

Before the  
Federal Communications Commission  
Washington, D.C. 20054

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SEP 28 2001  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
)  
Revision of the Commission's Rules )  
To Ensure Compatibility with )  
Enhanced E911 Emergency Calling Systems )

CC Docket 94-102

**RCC MINNESOTA, INC.  
PETITION FOR TEMPORARY WAIVER OF THE  
E911 PHASE II ENHANCED WIRELESS SERVICES**

RCC Minnesota, Inc. (hereinafter "Petitioner"), by its attorneys, hereby requests a temporary waiver of the wireless E911 location technology phase-in requirements of the Commission's rules, 47 C.F.R. 20.18(f)<sup>1</sup> and (g)<sup>2</sup> in the state of Minnesota. Specifically, Petitioner seeks a temporary waiver of the requirement that Commercial Mobile Radio Service (CMRS) carriers selecting a network-based Phase II E-911 solution follow a phased in implementation schedule beginning October 1, 2001. As set forth below Petitioner currently is in the testing and implementation stages of E-911 Phase 1. Despite concerted good-faith efforts, Petitioner has not been able to find a viable solution to meet the mandate in the time allocated. Other carriers have come to the same conclusion, as evidenced by the number of waiver requests before the Commission. Petitioner therefore proposes a modified implementation schedule that will Phase II E-911 service to begin in the third quarter of 2002 with a phase in of greater

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<sup>1</sup> Third Report and Order In Re Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, 14 FCC 17388 (released October 6, 1999).  
<sup>2</sup> Fourth Memorandum Opinion and Order In Re Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, 15 FCC Rcd. 17442 (released September 8, 2000) ("Fourth MO&O")

coverage over the following 12 months. Such a request is consistent with the Commission's goals in this E-911 proceeding and is in the public interest.

## **I. Background**

Petitioner is a Cellular Radiotelephone Service provider which offers wireless telecommunications service in rural Minnesota. In its Implementation Report originally filed with the Commission on November 9, 2000 and as amended February 8, 2001, Petitioner indicated its intent to employ a handset Phase II E-911 solution consistent with Section 20.18(g) of the Commission's rules. Since that initial filing Petitioner has determined that a handset solution is no longer a possibility since handsets which are compatible with Petitioner's TDMA are not available. Therefore, on September 17, 2001, Petitioner filed an amendment to its Implementation Report to indicate its intent to employ a network-based solution to and thereby begin providing Phase II location information within 6 months of a valid PSAP request. However, because of Petitioner's relatively small size combined with the general difficulties and unique challenges faced by rural wireless carriers, compliance with Phase II by October 1, 2001 is not feasible. Petitioner has extensively studied available Phase II location technology offerings, has determined viable paths to compliance with the FCC Phase II performance requirements, and has acquired portions of the supporting technology components where commercially viable. These efforts are described below.

### **A. Evaluation of existing technologies**

Petitioner provides wireless service to rural Minnesota using a combination of AMPS and TDMA cellular technologies. Neither of the two categories of location technology – network-based or handset-based – has proven viable in this market. (See Petitioner's previously delivered Implementation Plan.<sup>3</sup>)

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<sup>3</sup> E-911 Phase 2 Implementation Plan, as amended, Rural Cellular Corporation and its Subsidiaries, September 17, 2001

Handset based. RCC originally chose a handset-based position determination approach, as described in the original implementation plan filed with the FCC in February 2001. The rationale for the choice was that available network-based systems were not expected to provide the necessary accuracy. However, over the course of the year, RCC has determined that no GPS-oriented handset-based solution is available that is compatible with its installed AMPS/TDMA infrastructure, nor is any expected to be available in the immediate future (GPS being the only handset solution proven to meet the E911 performance requirements). As has been demonstrated in the record, vendors have not made location-enabled TDMA/AMPS handsets available to Petitioner, or to other carriers. (See, for example, AT&T's waiver request.<sup>4</sup>) Petitioner's sales volume is not of a size that is adequate to entice vendors to leverage this technology into their product. Petitioner has been unable to obtain a commitment from its supplier to provide location-capable handsets by the Commission's October 1, 2001 deadline for commencing the sale of Phase II-compliant handsets. As a result, handset-based location technology is not an option for Petitioner. (See Attachment B)

