

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matters of

IP-Enabled Services

E911 Requirements for IP-Enabled Service
Providers

WC Docket No. 04-36

WC Docket No. 05-196

REPLY COMMENTS OF T-MOBILE USA, INC.

T-Mobile welcomes the opportunity to submit these reply comments in response to the Commission's *VoIP E911 NPRM*¹ and to explore future E911 requirements for IP-enabled service providers. T-Mobile is a nationwide commercial mobile radio service ("CMRS") carrier currently serving more than 19.2 million customers. In addition to its CMRS service, T-Mobile also provides Wi-Fi (802.11b) wireless broadband Internet access via its HotSpot service in more than 6200 convenient public locations in the United States, such as Starbucks coffeehouses, hotels, airports, and airline clubs, making it the largest carrier-owned Wi-Fi network in the United States.

In the future, as many press reports have described, it is likely that commercial mobile service providers may more fully integrate their existing CMRS operations with services using unlicensed spectrum to provide IP-enabled services. These converged services hold much promise for consumers. For example, unlicensed wireless service could supplement existing CMRS service, providing better in-building and residential coverage than may have been the case previously.

¹ *IP-Enabled Services and E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245 (2005) ("*VoIP E911 Order*," "*Order*," or "*VoIP E911 NPRM*").

T-Mobile has worked vigorously to ensure that its GSM networks are in full compliance with the Commission's CMRS E911 rules. T-Mobile is equally committed to ensuring that, in the future, customers will receive the best possible level of reliable E911 service while they enjoy the benefits of converged mobile IP-enabled services (which include the benefits that enhanced coverage can bring for communicating generally in times of need).

T-Mobile therefore welcomes the opportunity to work with the Commission to further develop its VoIP E911 requirements. T-Mobile agrees with the Commission that it is vital for consumers to be able to access emergency services in their time of need, and this proceeding is an important effort in ensuring that such services will be developed as effectively and as rapidly as possible. In moving forward, however, the Commission should decline to apply CMRS rules to emerging technologies such as Wi-Fi and WiMax-based interconnected VoIP services. Wi-Fi, in particular, is ill suited to requirements designed for the long distances over which CMRS signals travel. And it would be premature to impose CMRS requirements on WiMax, which has not yet been widely adopted.

The Commission should likewise reject suggestions that it require Master Street Address Guide ("MSAG") validation of location information. Such a requirement could undermine rather than advance public safety by preventing providers from sending the best and most accurate location information available to emergency service personnel.

As virtually all commenters have explained, the Commission should also decline to adopt a fixed deadline for adoption of automatic location technology. Instead of imposing a technology mandate, the Commission should foster adoption of the best

possible location technology by allowing the market and industry to drive the development process.

Finally, and as detailed in T-Mobile's Petition for Clarification of the Commission's *VoIP E911 Order*, the Commission should take a number of discrete steps to harmonize its CMRS and VoIP E911 rules. Taking these actions will maximize public safety by enabling CMRS providers to use their existing E911 infrastructure and capabilities to provide E911 service to interconnected VoIP customers.

I. Wireless VoIP Should not be Subject to CMRS Accuracy Standards.

In response to the Commission's NPRM, TeleCommunications Systems, Inc. ("TCS") alone has argued that wireless VoIP services – services that use wireless broadband connections such as Wi-Fi or WiMax² – should be subject to the same accuracy standards as CMRS.³ The Commission should reject this suggestion. First, the Commission should not lump together CMRS, Wi-Fi and WiMax for regulatory purposes. CMRS is a distinct service regulated pursuant to particular characteristics; Wi-Fi and WiMax are distinct stand-alone technologies. The Commission historically has shied away from regulating particular technologies, especially in the wireless arena, and the results have been extremely positive. It is this hands-off approach to equipment standard-setting, for example, that led to the development of multiple PCS technologies (*e.g.*, CDMA and GSM). The FCC should do no less with respect to Wi-Fi and WiMax as it develops VoIP E911 standards.⁴

² *Id.* ¶ 59.

³ Comments of TCS at 10, WC Docket No. 05-196 (filed August 15, 2005).

⁴ Wi-Fi more closely resembles cordless telephones than CMRS service, sharing frequencies and power levels with cordless telephones and enabling connections only over short distances. WiMax will enable connections over longer distances, but is not yet widely used and its suitability for voice is not yet proven. WiMax, therefore, should not be subject to CMRS regulatory obligations at this early stage as well.

More fundamentally, the accuracy standards applicable to CMRS providers were developed with the capabilities of CMRS services in mind. Indeed, the very standards TCS advocates vary depending on the relevant location technology – GPS or network-based – used. The Commission should not force developing VoIP technologies into regulatory constructs designed for different services. Moreover, TCS’s proposal is a solution in search of a problem: as TCS acknowledges, at the short distances for which Wi-Fi is used, the address of the hot spot will provide sufficient location information.⁵ For WiMax, the Commission should not now impose location accuracy requirements in advance of wider availability of these services.

II. The Commission Should Permit Providers to Use the Most Accurate Location Information Available.

As T-Mobile has explained elsewhere,⁶ the Commission should allow interconnected VoIP service providers the flexibility to furnish PSAPs with the best available location information for their customers. In particular, where a provider has access to real-time location information derived from provision of service or operation of the network, the provider should have discretion to supply that information in lieu of potentially outdated customer-reported location information. By encouraging use of the most accurate information available, this approach will maximize the effectiveness of emergency services.

Encouraging use of the most accurate information available to providers also counsels against requiring MSAG validation for mobile VoIP services. Intrado argues

⁵ TCS Comments at 10.

