.

---

<sup>9</sup> <http://www.mobileworldlive.com/att-m2m-expert-looks-platform>.

<sup>10</sup> <http://apps.fcc.gov/ecfs/document/view?id=7521374908>.

## 1 **Impact on AT&T**

### 2 **Absence of Restraints**

3           The RWA agreement puts no unreasonable restraints on AT&T's freedom of action other  
4 than those included in the FCC's Data Roaming Order<sup>11</sup> that would apply to both participants in  
5 a symmetrical roaming agreement. The agreement's terms and conditions are symmetrical with  
6 respect to the rules and obligations under which the participating carriers will operate, except  
7 where their required actions are a function of their distinctive respective roles as Home and/or  
8 Serving Carrier. In this specific case WCX will be only a home carrier and AT&T will exclusively  
9 serve as a serving carrier, relegating the relationship to asymmetrical or one-way operation. This  
10 is the result of AT&T's unilateral choice. WCX would freely agree to provide roaming to AT&T  
11 within WCX's home area, on symmetric terms, conditions and prices, but AT&T has made it plain  
12 it does not desire to obtain roaming from WCX.

13           The RWA Agreement does not contain any commercially unreasonable limitations on the  
14 actions or prerogatives of either party that may have an inappropriate competitive effect or  
15 negative influence on consumers' freedom of choice regarding their provider of mobile services.  
16 The RWA Agreement contains no prohibition on either party participating in legitimate mobile  
17 activities that may make significant contributions to its sources of revenues such as MVNOs  
18 and/or innovative new M2M services.

19           Nor does the RWA agreement unduly burden AT&T, either technically or financially. The  
20 RWA Agreement specifically pays attention to and incorporates standards and procedures of the

---

<sup>11</sup> *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Second Report and Order, 26 FCC Rcd 5411 (2011) ("Data Roaming Order").

1 GSM Association (GSMA), the global association of mobile operators of which AT&T is the most  
2 prominent U.S.-based member. Section 9: Billing, Accounting and Settlement states:

3 *The Parties acknowledge and agree to adopt GSMA Annexes and PRDs as*  
4 *necessary and follow all globally-recognized GSMA industry procedures found in*  
5 *the relevant GSMA Annexes and PRDs for Interconnection, Billing, Accounting*  
6 *and Settlement. These procedures shall include, but are not limited to, the TADIG*  
7 *and TAP provisions included in the mutually executed AA.13.”*

## 8 Pricing

9 Evidence from multiple sources demonstrates that the wholesale prices incorporated in  
10 the RWA Roaming Agreement will ensure that AT&T will enjoy commercially reasonable profit  
11 margins in its provision of wholesale data roaming services. This finding is based on the levels of  
12 retail data pricing offered by several operators in the U.S. (including AT&T itself) as well as in  
13 Canada and Europe, and on identification of the lower costs incurred in providing wholesale as  
14 compared to retail services.

15 Profit is a function of the difference between price-dependent revenues (assuming  
16 prices are affordable so customers use the service at levels that enable reasonable economies of  
17 scale to be achieved) and the costs of provision. Therefore AT&T’s wholesale profit margins  
18 operating in accordance with the RWA Agreement will be reasonable since the retail price  
19 assumed in the RWA Agreement is higher than the lowest retail prices currently being charged  
20 in the U.S. market, while the costs incurred by AT&T in providing a wholesale roaming service  
21 will be lower than its retail costs of providing services to retail customers that generate a total  
22 volume of traffic comparable to the volume of traffic from a single wholesale customer.

1 *U.S. retail data prices*

2 The price offered in the RWA Roaming Agreement is a prevailing retail price of \$10/GB,  
3 with a provision for revision as this retail price changes. Retail prices per GB have been  
4 decreasing substantially in recent years thanks to improvements in technology. As shown below,  
5 the RWA price that is a conservative estimate (i.e. higher than some current retail prices that  
6 can be found in the U.S. market) will ensure that AT&T will be able to generate a commercially  
7 reasonable profit margin on roamers' traffic. In this sense the RWA roaming agreement can be  
8 characterized with respect to the interests of AT&T as "commercially highly reasonable," or even  
9 "commercially generous." Evidence for the reasonableness or generosity of this wholesale price  
10 for the serving carrier or wholesaler is based on:

- 11 • Evidence that there are (mid-2014) examples of retail data prices offered by the  
12 major U.S. carriers that are significantly lower than \$10/GB;
- 13 • Evidence of retail data prices in other developed markets that are significantly  
14 lower than \$10/GB;
- 15 • Finding that the costs of providing wholesale service are significantly lower than  
16 the costs of providing retail service, so if the price of its wholesale service is set  
17 as equal to that of its retail service, the operator should be able to generate a  
18 satisfactory and reasonable profit margin from its wholesale, e.g. roaming, traffic  
19 that exceeds the profit margin earned from traffic generated by customers of its  
20 retail services.

21 Information on current U.S. retail data rates has been gathered from Verizon, Cricket  
22 Wireless (prepaid services now part of AT&T's portfolio since its acquisition of Leap Wireless),  
23 and T-Mobile. The prices charged to retail customers in the U.S. for incremental data usage is as  
24 follows:

- 25 • Verizon prepaid service: \$5-10/GB depending on the total volume of the data  
26 allowance.<sup>12</sup>
- 27 • Cricket Wireless: \$4-5/GB depending on the total volume of the data allowance.<sup>13</sup>

---

<sup>12</sup> <http://www.verizonwireless.com/wcms/consumer/shop/prepaid.html> (accessed August 1, 2014).