Network based. Having determined that a network-based solution is the only technology available to Petitioner, the performance of such a system has been analyzed. Petitioner has contracted with a leading wireless location engineering services organization to evaluate the theoretical performance of a network-based system in Petitioner's rural market (see Attachment A). The results are not promising. The analysis assumes a location receiver resident at each of Petitioner's tower sites in the densest of its Minnesota areas (RSA 5), utilization of a combined angle of arrival (AOA) and time-difference of arrival (TDOA) technologies, and performance consistent with current state of the art technology. The analysis tool, which has been successfully

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<sup>4</sup> AT&T Wireless Services, Inc. Request for Waiver of the E911 Phase II Location Technology Implementation Rules, AT&T Wireless Services, Inc., April 4, 2001. Also see Leap Wireless International, Inc. Petition for Partial Waiver of E-911 Phase II Implementation Milestones at 13-16 (August 23, 2001); Inland Cellular Telephone Co. Petition for Limited Waiver of Section 20.18(e) and (g)

utilized for a number of deployments, predicts 100-meter accuracy in only about 8% of the geographic area. (Due to the sparse population of these areas, most points are served by one – or at most two – towers, whereas multiple towers are required for an accurate location estimate.) The value of installing such a location system is clearly minimal, as it comes nowhere near meeting the E911 performance requirements. To reach the performance goals, numerous new tower sites would be required – perhaps twice the number of sites required for voice coverage today. (29 sites in Minnesota RSA 5 currently provide an acceptable grade of voice service.) Since this is rural terrain, most of the new sites would require new tower construction as well as power and communication backhaul service. A rough estimate of cost is between ten and twenty million dollars of capital expense, not including ongoing operational costs.

#### **B. The Path to Compliance**

Petitioner has shown good faith in meeting the Commission’s Phase I requirements, using the Intrado MPC plus ALI. Petitioner is currently implementing Phase I services in the Minnesota market. Industry leader Intrado will provide the data services for Phase I, and has Phase II data services in place for when the positioning equipment is available.

In addition, RCC has contracted the services of TechnoCom Corporation to help evaluate position determination options. TechnoCom’s experience in this area will ensure that all available options are considered, that the deployment of the position determination equipment is executed quickly and efficiently, and that its performance is optimized.

Petitioner has received a Phase II request from the State of Minnesota. The Commission has, as of this time, not issued a clarification regarding the objective criteria a PSAP should be required to demonstrate at the time that it makes such a request of a carrier. It is unclear whether the PSAP has taken sufficient steps to assure that it will be able to receive and utilize the E-911

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of the Rules at 3 (July 30, 2001); Qwest Wireless, LLC and TW Wireless, LLC’s Petition for Extension of Time or Waiver of Section 20.18 of the Rules at 8 (July 25, 2001).

data prior to the delivery of service by the carrier. Until such time as Petitioner can determine the kinds of identifiable, measurable criteria which will help all involved parties predict whether a PSAP will be ready to receive and utilize Phase II information within six months of the request, it is very difficult for Petitioner to set even a basic timetable for deployment.

However, in light of the Commission's current directives, Petitioner proposes to implement a network-based solution using triangulation of existing cell sites where such triangulation is possible. Specifically, Petitioner proposes the following implementation plan:

- (1) Order and install the switch hardware and software necessary for Phase II by the beginning of third quarter 2002;
- (2) Provide Phase II service to half of the cell sites in the service area that are capable of obtaining location information by triangulation with at least two neighboring cell sites by the end of calendar year 2002; and
- (3) Provide Phase II service to the remaining cell sites in the service area that are capable of obtaining location information by triangulation with at least two neighboring cell sites by the end of the first quarter 2003.

Petitioner's approach here is to concentrate its Phase 2 resources in those cell sites that can actually use the technology to identify location coordinates. However, this method will only provide some level of Phase 2 capability in approximately 24% of the service area and within the covered area only 31% of the calls could meet the commission's accuracy standard (See Addendum A). In order to provide this service to the remainder of its service area many additional cell sites would have to be constructed strictly for the purpose of triangulation, with no voice traffic on those sites. This method would require Petitioner to build triple the number of cell sites, which are expensive and not necessary to carry the voice traffic of Petitioner's subscriber base.

Petitioner hopes that by the time it has completed triangulation in its existing cell sites in the service area, additional technological solutions will be available to implement Phase 2 in the remaining portion of its service area. Some leading candidates under consideration are mentioned here.

