

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of)	
)	
Wireless E911 Location Accuracy Requirements)	PS Docket No. 07-114
)	
Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems)	CC Docket No. 94-102
)	
Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling)	
)	
911 Requirements for IP-Enabled Service Providers)	WC Docket No. 05-196
)	

To: The Commission

REPLY COMMENTS OF UNION TELEPHONE COMPANY

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Union Telephone Company ("Union") hereby submits its reply comments in the above-captioned proceeding regarding E911 location accuracy requirements for providers of commercial mobile radio services ("CMRS").¹

I. INTRODUCTION AND SUMMARY

As a member of the Rural Cellular Association ("RCA"), Union fully supports the filings – including comments, reply comments, and *ex parte* presentations – that RCA has

¹ / *Wireless E911 Location Accuracy Requirements; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling; 911 Requirements for IP-Enabled Service Providers*, PS Docket No. 07-114; CC Docket No. 94-102; WC Docket No. 05-196, Notice of Proposed Rulemaking, FCC 07-108 (rel. June 1, 2007) ("*NPRM*").

made in this proceeding. Union therefore adopts and incorporates by reference these filings and the positions RCA has taken on behalf of Union and other RCA members.

Union submits these reply comments in order to call the Commission's attention to an additional, yet significant, factor that affects the ability of carriers serving expansive rural areas to provide emergency communications services. In particular, Union urges the Commission to give careful consideration to the ability of wireless carriers to obtain access or rights-of-way to federally owned and/or managed lands to deploy the facilities, technology, and infrastructure necessary for providing coverage and obtaining the most accurate location information possible for E911 callers.

As discussed herein, carriers can often face substantial delays in obtaining permission to place communications facilities on federal lands or may be denied such permission altogether. In the western United States in particular, where the U.S. Government owns and manages hundreds of millions of acres of land, this can effectively stall or bring to a total halt the deployment of wireless networks and facilities. Union therefore urges the Commission to proactively engage its coordinate federal agencies, impressing on them the public interest need for improved public safety communications and obtaining their active cooperation and assistance in the achievement of this important federal policy objective.

At the same time, Union urges the Commission to recognize that there are situations where wireless carriers will be unable to comply with the Commission's E911 location accuracy standards in certain parts of their service areas due to difficulties in obtaining access to federal lands for the deployment of the necessary facilities and infrastructure. Accordingly, the Commission should ensure that its rules and regulations

on E911 location accuracy appropriately accommodate such circumstances and allow carriers in these areas sufficient flexibility to provide the best emergency communications services possible without fear of penalty.

Finally, Union provides herein a brief reply to certain other issues raised by the Commission in Section III.B. of the *NPRM*.

II. UNION TELEPHONE COMPANY

Union was founded in 1914 and has a long-standing history of providing vital telecommunications services in underserved rural areas. Based in Mountain View, Wyoming, Union provides local telephone service to approximately twenty-five rural communities in parts of Wyoming, Colorado, and Utah. In 1990, Union expanded to wireless telecommunications service and now provides, or is licensed to provide, coverage to an area encompassing over 123,611 square miles of mostly rural country. A map of Union's wireless coverage area is provided as Attachment 1.

Although Union commenced operations with only eight cell sites, the demand for cellular service has caused this number to multiply to over 200 cell sites placed throughout Wyoming, northwestern Colorado, and parts of Utah. Besides basic telephone and cellular service, Union also offers long distance, Internet, and cable television service.

III. ACCESS TO FEDERAL LANDS PRESENTS A SIGNIFICANT CHALLENGE FOR CARRIERS IN RURAL AREAS

Union shares the concerns expressed by many commenters that new location accuracy requirements, including the Commission's recently-adopted PSAP-level compliance requirement, will place an enormous strain on rural Tier III carriers,

especially on GSM carriers such as Union, who must rely on network-based location technologies and solutions in order to provide Phase II location information for callers.

A. Union’s Network-Based Location Solution

Because Union serves an expansive, sparsely populated, largely rural area, its cell sites are widely dispersed in comparison to those in suburban and urban regions. In many areas, for example, Union’s cell sites are deployed in a “string of pearls” configuration along a highway or other corridor. In some parts of Union’s service territory, such a configuration is the only economically viable way to provide coverage, while in other parts of Union’s service territory it is the only configuration that is possible, such as along public roads in National Forests or National Parklands. In addition, much of Union’s service territory covers mountainous and/or forested terrain, presenting additional coverage challenges.