- 1 • T-Mobile: \$5/GB,<sup>14</sup> and \$3.33/GB in a late August, 2014 announcement.<sup>15</sup>
- 2 • AT&T's Mobile Share<sup>®</sup> Value pricing plans: \$7.5-10/GB<sup>16</sup> (for families, depending
- 3 on the total volume of the data allowance).

#### 4 *Canadian retail data prices*

5 The relevance of Canadian experiences and information to the U.S. mobile sector and in  
6 particular wholesale roaming arrangements is exemplified in the recent determination by the  
7 Canadian regulator the CRTC (Canadian Radio-television and Telecommunications Commission)  
8 as the outcome of its Notice of Consultation 2013-685 – “Wholesale mobile wireless roaming in  
9 Canada - Unjust discrimination/undue preference” that there were clear instances of unjust  
10 discrimination and undue preference by Rogers Communications Partnership with respect to its  
11 wholesale mobile wireless roaming arrangements with new entrants.<sup>17</sup>

12 The Canadian to U.S. roaming environment and experiences is relevant because: (a) The  
13 roaming agreements considered by the CRTC include those between U.S. and Canadian carriers;  
14 (b) The conditions that are supposed to be met in roaming agreements in Canada overlap  
15 significantly (“commercial reasonableness”) with those in the FCC's Data Roaming Order; (c) The  
16 arguments presented by the Canadian incumbents who have had strong relationships with the  
17 U.S. incumbents since the dawn of the telephone age are similar to those that AT&T produces to  
18 justify its proposed roaming rates; and (d) Perusal of the filings by Canadian incumbents in this  
19 CRTC Consultation shows that they use U.S.-based experts with whom the FCC is familiar to  
20 prepare and present analyses that support their claims and positions; (d) Perusal of the filings of

---

<sup>13</sup> <https://www.cricketwireless.com/cell-phone-plans> (accessed August 1, 2014).

<sup>14</sup> <http://www.t-mobile.com/cell-phone-plans/individual.html> (accessed August 1, 2014).

<sup>15</sup> <http://www.rcrwireless.com/20140825/carriers/price-war-continues-to-rage-t-mobile-us-updates-simple-starter-tag2> (accessed August 25, 2014).

<sup>16</sup> <http://www.att.com/shop/wireless/data-plans.html?fbid=xSEUXyrHFK8> (accessed August 2, 2014).

<sup>17</sup> Telecom Decision CRTC 2014-398, July 31<sup>st</sup>, 2014, <http://www.crtc.gc.ca/eng/archive/2014/2014-398.htm>.

1 new entrants and small carriers in Canada indicates close similarities, in the nature and content  
2 of their claims of unreasonable treatment by Canadian incumbents with respect to roaming  
3 agreements, to the documented experiences of small U.S. carriers regarding their treatment by  
4 AT&T. AT&T is a major cross-border roaming partner of Rogers and has a long history of  
5 relationships with Rogers, including a 34% stake in Rogers Wireless that it sold in 2004.

6 It is noteworthy that the CRTC rejected the argument that cross-border roaming  
7 arrangements between the U.S. and Canada have and should have no bearing on the  
8 reasonableness of domestic roaming agreements. Moreover one new entrant Wind reported  
9 that at the time it launched services at the end of 2009 the only technologically compatible  
10 roaming partner available to it in Canada was Rogers, which is the same situation facing WCX.  
11 AT&T is the sole source of roaming services in Band Class 17 in the U.S.

12 Rogers claimed that its roaming agreement with Wind was arrived at as an outcome of a  
13 commercially reasonable negotiation, since a dispute resolution process was available that  
14 Wind did not use. However Wind pointed out that it had no choice but to accept the terms that  
15 Rogers proffered or it would have been unable to launch service within a reasonable time  
16 frame. The delay incurred, moreover with no assurance of success in securing lower roaming  
17 prices, would have been very harmful to its investors and would have deprived Canadian  
18 consumers of access to the capacity available in the spectrum licenses it had acquired. Wind  
19 could not afford to enter into dispute resolution that would have inevitably delayed its launch of  
20 service for many months.<sup>18</sup> Hence Wind was under unreasonable duress and not in a position  
21 in which it could negotiate a commercially reasonable agreement with Rogers. Wind also

---

<sup>18</sup> Wind's submissions in CRTC 2013-685 can be found at  
<https://services.crtc.gc.ca/pub/ListeInterventionList/Documents.aspx?ID=215494&Lang=e>.