MNLS. Mobile-Assisted Network Location System (MNLS) has been proposed by leading TDMA carriers as an interim solution for TDMA networks. If this technology becomes accepted, Petitioner can adopt it, leveraging the momentum provided by the larger carriers.

GSM E-OTD. The preferred location technology for GSM networks at this time appears to be Enhanced Observed Time Difference of arrival (E-OTD). Should Petitioner become justified in migrating its airlink from TDMA to GSM, this technology becomes a prime candidate for Petitioner's upgraded network.

CDMA handset. Likewise, the preferred location technology for CDMA networks at this time is a handset-based solution. Should Petitioner become justified in migrating its airlink from TDMA to CDMA, this technology becomes a prime candidate for Petitioner's upgraded network.

## **II. Discussion**

Generally, the Commission's rules may be waived when there is good cause shown<sup>5</sup> and "when special circumstances warrant deviation from the general rule, and such deviation will serve the public interest."<sup>6</sup> In the context of E-911, the Commission has recognized that individual waivers that are "specific, focused and limited in scope, and with a clear path to compliance" may be granted where due to "technology-related issues" or "exceptional circumstances," a wireless carrier is unable to meet the October 1, 2001 deadline.<sup>7</sup> As explained below, Petitioner's request satisfies this standard.

First, Petitioner is presenting a waiver request that is specific, focused and limited in scope. The scope of the request is limited to Sections 20.18(f) and (g). Petitioner has made good faith efforts to comply with the other sections of Section 20.18 by implementing Commission's

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<sup>5</sup> 47 C.F.R. § 1.3.

<sup>6</sup> Fourth MO&O at 17457; Northeast Cellular Telephone Co. v. FCC, 897 F.2d 1164, 1166 (D.C. Cir. 1990) citing WAIT Radio V. FCC, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

<sup>7</sup> See id.

Phase I requirements, using the Intrado MPC plus ALI. Furthermore, Petitioner only seeks a temporary waiver with respect to its service in Minnesota. Petitioner has affiliates which operate cellular systems in rural areas in other states, however, no PSAP request has been received for Phase II deployment in those areas and those operations do not need a waiver at this time. Accordingly, Petitioner's waiver request is narrower than many others currently before the Commission.

Second, Petitioner's request is structured with a "clear path to compliance." Rather than request a "broad, generalized waiver"<sup>8</sup> or an indefinite extension, Petitioner has formulated a proposed schedule that constitutes the best implementation timeline possible within the constraints of its supplier relationships. Assuming the compatible location technology component is available as promised, Petitioner would be able to begin implementing location-capable technologies by the end of the fourth quarter of 2002 rather than October 1, 2001. This timetable is based on manufacturer estimates of general availability dates ranging from the first quarter of 2002 to the third quarter of 2002.

Third, despite its efforts to comply with the Commission's Phase II requirements in a timely fashion, Petitioner has faced technological issues that have hindered its progress. Specifically, Petitioner has been unable to obtain vendor commitments that would allow it to begin implementing a solution by the October 1, 2001 deadline. As a relatively small carrier with a primarily rural subscriber base, Petitioner is not able to negotiate directly with the manufacturers that are rolling out network-based solutions. As such, it lacks the ability that larger carriers with nationwide footprints might have to demand that manufacturers provide it with the requisite technology.

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<sup>8</sup> See id.

Being thus one step further down the “food chain,” Petitioner cannot force manufacturers to roll out the solution needed for its specific network. Under the circumstances, Petitioner has done its best to come as close as possible to meeting the October 1, 2001 deadline by pursuing discussions with its software vendors.

Grant of the requested waiver is in the public interest. The public policy behind the Commission’s E-911 rules is to meet important public safety needs as quickly as reasonably possible.<sup>9</sup> Allowing Petitioner to introduce important public safety needs on a more graduated schedule would serve this objective. Not only would a delay make it possible for Petitioner to provide superior location accuracy by waiting for the best possible solution, the proposed implementation schedule would have no appreciable effect on the availability of Phase II E-911 in Petitioner’s service area. While Petitioner intends to continue to cooperate with any requesting PSAPs, the marginal public-interest benefit of introducing location-based handsets by October 1, 2001 would be minimal. Under these circumstances, the implementation timetable proposed herein allows for an expeditious and sensible phase-in of Petitioner’s network-based solution.

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<sup>9</sup> See Fourth MO&O, 15 FCC Rcd at 17449.