All of these factors serve as obstacles to the effectiveness of network-based trilateration in determining a caller’s location. In order to overcome these obstacles to the greatest degree possible, Union is planning to implement an Angle-of-Arrival (“AOA”) solution on its network. Although AOA is one of the most advanced network-based location solutions currently available, it is not capable of meeting the Commission’s location accuracy standards in all parts of Union’s service territory at the PSAP level.²

B. Access to Federal Land Presents a Unique Challenge to Union

Although the construction of additional cell sites would be the most direct way for Union and other network-based carriers to improve location accuracy in rural areas, this

² / See, e.g., T-Mobile *Ex Parte* Presentation filed August 6, 2007, at 7; T-Mobile *Ex Parte* Presentation filed Sept. 6, 2007, at 3 – 4.

can be prohibitively expensive and sometimes impossible.³ Aside from cost, one of the most significant obstacles Union faces is its ability to obtain access to federally owned and managed lands for the construction of communications towers.

1. Union Requires Access to Federally Owned and Managed Lands in Order to Provide Service

As shown in the maps included as Attachment 2, much of the land in Union's service territory is owned and/or managed by the U.S. Government and is administered by the Bureau of Land Management (BLM), the National Park Service, the U.S. Forest Service, and other federal agencies.⁴ Union roughly estimates that these federal holdings account for between fifty and sixty-five percent of the total land area in Union's service territory. These federal lands abut, and often surround, towns and communities, private homes, private ranches and farms, as well as highways, roads, and other transportation corridors. These lands are also host to a wide range of activities, from recreation and tourism to mining and energy development and exploration. The people who live, work, recreate, and travel through these areas often depend on the wireless coverage provided by Union for their communications needs, including in emergencies.

In order to provide the coverage necessary to meet the public demand for wireless services, Union's only option in many cases is to construct a communications site on federally owned or managed land. This means that Union must first apply for and receive a permit from the relevant federal agency for access to the necessary rights-of-way and for permission to construct and operate a tower on the agency's land. The agency must then review Union's application to determine how it fits within the agency's management

³ / RCA Comments at 4.

⁴ / These maps were produced by the U.S. Geological Survey and may also be viewed or downloaded at <http://nationalatlas.gov/printable/fedlands.html#list>.

plan for the area, and must also ensure that the application is reviewed and processed in accordance with the requirements of relevant federal laws on land management, environmental and historical preservation, and so forth.⁵ Although each agency has established procedures and guidelines for reviewing and processing rights-of-way applications, this process can still require a considerable amount of time, and there is no certainty as to whether a particular application will be granted or denied, or whether it will be subject to sometimes substantial delays in processing. This has a significant impact on Union's ability to construct the cell sites necessary to fill in gaps in its existing coverage and to expand coverage to areas where it is needed or demanded by the public.

2. National Park Service Lands

As an example, Union provides coverage and services, including emergency communications services, to park users and employees in parts of Grand Teton National Park and Yellowstone National Park, but has no coverage – and thus cannot provide services – along the John D. Rockefeller, Jr. Memorial Parkway, a well-traveled road that serves as the primary link between the two national parks.⁶ This Parkway and the lands around it are administered by the National Park Service through Grand Teton National Park.

In March 1999, Union submitted an application to construct a tower to provide cellular coverage along the Parkway and eliminate the “dead zone” that exists between

⁵ / Examples of these laws include the Federal Land Policy and Management Act (“FLPMA”), the National Forest Management Act (“NFMA”), the National Environmental Protection Act (“NEPA”), and the National Historic Preservation Act (“NHPA”).

⁶ / According to the National Park Service, Yellowstone National Park receives approximately three million visitors per year, and Grand Teton National Park receives nearly four million visitors per year. The parks together have over six thousand employees during the peak season. *See* <http://www.nps.gov> (last visited Sept. 14, 2007).

Yellowstone and Grand Teton. Union then commissioned and submitted an Environmental Assessment that was published for public review in May 2000. One year later, in May 2001, the National Park Service issued a decision approving Union's application, but then withdrew its approval two months later, stating that it was initiating a wilderness study for the area including the proposed site and, before Union's application could be processed any further, the Park Service must first complete an analysis to determine whether the proposed site would be included in a wilderness designation. This analysis is still pending six years later, and Union has been unable to get any response from the National Park Service about when it may be completed.

This situation is entirely beyond Union's control. Unless and until the National Park Service completes its long-delayed analysis, Union can do nothing to provide wireless communications services, including emergency communications services, to any of the millions of visitors and employees traveling through the area of the John D. Rockefeller, Jr. Memorial Parkway each year. In addition, Union can do nothing in this area to improve its existing coverage at the fringes of its nearby coverage areas in Yellowstone and Grand Teton National Parks, and in no event can Union do anything to improve E911 location accuracy for these fringe coverage areas, regardless of what rules or requirements the Commission may adopt.