⁶ Petition of T-Mobile USA, Inc. for Clarification at 4-5, WC Dockets No. 04-36 & 05-196 (filed July 29, 2005) (“T-Mobile Petition for Clarification”).

for MSAG validation,⁷ but such a requirement could impair rather than advance public safety. Mobile carriers like T-Mobile already have reliable and proven E911 systems, a key element of which is the infrastructure designed to deliver location information in geographic longitude and latitude, or “x,y,” format which the PSAPs can accept and use automatically in their CPE. The Commission should encourage these providers to use their existing infrastructure to support interconnected VoIP service by permitting delivery of location information in x,y format.

Further, translating x,y coordinates into MSAG addresses may affirmatively mislead first responders and impair delivery of emergency services. MSAG addresses simply cannot be provided for many of the locations in which mobile devices are used, such as large airports or arenas. Use of an MSAG address in these circumstances could erroneously lead emergency personnel to a generic place even though the person in distress may be located hundreds of yards away. Likewise, translating x,y coordinates into street addresses is an imperfect science, as a number of street addresses typically fall within the range of accuracy of x,y coordinates. And MSAG validation does nothing to improve the accuracy of the underlying location determination. Instead, presenting a fixed street address to first responders when that address is derived from x,y coordinates creates a false impression of precision. PSAPs are already accustomed to receiving CMRS location information in x,y format and, based on their expert knowledge of their own coverage area, responding appropriately. Finally, Intrado overlooks the fact that it often requires several days to fully validate an address against an MSAG. Forcing the use of MSAG-valid addresses will simply and unnecessarily create windows during

⁷ Comments of Intrado Inc. at 1-2, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

which E911 service could be degraded, both when VoIP service is initiated and each time a VoIP device is relocated (a frequent occurrence with nomadic and mobile devices). Consequently, the Commission should enable providers to provide x,y coordinates to emergency personnel and should not mandate use of MSAG-validated location information.

III. The Commission Should Not Set a Fixed Deadline for Provision of Automatic Location Sensing Capabilities.

T-Mobile supports the wide variety of commenters⁸ that have argued against the Commission's proposed June 2006 deadline for the provision of automatic location sensing capabilities. VoIP providers and equipment manufacturers already have significant incentives to solve the critical problem of providing location information for mobile or nomadic VoIP users. The Commission should continue to allow these vitally interested parties to work to develop appropriate solutions. Furthermore, and as CTIA has demonstrated by pointing to the Commission's experience with wireless E911, imposing specific technological mandates can undermine development and adoption of the best technological solutions.⁹ Rather than adopting an arbitrary and potentially counterproductive deadline, the Commission should give providers and equipment manufacturers the freedom to find and adopt the best technological approaches to the

⁸ See, e.g., Comments of AT&T Corp., at 5-8; Comments of SBC Communications Inc., at 6-10; Comments of BellSouth Corporation, at 3-6; Comments of the United States Telecom Association, at 4-6; Comments of Qwest Communications Corporation, at 5-8; Comments of Verizon, at 1-4; Comments of the Information Technology Industry Council, at 5-10; Comments of Cisco, Inc., at 10; Comments of United Online, Inc., at 9-11; Comments of Vonage America Inc., at 7-11; Comments of Skype Communications, SA, at 10-22; Comments of Time Warner Inc., at 7-10, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

⁹ Comments of CTIA – The Wireless Association at 6-10, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

challenge of automatically identifying the location of users of interconnected VoIP services.

IV. The Commission Should Take Steps to Harmonize its CMRS and VoIP 911 Requirements.

T-Mobile has separately petitioned the Commission to clarify certain elements of its *VoIP E911 Order* to ensure that CMRS providers can use their existing capabilities to provide the best possible access to emergency services for their VoIP customers.¹⁰ To present clarity as providers work to comply with the Commission's ambitious and critical new VoIP E911 rules, the Commission should take the steps outlined by T-Mobile in its petition as quickly as possible.

T-Mobile has explained above that the Commission should allow interconnected VoIP providers to supply PSAPs with location information that is automatically derived in lieu of customer-reported information, and to provide that information in x,y form.¹¹ The Commission should take the additional steps outlined in T-Mobile's petition as well. Specifically, the Commission should:

- (1) clarify that a CMRS provider may satisfy the requirement that it obtain customer-provided location information by deriving Registered Location information automatically from its provision of service or operation of the network;
- (2) explain that interconnected VoIP service providers relying exclusively on automatically derived location information need not obtain user-provided Registered Location information;
- (3) permit providers to collect user-provided Registered Location information after service initiation in certain narrow circumstances where collection in advance is virtually impossible;

¹⁰ See T-Mobile Petition for Clarification.

¹¹ See *Supra* at Part II.

- (4) clarify that, for mobile and nomadic VoIP applications, a PSAP is not considered to be capable of “receiving and utilizing” E911 data until the PSAP can use non-call associated signaling and retrieve location from real-time databases, and the implementation period provided in Section 20.18 of the Commission’s rules has elapsed.

Promptly taking these steps will further public safety by enabling CMRS providers offering interconnected VoIP services to rely on their existing E911 infrastructure and furnish emergency services with the best possible location information for interconnected VoIP customers.

V. Conclusion

T-Mobile shares the Commission’s commitment to reliable and effective E911 service for all consumers, and submits these comments in an effort to further this critical goal.

Respectfully submitted,

Thomas J. Sugrue
Kathleen O’Brien Ham
Robert A. Calaff
Daniel J. Menser
T-MOBILE USA, INC.
401 9th Street, NW, Suite 550
Washington, DC 20004
(202) 654-5920

John T. Nakahata
Brita Dagmar Strandberg
HARRIS, WILTSHIRE & GRANNIS, LLP
1200 18th Street, NW, Suite 1200
Washington, DC 20036
(202) 730-1320

Counsel for T-Mobile USA, Inc.

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