

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

In the Matter of )  
 )  
Wireless Telecommunications Bureau ) WT Docket No. 02-46  
Seeks Comment on Report Technical and )  
Operational Wireless 911 Issues )

To: Wireless Telecommunications Bureau

**COMMENTS OF THE RURAL TELECOMMUNICATIONS GROUP**

The Rural Telecommunications Group (“RTG”)<sup>1</sup> hereby submits comments on the Report on Technical and Operational Wireless E911 Issues (“Hatfield Report” or “Report”)<sup>2</sup> in response to the Federal Communications Commission’s (“FCC” or “Commission”) invitation in its *Public Notice* released October 16, 2002 (DA 02-2666).<sup>3</sup> RTG has been heavily involved in this proceeding since 1996 when the Commission sought further comment with regard to its nascent wireless enhanced E911 (“E911”) rules.<sup>4</sup> RTG has consistently brought to the Commission’s attention the unique obstacles that rural wireless carriers face regarding the implementation of

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<sup>1</sup> RTG is an organized group of rural telecommunications providers who have joined together to speed the delivery of new, efficient, and innovative telecommunications technologies to the populations of remote and underserved sections of the country. RTG’s members provide wireless telecommunications services such as cellular telephone service and Personal Communications Services (“PCS”) to their subscribers. RTG’s members are all affiliated with rural telephone companies or are small businesses serving secondary, tertiary, and rural markets.

<sup>2</sup> *A Report on Technical and Operational Issues Impacting The Provision of Wireless Enhanced 911 Services*, prepared for the FCC by Dale N. Hatfield (October 15, 2002). The report, authored by the former Chief of the FCC’s Office of Engineering and Technology, Dale Hatfield, is sometimes referred to hereinafter as the Hatfield Report.

<sup>3</sup> *Wireless Telecommunications Bureau Seeks Comment on Report on Technical and Operational Wireless 911 Issues*, WT Docket No. 02-46, DA 02-2666 (October 16, 2002).

<sup>4</sup> *Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Calling Systems*, CC Docket No. 94-102, Further Notice of Proposed Rulemaking (July 26, 1996) (“*FNPRM*”).

E911. For example, RTG has consistently represented that rural carriers' base stations are spread far and wide or are located in straight lines on roadways, making the FCC's accuracy standard difficult or impossible to meet in many cases.<sup>5</sup> RTG also kept the Commission abreast of the harsh economic consequences and rural market cost recovery problems associated with the implementation of E911.<sup>6</sup> RTG is pleased that the Hatfield Report recognizes the technical impediments and fiscal inequities faced by rural carriers.

### **I. The Report Accurately Identifies Accuracy Hurdles in Rural Settings**

Through his research, Mr. Hatfield found that many carriers are encountering technical and operational problems preventing the deployment of E911. The Report recognizes that small, rural carriers have additional technical and operational problems that may make it more difficult for them, as opposed to nationwide carriers, to implement E911 services. As RTG members have cited in their various E911 reports, the layout of base station sites in rural areas is typically "far from ideal" for network-based ALI solutions. For example, base station coverage sites are often larger, leading to weaker signals. In addition, base stations are often located along highways in a ribbon or "string of pearls" configuration, making triangulation difficult, if not impossible.

Mr. Hatfield correctly recognizes that rural carriers generally do not have heavily populated areas with enough transmission sites that they can use to average their accuracy results in order to meet the Commission's accuracy standards. While large, nationwide carriers can meet the Commission's accuracy percentage standards by using urban-based accuracy averages to overcome less accurate rural results, rural carriers do not have this option. Instead, they must meet nationwide standards developed, for the

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<sup>5</sup> RTG's September 25, 1996 *FNPRM* Comments at 2 and 3.

<sup>6</sup> *Id.* at 4 and 5.

most part, with nationwide carriers in mind. Arguably, rural carriers are expected to provide more accuracy in rural areas than nationwide carriers. While there is no denying the public safety benefits of a Phase II E911 regime where customers receive better emergency accuracy results in regions covered by small, rural carriers, such a regime is contrary to Commission intent to set a consistent accuracy standard for all carriers and their customers.<sup>7</sup> Further, rural carriers do not have the same financial resources as urban-based carriers to make the changes necessary, such as building additional towers, to meet essentially more stringent accuracy standards in rural regions than the large carriers must meet in their rural regions.

In light of the Report, RTG suggests that the Commission reexamine its accuracy standards and develop an accuracy standard that reflects the difficulties small, rural carriers have in achieving the same accuracy results that are achievable in urban areas. Since small, rural carriers cannot use any urban-based accuracy results to average out inherently less accurate results in rural areas, the Commission should allow small, rural carriers to meet a “rural” accuracy standard.

## **II. Deployment of Phase II E911 Is an Immense Economic Burden for Small, Rural Carriers**

As RTG members are painfully aware, commercial mobile radio service (CMRS) carriers are largely responsible for recovering the costs of E911 implementation from their own customer base. RTG applauds Mr. Hatfield for identifying that building base stations solely for the purpose of providing more accurate position fixes is uneconomical for most rural carriers with smaller customer bases. For several RTG members, deployment of E911 capability has been

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<sup>7</sup> *In re Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Calling Systems*, CC Docket No. 94-120, Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 18676 at ¶ 136 (1996).

particularly difficult due to economic obstacles they face in attempts to purchase the switch upgrades necessary for Phase II deployment. While RTG's members are committed to the implementation of Phase II E911, sometimes the upgrades necessary to achieve such compliance border on the economically irrational. For example, one RTG member in particular must purchase a \$500,000 Nortel product to upgrade its switch. With a limited customer base, this RTG member has to spend approximately \$1700 per customer to upgrade its switch. This figure does not even include the additional Phase II handset, cell site, network signaling, switching and location equipment, and software upgrade costs that will be added on when they implement their Phase II solution. The carrier would have to increase each customer's bill by approximately \$14.00 per month for the next ten years in order to recover its switch upgrade investment (not including interest payments). This cost is prohibitively expensive and rural carriers should not be required to incur such costs to meet an unfunded government mandate.

While Mr. Hatfield does not provide any recommended solutions to the cost-recovery aspect of E911, he does an excellent job of defining the issue. As stated above, CMRS carriers are largely responsible for recovering the costs of E911 implementation from their own customer base. In fact, Mr. Hatfield points out that wireless subscriber bases are slowing and with "dry" capital markets, building out E911 is an arduous task for even the largest members of the wireless industry. Consistent with Mr. Hatfield's recommendation to use the Department of Homeland Security as a possible overseer of E911 rollout due to the security and emergency benefits of E911, RTG suggests that a funding mechanism for rural Phase II E911 be considered by both Congress and the FCC in order to meet the critical public safety needs of rural America.