Union has successfully worked with National Park Service staff in the past, not only to provide coverage in portions of national parks, but also during emergencies, such as when the National Park Service asked Union to provide emergency wireless facilities during a fire at Yellowstone National Park. However, Union has also encountered significant delays in the processing of its right-of-way applications. For example, in

addition to the situation with the John D. Rockefeller, Jr. Memorial Parkway discussed above, the National Park Service has failed to process other applications Union has filed for sites in Yellowstone National Park for between three and four years. This has effectively prevented Union from building out and improving its wireless network coverage in these areas.

3. Bureau of Land Management and the U.S. Forest Service

Union has also experienced difficulties – and, in some cases, strenuous resistance – in its efforts to obtain communications rights-of-way from BLM and the U.S. Forest Service. Although BLM must issue a preliminary written response to an application within sixty days of receipt, Union has five applications in Wyoming alone that have not been processed for anywhere from seven to nine months, and BLM has not provided satisfactory explanations for any of these delays. In fact, one of the BLM Field Offices has even admitted that its delays in processing two of Union’s applications are in retaliation for Union’s decision to appeal the denial of a separate, unrelated application to the Department of Interior’s Board of Land Appeals. Union’s efforts to address these delays through the regional field offices and the BLM Wyoming State Director have thus far been unsuccessful.

The U.S. Forest Service, meanwhile, has not completed the processing of at least six separate rights-of-way applications filed by Union for anywhere from three to six years after they were submitted. While the Forest Service, like BLM, must issue a preliminary written response to an application within sixty days of receipt, it still has not responded to an application filed by Union in 2001 for a site in the Bridger-Teton National Forest, and also has not responded to two separate applications filed by Union in 2004 for other sites in the same national forest. The Forest Service also violated its own

regulations by refusing to entertain repeated attempts by Union to appeal the denial of two other applications for sites in the Routt and Arapaho National Forests. Although the Forest Service eventually agreed to reconsider these denials, its initial refusal to do so has effectively delayed the processing of these applications for several years.

4. Communications Sites Are a Low Priority for Other Federal Agencies

A common theme underlying many of these delays is the decision by these agencies to assign a relatively low priority to processing applications for communications rights-of-way. BLM has repeatedly stated that the processing of applications related to energy development is its top priority, while Forest Service personnel have stated that applications for non-recreational activities are given a low priority.

In so doing, these agencies overlook or disregard the fact that wireless communications are essential to these “priority” activities. Energy and energy-support companies rely on Union’s wireless communications services for their day-to-day operations, and these companies have repeatedly asked Union to increase wireless coverage for their emergency communications, without which they will not commence operations in remote areas. Union has also received repeated requests from recreational outfitters and guides to increase its coverage for their emergency and other communications needs.

5. Denials of Access Affect the Public as a Whole

These agencies’ delays and decisions on rights-of-way also have a significant impact on the safety of the public as a whole. For example, Union is currently appealing BLM’s denial of a right-of-way application for a tower that would help close a significant coverage gap along US Highway 287 in Fremont County, Wyoming. The Board of

County Commissioners for Fremont County has moved to intervene in this appeal in support of Union, arguing that BLM's refusal to allow Union to construct the cell tower in question will cause direct and immediate harm to the public in Fremont County, particularly with respect to the availability of emergency communications not only for those in need, but also for public safety first responders in the area who utilize Union's wireless communications services. This appeal is currently pending before the Department of Interior's Board of Land Appeals.

C. The Commission Must Address the Impact of Access to Federal Land

The Commission has repeatedly stated that public safety is one of its top priorities, and that improving public safety communications – including the availability and accuracy of E911 services – is a leading policy goal. However, this goal cannot be achieved by the Commission and industry alone. The Commission must also obtain the cooperation of other federal agencies that, for whatever reason, do not necessarily share the Commission's view on the priority that should be placed on public safety communications needs.

At the same time, the Commission's rules and regulations must recognize and accommodate situations where wireless carriers are or will be unable to comply with the Commission's E911 location accuracy standards in certain parts of their service areas due to their inability to obtain timely access – or to obtain any access whatsoever – to federal lands for the deployment of the facilities, technology and infrastructure necessary to provide the required level of location accuracy for E911 services. For example, the Commission's recently-adopted licensing and service rules for the 700 MHz band include a provision stating that 700 MHz licensees will not be penalized for failing to meet their geographic buildout benchmarks if they do not provide coverage on government lands

located within their license areas.⁷ The Commission should make a similar accommodation with respect to its E911 location accuracy requirements. Otherwise, rather than face penalties for failing to meet these requirements due to circumstances beyond their control, carriers may choose to discontinue service in or near these areas altogether, potentially leaving millions of Americans without access to emergency or any other communications.⁸ As CTIA stated, such a result would be “clearly contrary to the FCC’s objective of ‘ensur[ing] that wireless E911 service meets the needs of public safety and the American people’.”⁹

IV. OTHER ISSUES RAISED IN THE COMMISSION’S *NPRM*

Union would also like to briefly reply with respect to other issues raised by the Commission in the *NPRM*.