### III. Conclusion

For the reasons set forth above, Petitioner requests a temporary waiver of Sections 20.18(f) and (g) of the Commission's rules. The public interest benefit in this case equals or exceeds that which the Commission has found in other instances to be sufficient for waiver. Accordingly, Petitioner requests that a waiver and temporary extension be granted as proposed.

Respectfully submitted,

**RCC MINNESOTA, INC.**

By: *B. Lynn F. Ratnavale*  
David L. Nace  
B. Lynn F. Ratnavale  
Its Attorneys

Lukas, Nace, Gutierrez & Sachs, Chartered  
1111 19<sup>th</sup> Street N.W. Suite 1200  
Washington, D.C. 20036  
(202) 857-3500

September 28, 2001

**DECLARATION**

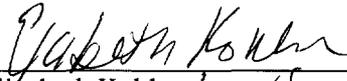
I, Elizabeth Kohler, hereby state and declare:

1. I am Legal Services Director of the RCC Minnesota, Inc. a Cellular Radiotelephone Service provider in Minnesota.

2. I am familiar with the facts contained in the foregoing Petition For Waiver, and I verify that those facts are true and correct to the best of my knowledge and belief, except that I do not and need not attest to those facts, which are subject to official notice by the Commission.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 27 day of September 2001.

  
Elizabeth Kohler, Legal Services Director of  
RCC Minnesota, Inc.

### **III. Attachments**

**A. Technocom study**

# **Network Based Location Performance in Rural Carrier Corporation Markets**

Presented to:

**RCC**

September 8, 2001

By:

**TechnoCom**  
Wireless Location Leaders

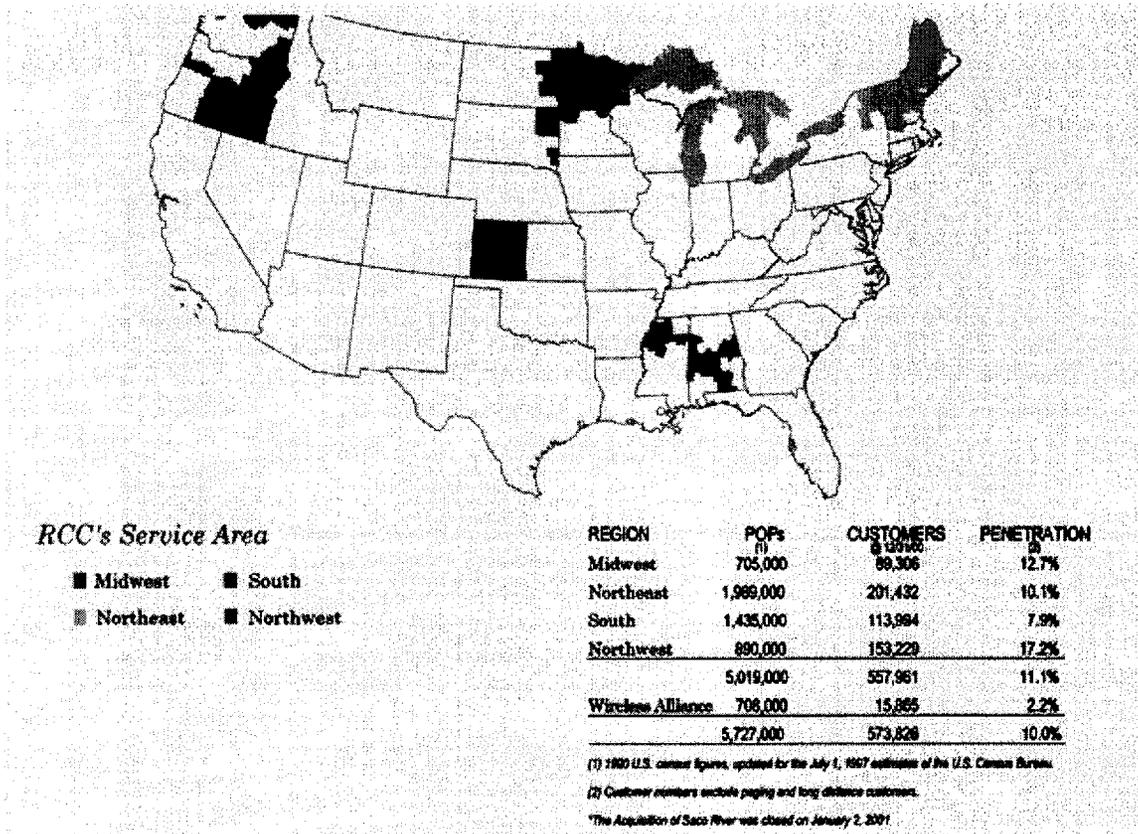
**16133 Ventura Blvd., Suite 500  
Encino, CA 91436**

1. Introduction

RCC serves rural markets in the Midwest, Northeast, Northwest and the Southern regions of the United States. RCC serves rural areas where tourism, agriculture, and small businesses are prevalent. These areas, located in twelve states, are adjacent to metropolitan areas or include significant highway corridors.