1 reported that it had succeeded in negotiating a cross-border roaming agreement with T-Mobile  
2 at a price substantially lower than the one it had been obliged to accept domestically from  
3 Rogers.<sup>19</sup>

4 Information on retail data rates in Canada can also be found in evidence submitted to  
5 the CRTC's Notice of Consultation 2013-685 – "Wholesale mobile wireless roaming in Canada –  
6 Unjust discrimination/undue preference." One intervention from Bragg Communications  
7 (operating as Eastlink) in this Consultation presented the following findings based on Rogers and  
8 Bell Mobility's lowest published retail rates<sup>20</sup>:

9 The lowest retail rates that Rogers and Bell charge their customers are:

Service	Rogers, CDN\$	Bell Mobility, CDN\$
Voice per minute	Less than 0.01875	Less than 0.006
Per outgoing text message	Less than 0.015	Less than 0.015
Per incoming text	0.00	0.00
Per megabyte	0.006	0.0083

10 These retail prices per megabyte cited (in Canadian currency) are equal respectively to  
11 CDN\$6 and CDN \$8.3 /GB, or \$5.4-7.6/GB at the exchange rate of early August 2014. The level of  
12 these prevailing prices is confirmed by other sources, e.g. the following information on Rogers'  
13 retail rates:<sup>21</sup>

---

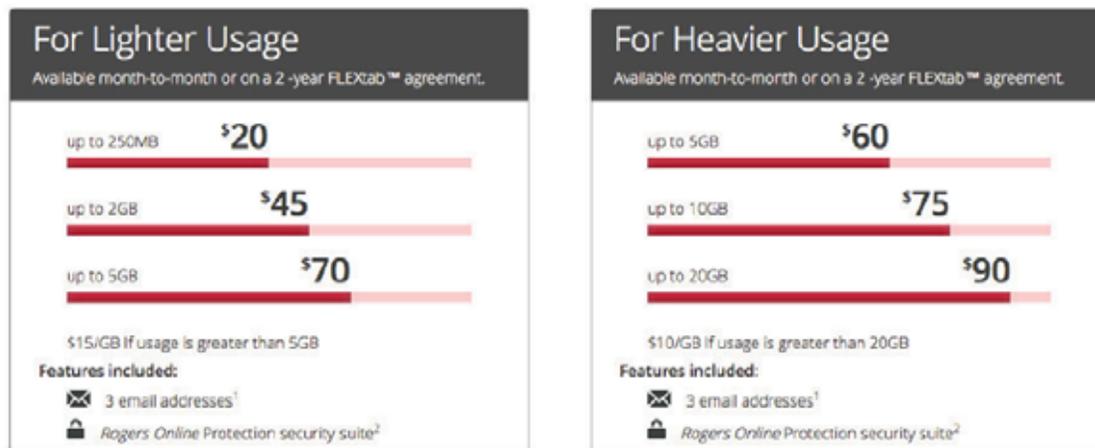
<sup>19</sup> [http://business.financialpost.com/2014/01/30/wind-mobiles-cheap-unlimited-u-s-wireless-offer-shows-roaming-disparity-with-canada/?\\_lsa=94ed-4852](http://business.financialpost.com/2014/01/30/wind-mobiles-cheap-unlimited-u-s-wireless-offer-shows-roaming-disparity-with-canada/?_lsa=94ed-4852), and <http://techcrunch.com/2014/01/30/canadas-wind-mobile-offering-unlimited-u-s-talk-text-and-data-roaming-for-15-per-month/>.

<sup>20</sup> Eastlink's submissions can be found at <https://services.crtc.gc.ca/pub/ListeInterventionList/Documents.aspx?ID=212279&Lang=e>.

<sup>21</sup> <http://www.seaboardgroup.com/main/images/stories/Reports/getitff.pdf>.

## Rogers Flex Rate Plans for Hubs

Source: Rogers website (24 April 2014), [http://www.rogers.com/web/content/mobile-plans?asc\\_refid=plans-pricing](http://www.rogers.com/web/content/mobile-plans?asc_refid=plans-pricing)



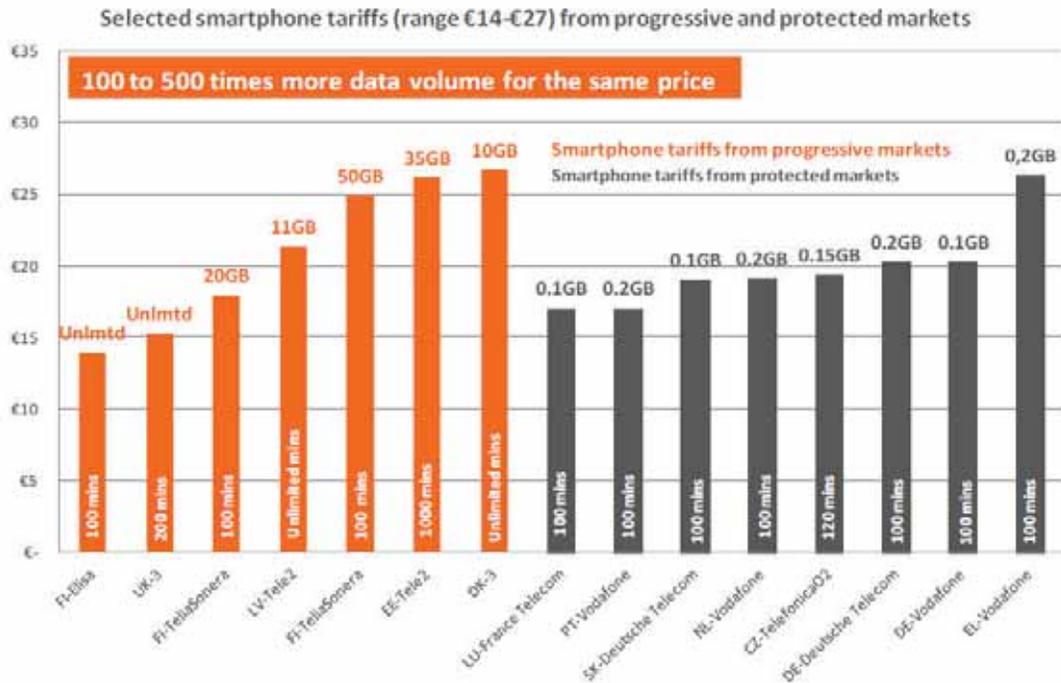
1  
2 The lowest retail data price found from the largest Canadian operator Rogers (AT&T's  
3 roaming partner in Canada) is equal to CDN\$4.50/GB or \$4.14/GB.