A. Timeframes for Compliance

In considering the appropriate timeframes for carriers to achieve compliance with new E911 location accuracy requirements, including the Commission’s newly adopted requirement that accuracy be measured at the PSAP level, Union agrees with RCA and SouthernLINC Wireless that the Commission should adopt staggered compliance

⁷ / *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket No. 06-150, Second Report and Order, FCC 07-132 (rel. Aug. 10, 2007) at ¶¶ 157, 160-161; *Id.* at ¶ 160 (As the Commission correctly noted, “In many locations, covering certain government land may be impractical, because these lands are subject to restrictions that prevent a licensee from providing service or make provision of service extremely difficult.”).

⁸ / *See* CTIA Comments at 5; *See also* T-Mobile Comments at 3; National Telecommunications Cooperative Association (NTCA) Comments at 3.

⁹ / CTIA Comments at 5 (citing *NPRM* at ¶ 1).

schedules for Tier I, Tier II, and Tier III carriers.¹⁰ Because vendors generally push Tier III carriers to the end of the line for new equipment, they need additional time to obtain and deploy the new technology and equipment that will be needed to meet the Commission's location accuracy requirements.¹¹

B. Adoption of a Single Location Accuracy Standard

Union joins RCA, AT&T, and T-Mobile in opposing the adoption of a single, uniform location accuracy standard for all technologies.¹² Union agrees that such a move would be “grossly inequitable” and “patently unfair at this juncture.”¹³ As RCA stated in its comments:

Ten years ago the Commission set the accuracy requirements for a network-based location solution and carriers spent ten years and untold millions of dollars attempting to build location solutions to meet this requirement. To now say “sorry,” we want you to meet a higher level of accuracy even though the evidence is that wireless carriers are struggling to meet the original requirement is nonsensical.¹⁴

¹⁰ / RCA Comments at 4 – 5; SouthernLINC Wireless Section III.A. Reply Comments at 14.

The Commission has explicitly waived the sunshine period prohibition to allow parties to file comments relating to questions raised in Section III.B. of the *NPRM*, which includes the Commission's request for comment on the appropriate timeframe for enforcement of the PSAP-level requirement. *Wireless E911 Location Accuracy Requirements; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling; 911 Requirements for IP-Enabled Service Providers*, PS Docket No. 07-114; CC Docket No. 94-102; WC Docket No. 05-196, Order, DA 07-3957 (rel. Sept. 18, 2007) at ¶ 2; *NPRM* at ¶ 8.

¹¹ / *Id.*; See also NTCA Comments at 3.

¹² / RCA Comments at 5 – 6; AT&T Comments at 7 – 9; T-Mobile Comments at 16 – 17.

¹³ / T-Mobile Comments at 16; RCA Comments at 5.

¹⁴ / RCA Comments at 5.

The record overwhelmingly shows that it is impossible for network-based carriers to meet the current accuracy requirements for network-based systems throughout their entire service areas. Thus, there is no basis to assume that these same technologies will be able to meet the even stricter standard currently applicable to AGPS handset-based systems.

Furthermore, GSM carriers such as Union do not have the option of implementing a handset-based AGPS solution as either a supplement to or replacement for their network-based systems. As T-Mobile pointed out, “because the U.S. is only a small part of global CMRS equipment markets, particularly for GSM equipment, U.S. requirements have to be coordinated with other product changes being implemented around the world.”¹⁵ So far, GSM manufacturers have not had any incentive to develop – let alone provide – AGPS handsets for U.S. carriers, nor do they appear likely to in the near future. And even if manufacturers do eventually decide to produce AGPS-equipped GSM handsets, this equipment will go to the largest carriers first, while Tier III carriers such as Union will be pushed to the end of the equipment supply line.

C. New Location Technologies and Standards

Union agrees with other commenters that it is premature for the Commission to consider adopting new, stricter location accuracy standards.¹⁶ The record clearly shows that current technology cannot even meet the current standards in all circumstances, and there is still no reliable test data on the capabilities of new technologies, many of which are still in the early development stages. Determining an appropriate timeframe for requiring compliance with any new standards would thus be speculative at best.

¹⁵ / T-Mobile Comments at 18.

¹⁶ / *See, e.g.*, AT&T Comments at 11.

However, as discussed above, if the Commission should decide to adopt new location accuracy standards at some point in the future, it should also adopt a staggered compliance schedule for Tier I, Tier II, and Tier III carriers.

WHEREFORE, THE PREMISES CONSIDERED, Union respectfully requests the Commission to take action in this docket consistent with the views expressed herein.

Respectfully submitted,

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