RCC utilizes TDMA technology in the 800 MHz band. As depicted in Figure 1, RCC serves about 600,000 users however due to the rural setting of its licenses, RCC like several other rural carriers supports AMPS for backward compatibility. AMPS is utilized mainly in support of the CDMA and GSM roamers that represent a significant fraction of the RCC system usage.

AMPS/TDMA carriers such as RCC have investigated the applicability of the various location technologies including handset-based and network-based systems proposed by various vendors in the past five years. Handset based solutions are not at this time planned by vendors since AMPS and TDMA technologies are being transitioned to either GSM or CDMA. Thus, the viability of network based location solutions in RCC's markets is critical to its strategy for meeting the FCC's E9-1-1 mandate. RCC has retained TechnoCom Corporation and its team of wireless location experts to assist RCC in assessment of the viability of network based location systems in RCC's markets. This interim report presents the results of TechnoCom's analysis pertaining to the performance of such a location system in Minnesota and Vermont.



## 2. Analysis Approach and Results

TechnoCom used its location system performance prediction tool, LocatePredict™ (patent pending), to analyze the coverage of a network overlay system. The tool predicts the coverage of the location system by overlaying the location sensors on top of the existing cell site information. The analysis focused on technologies that have been proposed and successfully demonstrated by the location vendors for TDMA systems such as RCC.

Based on the published trial results, the best approach available is a combined AOA/TDOA location system. Under this approach AOA as well as TDOA sensors are to be deployed at all cell sites in a given market. As such the analysis assumes a 1:1 cell site to location base station (AOA & TDOA) deployment. It is assumed that the TDOA processors and AOA detectors have about 15 dB better sensitivity than the cellular base station i.e. -130 dBm is assumed detectable by the AOA and TDOA receivers. This enables the location receiver to “hear” mobiles in neighboring sites (at least in urban/suburban scenarios). The time jitter at a TDOA site is assumed to be 20 ns. Additionally, high precision, accurately calibrated AOA receivers are also assumed with an rms angular error of 1 degree.

The characteristics of the cellular infrastructure provided by RCC to TechnoCom have been used, e.g., antenna heights and types. Since the vast majority of cellular users are currently hand-held units, a 0.6 W maximum handset power level has been assumed in the prediction.

The analysis reported here focused on Minnesota and Vermont as provided by RCC engineers.