### 4 *European Retail Data Prices*

5 Retail prices for telecommunications services vary widely across Europe, including within  
6 the European Union, despite its goal of a harmonized or common market that should lead to  
7 comparable prices for similar services in its member states. The following chart shows examples  
8 of retail mobile data prices across Europe from an analysis in May 2013.<sup>22</sup> It can be seen that  
9 the lowest retail prices include one package at the high volume end at a price of below 1 €  
10 (euro)/GB or about \$0.7/GB, with other examples of mobile services with smaller total volumes  
11 of data at less than \$2 to less than \$4/GB at the exchange rate of early August, 2014. The two

<sup>22</sup> The EU27 Mobile data cost competitiveness Report – May 2013, is available at [http://www.rewheel.fi/downloads/Rewheel\\_EU27\\_mobile\\_data\\_cost\\_competitiveness\\_report\\_May\\_2013\\_FINAL.pdf](http://www.rewheel.fi/downloads/Rewheel_EU27_mobile_data_cost_competitiveness_report_May_2013_FINAL.pdf).

- 1 orders of magnitude gap on a per GB basis of these services with the high prices of very low
- 2 volume packages offered in the least competitive markets such as Germany is striking.



Source: Rewheel analysis

3

4

### 5 Financial Implications for AT&T of the RWA Roaming Agreement

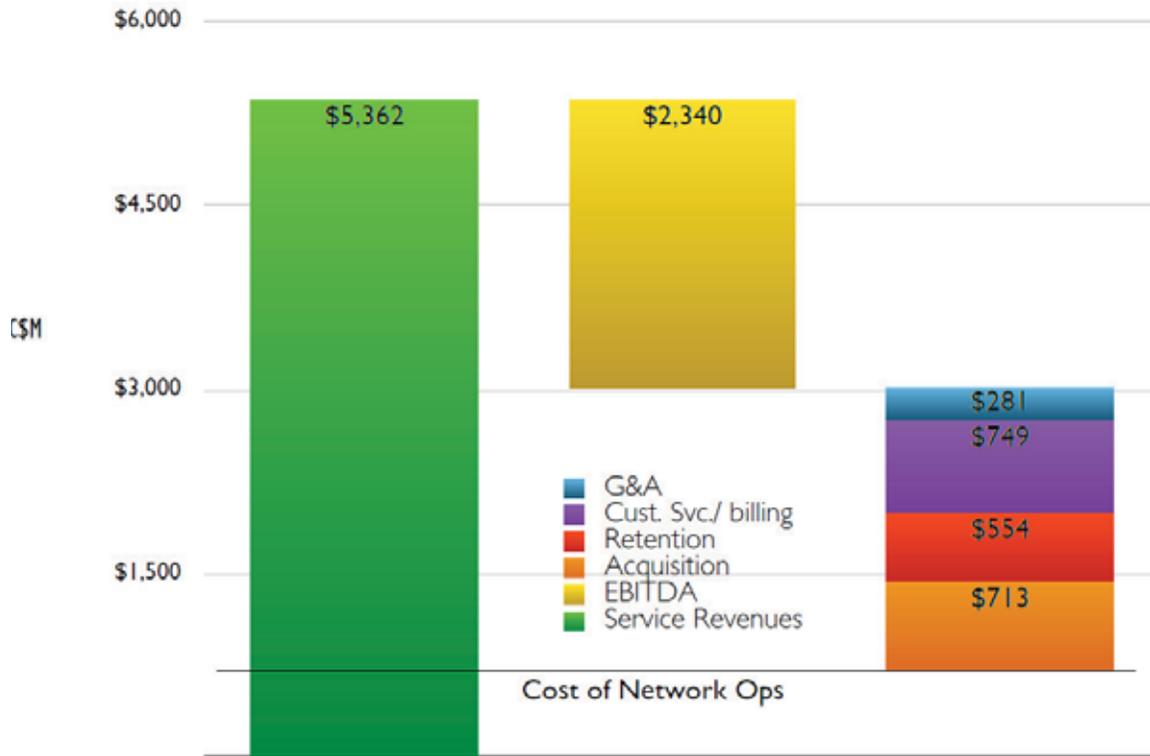
6 The evidence presented in the preceding paragraphs indicates that the proposed  
 7 wholesale price based on “prevailing retail pricing” quantified in the RWA agreement is  
 8 significantly higher than several retail prices that can be found in various markets and from  
 9 several operators.

10 The cost side of the equation must also be taken into account in an assessment of the  
 11 financial consequences for AT&T from the proposed RWA wholesale price for data roaming. The  
 12 retail prices cited are based on individual customers or small groups of customers that should be  
 13 more expensive to serve than wholesale bulk customers, since several costs incurred in serving

1 retail customers are not incurred in serving a wholesale customer. The following chart shows an  
2 example of the structure of retail costs of a mobile operator<sup>23</sup>.

### Deconstructing Retail Pricing: Bell Mobility

Source: Bell reports and SeaBoard calculation (workbook is available for subscribers)



3

4 The total costs of a retail mobile service include:

- 5 • *Marketing (advertising, branding, promotion)*
- 6 • *Customer support and service (call centers)*
- 7 • *Retail stores*
- 8 • *Device inventory costs and subsidies*
- 9 • *Legal, regulatory and lobbying costs*
- 10 • *Bad debts and expenses of collection*
- 11 • *Capital investment and network operating expenses*

<sup>23</sup> Seaboardgroup.com, ibid

1           The cost components in italics are not incurred with wholesale customers, since  
2 wholesale customers buy in bulk and sell services to end-users through their own channels.  
3 These non-incurred costs account in all for about two thirds of total costs in the example of Bell  
4 Mobility that is shown above. It is true that some portion of these costs may legitimately be  
5 attributed in part to Bell Mobility's wholesale services, for example in association with the  
6 support of wholesale customers. Moreover a portion of G&A costs (a component of total legal  
7 and regulatory expenses that do involve wholesale matters as this Proceeding illustrates) may  
8 also be attributable to wholesale customers. In addition there may be losses from bad debts  
9 associated with wholesale customers (e.g. if an MVNO goes bankrupt), although it should be  
10 pointed out that the likelihood of this outcome is increased by arrangements such as the  
11 roaming agreement proposed by AT&T (as assessed in a separate document) that if  
12 implemented would be destructive to its roaming partner's business.

13           Nevertheless the costs to serve one wholesale customer should be significantly lower  
14 than the total costs of serving many individual retail customers that generate an equal or  
15 comparable amount of traffic on AT&T's network to the traffic from one wholesale customer.  
16 Therefore the anticipated overall pricing proposed in the RWA roaming agreement will allow  
17 AT&T to enjoy retail-level prices or revenues from the roaming traffic it receives, while it incurs  
18 wholesale-level costs to carry this traffic. This combination will ensure that AT&T will achieve a  
19 commercially reasonable profit margin on its wholesale roaming services.

20           It is also important to note that under the RWA agreement AT&T will not be  
21 providing the full suite of mobile functionalities, and will not incur other relevant costs,  
22 associated with a retail bundled product. The RWA proposal is not constructed in a way that

1 would turn WCX into a “data MVNO” when WCX customers are roaming. AT&T will not, for  
2 example, be providing the actual “Internet access” to WCX users. AT&T will not be responsible  
3 for obtaining resources on the Internet that are sought by WCX roamers, and will not incur all  
4 the transmission costs associated with carrying the information from where those resources are  
5 stored all the way back to the WCX user. Instead, AT&T will collect information from the user  
6 and route this traffic to WCX, over direct or indirect connections. WCX will take it from there  
7 and see to it that the information is delivered to its destination, connecting its roaming  
8 customer to the internet, email accounts and other data services that are being requested.  
9 WCX will secure any WCX roaming customer’s desired information resources and then hand the  
10 traffic to AT&T for delivery to this roaming WCX customer. AT&T’s “data” costs will be lower  
11 than those it incurs when it is serving one of its own retail customers. In roaming WCX is making  
12 use of AT&T’s transmission and routing facilities but not the services it offers to its own retail  
13 customers.

14 The largest U.S. mobile operator Verizon agrees that roaming is very different from the  
15 resale services in which MVNOs are involved:<sup>24</sup>

16 *There are also significant functional differences between roaming and*  
17 *MVNO services. T-Mobile’s economist recognized these differences, stating “[t]he*  
18 *MVNO benchmark must also be interpreted cautiously because MVNO customers*  
19 *may use the host provider’s network in substantially different ways compared to*  
20 *a roaming customer of a facilities-based competitor.”*

21  
22 *For example, roaming enables the customers of one provider to obtain*  
23 *service from another provider when leaving the area covered by the home*  
24 *provider network. MVNO providers do not have their own networks and rely on*  
25 *resale service to provide service to customers everywhere. Roaming is provided*  
26 *and billed on an individual call basis, whereas resale service is provided and billed*  
27 *in bulk. Roaming service also offers far less predictability with respect to demand.*

---

<sup>24</sup> Verizon's Reply Comments in 05-265, <http://apps.fcc.gov/ecfs/document/view?id=7521785143>.

## 1           **Safeguards against Unreasonable Use of Roaming by a Requesting Carrier**

2           The RWA Roaming Agreement follows the principle that roaming is supposed to be a  
3 necessary supplement to services provided within a facilities-based wireless operator's  
4 spectrum footprint, and not a mechanism for carrying the majority of its customers' traffic. This  
5 intent is clearly expressed in Section 5 (Services) of the RWA agreement.

## 6           **Absence of Provisions allowing Harmful and Unilateral Conduct**

7           The terms and conditions of the RWA roaming agreement are symmetrical with respect  
8 to the obligations on and freedom of action permitted to the two parties involved. See, for  
9 example, Section 12 "Suspension of Services":

10           Suspension of Data Roaming shall be according to existing GSM standards.  
11           Notwithstanding anything in the Agreement to the contrary, either Party may  
12           without liability suspend or terminate all or any of its Data Roaming to individual  
13           Authorized Users in circumstances where it would suspend or terminate those  
14           Data Services to its own subscribers or end users, including but not limited to:

- 15                   1. *Authorized Users using equipment which is defective or illegal; or*
- 16                   2. *Authorized Users causing any technical or other problems on the Serving*  
17                    *Carrier's Network; or*
- 18                   3. *Suspected fraudulent or unauthorized use; or*
- 19                   4. *Authentication of the legal relationship not being possible; or*
- 20                   5. *Maintenance or enhancement of its Network."*

21           The Sections on Termination (Section 13), Indemnification (Section 15) and Liability (section 18)  
22 are similarly symmetric and reciprocal.