## 3. Detailed Analysis

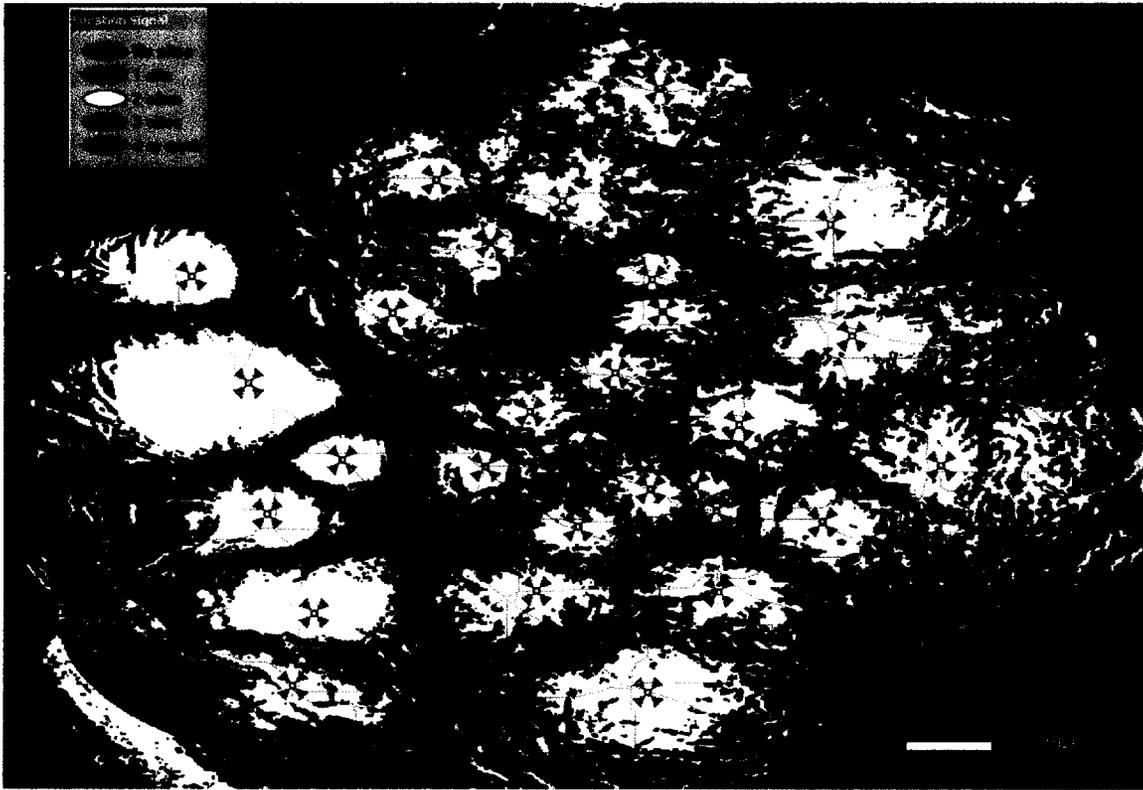
### 3.1 Minnesota Coverage

As shown in Figure 3-1, the RSA 5 area in Minnesota includes 29 sites and encompasses an area of approximately 14000 square miles. Distances of up to 30 miles representing a true rural setting separate the sites, placed mainly along the main roads.

Figure 3-2 provides the best server plots identifying the boundaries and cellular coverage predicted for each cell site. The cellular coverage generally looks good, with occasional areas in between distant sites that have marginal coverage. This is a situation that is commonly encountered in rural America. Some carriers go even as far as recommending vehicle mounted (3 watt units) to rural users seeking high quality of service throughout the market.

Of course the challenge for a location system is that coverage from multiple sites is required. For the case of an AOA/TDOA deployment, minimum of three sites are required to provide a location fix. So although cellular coverage for voice communications may be present, coverage for location purposes may well not be. This situation is examined in Figure 3-3 where each AOA or TDOA sensor is counted as a site thus leading to the majority of the area being covered by two or four sites. In other words the AOA and TDOA sensors at a cellular site account for two location sites. Due to the





**Figure 3-3. Number of Location Base Stations Providing Location Coverage (Minnesota)**

In the error analysis shown in Figure 3-4, a minimum of three sites is considered required for location determination. This is the minimum under ideal conditions, but in practice, more sites result in better reliability and accuracy. Coverage from as many as 7 or 8 sites has often been observed in experimental deployments of network-based solutions in suburban areas.

The coverage in terms of number of location sites has a direct correspondence to the achievable error. Generally, for the rural setting, where there is coverage from four or more sites, the performance is expected to be good. However as seen in the error plot (Fig. 3-4) acceptable coverage with error of less than 300 meters is only observed in limited areas. Most of the region is either not covered or the predicted error is far above the mandated accuracy requirements.

To better gauge the performance the statistics of the region were calculated leading to the realization that only 24.3% of the region is covered by the assumed location system. Within the covered area 30.5% of the points show an accuracy of 30.5% with an additional 5% showing accuracies between 100 and 1000 meters. In the same covered area 67% of the points have accuracy better than 2046 meters. Of course the statistics show that the performance of such system cannot meet the requirements of the FCC mandate.