## 23           **Impact on Customers**

24           The proposed RWA Agreement will deliver benefits and not cause any harm to  
25 customers. It will establish a roaming rate that enables WCX to offer national coverage to its  
26 customers at nationally competitive retail prices within a business plan and model designed and

1 able to attract investment in WCX's facilities and services at reasonable terms. Its provisions  
2 ensure that WCX will be motivated and able to develop innovative features and services for its  
3 mobile customers as an independent and entrepreneurial competitor.

4 The Commission refused to benchmark roaming rates and prevailing retail rates in  
5 2007.<sup>25</sup> It did so based on a lack of a persuasive showing in the record of that proceeding that  
6 consumers would be harmed in the absence of caps or benchmarks and because of concerns  
7 that benchmarking or capping could reduce investment incentives or perhaps even raise prices  
8 for "regional" calling. The "investment" and potential retail rate increase concerns no longer  
9 apply. Indeed, we now know that high, i.e. non-benchmarked or uncapped roaming rates does  
10 harm consumers, particularly those in rural areas.

11 The analysis in this Declaration has shown that consumers will inevitably be harmed if a  
12 small carrier such as WCX has to pay very high roaming rates, because WCX will no longer be  
13 able to offer competitively priced retail services with national coverage or it will have to impose  
14 severe limits on roaming usage to limit the losses it incurs from its roaming subscribers. This  
15 effectively and substantially reduces the value its customers can derive from the services and  
16 applications they wish to access.

17 In addition the risk of a decreased incentive to invest as a consequence of the level of a  
18 wholesale roaming rate does not apply to WCX and any carrier which is seeking roaming in  
19 areas where it holds no spectrum licenses and hence has no opportunity to invest. Indeed the  
20 reverse is true. By eroding the viability of its business plan very high roaming rates will make it  
21 harder if not impossible for WCX to attract the investments it seeks to improve its network and

---

<sup>25</sup> In *the Matter of Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, 22 FCC Rcd. 15817, ¶¶ 36-40 (2007).

1 services within its franchise area. Moreover since the market for mobile services is national  
2 rural carriers will not be able to raise their retail prices higher than the levels charged in urban  
3 areas whatever the roaming rates they have to pay, whether benchmarked or capped or not.

#### 4 **Conclusion**

5 The proposed RWA Agreement terms, implementation and operation were designed to  
6 be, and are, fully consistent with the goals reiterated and expressed in clear and unequivocal  
7 language of the *Data Roaming Order*. In particular they fully adhere to the spirit and text of  
8 paragraphs 13 to 15 (emphasis added, most footnotes omitted):

9 *We conclude that adopting a roaming rule tailored for mobile data services will*  
10 *best promote **consumer access to seamless mobile data coverage nationwide,***  
11 *appropriately balance **the incentives for new entrants and incumbent providers***  
12 ***to invest in** and deploy advanced networks across the country, and foster*  
13 *competition among multiple providers in the industry, consistent with the*  
14 *National Broadband Plan. Broadband deployment is a key priority for the*  
15 *Commission, and the deployment of commercial mobile data networks will be*  
16 *essential to achieve the goal of making broadband connectivity available*  
17 *everywhere in the United States. As discussed above, our determination to adopt*  
18 *a commercial mobile data roaming rule is supported by the overwhelming*  
19 *majority of commenters and evidence in the record.*

20 *Commercial mobile data services provided over advanced mobile broadband*  
21 *technologies have become an increasingly significant part of the lives of American*  
22 *consumers and the shape of the mobile industry.<sup>26</sup> Mobile data services*  
23 *increasingly are used for a variety of both personal and business purposes,*  
24 *including back-up communications during emergencies and for accessibility. Data*  
25 *traffic has risen sharply over the past few years as a result of the increased*  
26 *adoption of smartphones combined with increased data consumption per device.*  
27 *Our data roaming rule will maximize consumers' ability to use and benefit from*  
28 *wireless broadband data services wherever they are by enhancing **the ability of***  
29 ***all facilities-based providers, including small and regional providers, to provide***  
30 ***nearly nationwide data coverage through roaming arrangements.***

---

<sup>26</sup> For purposes of this Order, "mobile broadband" refers to mobile data services provided using Third-Generation (3G) and Fourth-Generation (4G) mobile network technologies, such as CDMA EV-DO (EV-DO), WCDMA/HSPA, HSPA+, LTE, and WiMAX. For a detailed discussion of the different generations of mobile wireless network technologies, see *Fourteenth Competition Report*, at 213, App. B, [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-10-81A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-10-81A1.pdf).