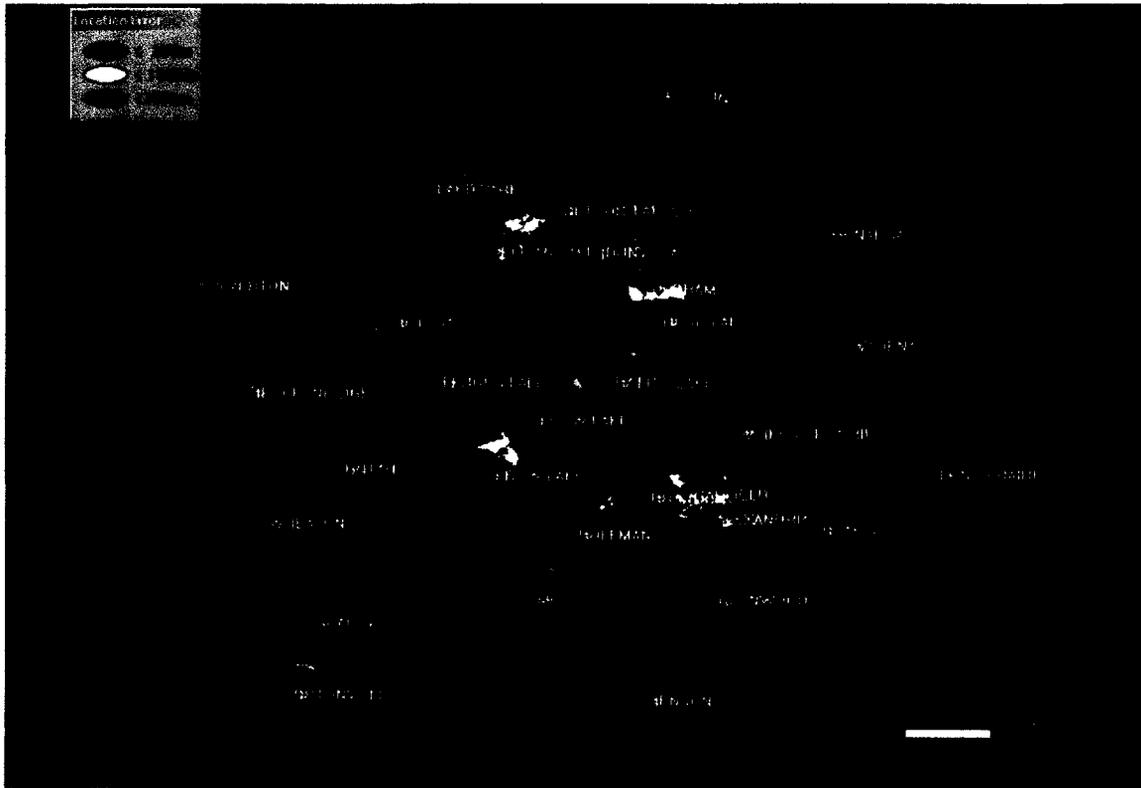


Figure 3-4. Location Error Predicted in the Minnesota

**3.2 Vermont Coverage**

To be inserted

**3.3 Performance Summary**

**Table 3-1. Location Performance Statistics.**

	Yield	For covered pts. % < 100 Meter	For covered pts. % < 1000 Meter	67 Percentile (for covered pts.)	95 Percentile (for covered pts.)
Minnesota	24.3 %	30.5%	35.33%	2046	2046
Vermont					

**4. Conclusion**

The analysis shows that even under best case assumptions, a network-based location solution will not come close to meeting the FCC E9-1-1 requirements in RCC's markets. Location coverage as a percentage of the overall cellular coverage is either poor or very poor, even when not considering the boundary areas. Furthermore, the location performance where location coverage exists does not meet the FCC accuracy requirements.

**B. Correspondence from Handset Vendors**

**Teresa Thoennes**

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**From:** Palacios Michael (NMP/Dallas) [Michael.Palacios@nokia.com]  
**Sent:** Monday, September 10, 2001 2:00 PM  
**To:** teresact@rcw.com  
**Cc:** Clayton Chris (NMP-Sales/Dallas)  
**Subject:** Mike Brown, c/o Teresa Thoennes re: E911 Phase II

(message for Mike Brown)

Mike:

Chris Clayton asked that I clarify our position on availability of handsets with GPS location functionality for E911 Phase II. Nokia Mobile Phones is committed to working with our carrier customers to provide solutions that meet the E911 Phase II mandate. To this end, we had in the past actively pursued development of a GPS SAMPS solution for one of our TDMA handset development programs. More recently, we put this development on hold. In our assessment of the viability of handset based Phase 2 solutions (GPS/SAMPS) for TDMA systems, we determined that including the GPS/SAMPS functionality in the upcoming handset would not be practical. We based this conclusion on a number of factors, including 1) lack of stated SAMPS support from infrastructure vendors, 2) little to no interest from the greater TDMA market for handset based E911 solutions, 3) low interest and commitment from the carrier community in general for handset-based GPS solutions, and 4) the general movement within the carrier community towards other types of E911 Phase 2 solutions.