1           As data services increasingly become the focus of the mobile wireless services,  
2           consumers increasingly expect their providers to offer competitive broadband  
3           data services, and the availability of data roaming arrangements can be critical  
4           to providers remaining competitive in the mobile services marketplace. We agree  
5           that the availability of roaming capabilities is and will continue to be a critical

Table 1: Test of Commercial Reasonableness of the RWA Roaming Agreement
---

6           component to enable consumers to have a competitive choice of facilities-  
7           based providers offering nationwide access to commercial mobile data services.  
8           As more and more consumers use mobile devices to access a wide array of both  
9           personal and business services, they have become more reliant on their devices.  
10          These consumers expect to be able to have access to the full range of services  
11          available on their devices wherever they go. **Providers with local or regional**  
12          **service areas need roaming arrangements to offer nationwide coverage, and**  
13          **there may be areas where building another network may be economically**  
14          **infeasible or unrealistic. Even where providers have invested in and built out**  
15          **broadband networks in a regional service territory, a service provider’s inability**  
16          **to offer roaming easily can deter customers from subscribing.** For example,  
17          Cincinnati Bell represents that “[d]ue to the limited availability of nationwide  
18          roaming partners for 3G and 4G services, [it] is seeing a steady defection of its  
19          customers to the national carriers even though Cincinnati Bell offers a superior  
20          network in its operating area.” Availability of such roaming arrangements also  
21          may be particularly important for consumers in rural areas – where mobile data  
22          services may be solely available from small rural providers. According to  
23          BendBroadband, its mobile broadband product is “not commercially viable for  
24          most consumers primarily because we cannot offer mobility outside of our service  
25          area, due to our inability to secure reasonable rates and terms for data roaming.”  
26          **A data roaming requirement will therefore help to ensure that, as consumers**  
27          **become increasingly reliant on wireless devices, continuity of spectrum-based**  
28          **services is preserved across networks and geographic regions.**

29           My observations and opinions are guided by the principles, policies and goals expressed  
30          in the Order generally and the sentiments expressed in paragraphs 13-15 in particular. I have  
31          also paid particular attention to the “tests” the Commission established in paragraph 86. Table 1  
32          below summarizes the commercial reasonableness of the RWA proffered roaming agreement  
33          against the criteria included in the *Data Roaming Order*.

Test of Commercial Reasonableness	Finding
Whether WCX's conduct unreasonably restrains trade	<b>Reasonable</b> , since the data roaming terms and conditions proffered by WCX enable it to offer national coverage under economically viable conditions and to innovate independently and with third parties in ways that benefit mobile customers, while ensuring a profit margin for and imposing no restraints on AT&T.
Whether WCX has responded to the request for negotiation, whether it has engaged in a persistent pattern of stonewalling behavior, and the length of time since the initial request	<b>Reasonable</b> , since AT&T claimed in 2012 that WCX did not propose its own terms as the requester, WCX participated in and helped create the RWA Model Roaming Agreement which is a consensus of Commercially Reasonable Terms agreed to by the RWA which is a trade association for dozens of United States Rural Wireless Carriers. WCX has, since 2011 and the passage of the FCC Roaming Order, pursued the implementation of a data roaming agreement aggressively and at significant expense proportionate to its resources that are much more limited than AT&T's
Whether the terms and conditions offered by WCX are so unreasonable as to be tantamount to a refusal to offer a data roaming arrangement	<b>Not applicable</b> , because of AT&T's unilateral declaration that it does not want to roam on WCX's network. If and when AT&T does desire to roam on WCX's network, the terms are in fact symmetrical which will make WCX's terms <b>Reasonable</b> .
Whether WCX has any roaming arrangements with AT&T, including roaming for interconnected services such as voice, and the terms of such arrangements	<b>Not applicable</b> , since WCX is a new entrant
Whether AT&T and WCX have had previous data roaming arrangements with similar terms	<b>Not applicable</b> , since WCX is a new entrant

<p>The level of competitive harm in a given market and the benefits to consumers</p>	<p><b>Reasonable</b>, since implementation of the proposed RCA/WCX roaming agreement will enhance competition and deliver benefits to consumers both in WCX’s retail offerings and in its ability to innovate for new services and uses of the network.</p>
<p>The extent and nature of WCX’s and AT&amp;T’s build-out</p>	<p><b>Reasonable</b>, as the RWA Agreement requires (1) Meeting or exceeding FCC Build out requirements and (2) Provision of a majority of data by all home carriers including WCX to its customers in order to roam.</p>
<p>Significant economic factors, such as whether building another network in the geographic area may be economically infeasible or unrealistic, and the impact of any “head-start” advantages</p>	<p><b>Reasonable</b>, since WCX is both a new entrant and has very limited spectrum, it must be able to rely on Roaming on AT&amp;T for up to half of its customers’ data usage. It is unrealistic to require any more of a build out since WCX will be unable to (1) profitably provide a comparable service to AT&amp;T without reliance on roaming to this level, nor will it (2) be able to create new and innovative LTE uses of its own network through technology partnerships unless its partners know it can provide service on a ubiquitous basis; and (3) because AT&amp;T holds a dominant position in similar LTE frequencies in the US.</p>
<p>Whether WCX is seeking data roaming for an area where it is already providing facilities-based service</p>	<p><b>Reasonable</b>, since WCX has met its FCC build out requirements as outlined in Auction 73 for its spectrum. There will be little to no Home Roaming, since WCX intends to use its own network inside the home area. Thus, WCX is seeking roaming for areas where it does not have licensed spectrum and therefore cannot construct facilities.</p>
<p>The impact of the terms and conditions on the incentives for either AT&amp;T or WCX to invest in facilities and coverage, services, and service quality</p>	<p><b>Reasonable</b>, since the terms and conditions are designed to foster WCX’s attractiveness to sources of investment and its ability to offer innovative service. WCX’s effective market entry as a competitor to AT&amp;T will have no material impact on AT&amp;T’s investment incentives.</p>