At this time, therefore, we have no near-term handset offering that satisfies E911 Phase II requirements for TDMA networks employing a handset based location solution. If market factors change the current environment, however, we are certainly amenable to re-investigating handset products with GPS functionality. In the interim, we continue to support technologies such as E-OTD for E911 location solutions.

Nokia is committed to providing you the best support and products possible; if you have comments or suggestions, please feel free to provide input. Please also be aware that information stated or referred to in connection with this description of Nokia's products is not a binding obligation for Nokia; this description is a reasonable estimate only. Product plans, related time scales, and other information are based upon our current understanding of existing standards, technologies and market situations, and upon our internal plans for the development and supply of terminals for sale to the open market. Because standards, technology and market situations may change, our plans are also subject to change. Final product deployment may include different features, different technologies and different timelines.

I hope the information above answers your question about our handset availability. If we can be of assistance by supporting your request for an extension from the FCC, or if you have further questions, please do not hesitate to contact me.

Michael Palacios  
Business Development Manager  
Business Development and Product Management  
Emerging Technologies  
Nokia Mobile Phones  
(972) 374-0688  
michael.palacios@nokia.com



August 20, 2001

Mr. Mike Brown  
Rural Cellular Corp.  
3905 Dakota Street  
Alexandria, MN 56308

Dear Mike:

It is with regret that I inform you and RCC that Audivox Communications Corp. will not be able to support your short-term E911 requirements.

At present, we do not have an E911 Phase II Compliant Handset.

Our goal is to support this technology; however, I do not have any firm dates to supply you at this time.

Regards,

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

Tim Tansey  
Regional Vice President

TT/LN



Mr. Michael Brown  
Vice President of Business Intergration  
Rural Cellular Corporation  
3905 Dakota Street SW, PO Box 2000  
Alexandria, MN 56308

August 30, 2001

Dear Michael:

Going forward, Motorola is has limited the scope of its research and development for TDMA handsets, and feels that the potential for TDMA handset-based location technology is not promising.

Motorola does not build TDMA network infrastructure and therefore is not in a position to comment on the merits of any TDMA network based location technology. However, Motorola has been a leading supplier of TDMA handsets and has reduced development of TDMA products for a number of reasons. TDMA is, essentially, a second generation technology that does not have a simple transition path to more advanced systems with richer features. In contrast, both GSM and CDMA have well established and recognized migration paths to 2.5 generation and 3<sup>rd</sup> generation advanced systems. Because of the desires of wireless providers to ensure a next generation transition path, Motorola is realigning resources and portfolios towards GSM and CDMA.

In light of these events, Motorola will have very little new product development for TDMA handsets and, based on an apparent lack of future demand, has not planned for the development of handset-based location technology for TDMA handsets. Therefore, Motorola will not have a handset-based location technology available for the TDMA air interface in time for the October 1, 2001 deadline promulgated by the Commission.

Please let me know if you have any questions.

Regards,

A handwritten signature in black ink, appearing to read 'D. Smith', written over a horizontal line.

Daniel E. Smith  
Motorola, Inc.  
Product Planning Manager  
Personal Communications Sector - North America



Mike Brown  
Rural Cellular Corporation  
3905 Dakota Street SW, PO Box 2000  
Alexandria, MN 56308

August 28, 2001

Dear Mike,

I will take this time to notify you of our situation regarding Phase II E911 compliance in our handset portfolio. Ericsson handsets will not be Phase II E911 compliant for the remainder of 2001. As more information becomes available as to when our handsets will become compliant, we will certainly forward this on to you immediately.

Best Regards,

Michael J. Nigro  
Regional Account Manager  
Ericsson, Inc.



**CERTIFICATE OF SERVICE**

I, Loren Costantino, an employee in the law offices of Lukas, Nace, Gutierrez & Sachs, Chartered, do hereby certify that I have on this 28<sup>th</sup> day of September, 2001, sent by hand-delivery, a copy of the foregoing PETITION FOR TEMPORARY WAIVER OF THE E911 PHASE II ENHANCED WIRELESS SERVICES to the following:

Thomas Sugrue, Chief  
Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W. Room 3-C252  
Washington, D.C. 20554

Jay Whaley  
Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W. Room 3-C207  
Washington, D.C. 20554

Jennifer Tomchin  
Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W. Room 3-C122  
Washington, D.C. 20554



Loren Costantino