<p>Whether there are other options for securing a data roaming arrangement in the areas subject to negotiations and whether alternative data roaming partners are available</p>	<p><b>Reasonable</b>, since as a result of AT&amp;T's introduction of Band Class 17 in the 700 MHz Lower Band Block B and C frequencies, WCX has no alternatives for comparable regional or national LTE data roaming in its licensed 700 MHz frequencies. There are no alternative data roaming partners.</p>
<p>Events or circumstances beyond either AT&amp;T's or WCX's control that impact either the provision of data roaming or the need for data roaming in the proposed area(s) of coverage</p>	<p><b>Neutral from AT&amp;T</b>, since AT&amp;T has raised no such events or circumstances in more than 3 years. <b>Reasonable from WCX</b>, since it is reasonable for WCX to rely on its ability to roam on AT&amp;T as essential input of its network and service offerings to the public. Today WCX cannot rely on roaming on AT&amp;T and as such does not have a viable and sustainable long-term business model.</p>
<p>The propagation characteristics of the spectrum licensed to the providers</p>	<p><b>Neutral</b>, since WCX is using spectrum and the same Ericsson equipment and radios that AT&amp;T is using.</p>
<p>Whether WCX's decision not to offer a data roaming arrangement is reasonably based on the fact that the providers are not technologically compatible</p>	<p><b>Not applicable</b>, since WCX is offering identical terms and has deployed the same technology.</p>
<p>Whether WCX's decision not to enter into a roaming arrangement is reasonably based on the fact that roaming is not technically feasible for the service for which it is requested</p>	<p><b>Not applicable</b>, since WCX is offering identical terms and has deployed the same technology.</p>
<p>Whether WCX's decision not to enter into a roaming arrangement is reasonably based on the fact that changes to the host network necessary to accommodate the request are not economically reasonable</p>	<p><b>Not applicable</b>, since WCX is offering identical terms and has deployed the same technology.</p>
<p>Whether WCX's decision not to make a roaming arrangement effective was reasonably based on the fact that the requesting provider's provision of mobile data service to its own subscribers has not been done with a generation of wireless technology comparable to the technology on which it seeks to roam</p>	<p><b>Not applicable</b>, since WCX is offering identical terms and has deployed the same technology.</p>

Other special or extenuating circumstances	<i>Neutral, since none have been identified in over 3 years by WCX or AT&amp;T</i>
Other factors: WCX may argue that the Commission should consider other relevant factors in determining the commercial reasonableness of the negotiations, AT&T's conduct, and the terms and conditions of the proffered data roaming arrangements, including the prices.	<i>Reasonable, since WCX has shown that its proposed roaming arrangement is commercially reasonable while the separate confidential analyses conclude that AT&amp;T's proffered terms are not commercially reasonable, and it has been able to impose roaming terms on much larger and more influential carriers than WCX that they find to be unreasonable<sup>27</sup></i>

1 KEY:

2 **Not applicable:** In the circumstances of WCX and AT&T this factor is not applicable to and  
3 therefore has no probative value for determining whether or not the terms and conditions of  
4 the proffered RCA/WCX data roaming arrangement meet standards of "commercial  
5 reasonableness."

6 **Neutral:** This factor neither supports nor contradicts a finding that the terms and conditions of  
7 the proffered RCA/WCX data roaming arrangement meet standards of "commercial  
8 reasonableness."

9 **Reasonable:** This factor provides evidence that the terms and conditions of the proffered  
10 RCA/WCX data roaming arrangement meet standards of "commercial reasonableness."

11 This concludes my Declaration. I reserve the right to supplement or amend the  
12 Declaration as circumstances may require or permit, and also reserve the right to reply to any  
13 oppositional contentions that AT&T Mobility may raise as the case proceeds.

14



15

16

Martyn Roetter

<sup>27</sup> Reply Comments of T-Mobile USA, Reply Declaration of Dirk Mosa,  
<http://apps.fcc.gov/ecfs/document/view?id=7521785714>

**XI. 1.735(D) Certificate of Service**

I certify that, consistent with rule 1.735(d), a true and correct copy of the foregoing Complaint (redacted public copy and confidential copy) has this day been served by hand delivery on one of the named defendant's registered agents for service of process on the same date that the complaint was filed with the Commission. The agent was:

Anisa Latif  
Certified Agent for Service of Process – AT&T Mobility LLC  
1120 20th Street NW, Suite 1000  
Washington DC 20036

A copy of the foregoing was also served on counsel for the defendant by overnight mail, addressed to:

David Lawson  
Sidley Austin LLP  
1501 K Street, N.W.  
Washington, DC 20005  
1.202.736.8088  
dlawson@sidley.com

By and through counsel:

/s/

MATTHEW A. HENRY

[henry@dotlaw.biz](mailto:henry@dotlaw.biz)

W. SCOTT McCOLLOUGH

[wsmc@dotlaw.biz](mailto:wsmc@dotlaw.biz)

McCOLLOUGH|HENRY PC

1250 S. Capital of Texas Hwy Bldg 2-235

West Lake Hills TX 78746

512.888.1112 (V)

512.692.2522 (FAX)