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

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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 No. 94-102

To: Wireless Telecommunications Bureau, Policy Division

**NORTH CAROLINA RSA 3 CELLULAR TELEPHONE COMPANY  
PETITION FOR TEMPORARY WAIVER OF THE IMPLEMENTATION DEADLINE  
FOR E-911 PHASE II ENHANCED WIRELESS SERVICES**

Lukas, Nace, Gutierrez & Sachs, Chartered  
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Washington, D.C. 20036

November 30, 2001

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North Carolina RSA 3 Cellular Telephone Company d/b/a Carolina West Wireless (hereinafter “Petitioner” or “Carolina West Wireless”), by its attorneys, hereby requests a temporary waiver of the wireless E911 location technology accuracy requirements of the Commission’s rules, 47 C.F.R. 20.18(h), in the state of North Carolina. 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 meet specific accuracy requirements in meeting their Phase II obligations. As set forth below Petitioner currently is 100 percent compliant with E-911 Phase I. Despite concerted good-faith efforts, Petitioner has not been able to find a viable solution to meet the Commission’s mandated Phase II accuracy requirements 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 schedule for meeting the accuracy requirements that will allow Petitioner to begin implementation of a network-based solution in the Petitioner’s service area in North Carolina beginning in the 1st quarter of 2002 in accordance with a recently received Public Safety Answering Point (PSAP) request.<sup>1</sup> Petitioner’s request herein is consistent with the Commission’s goals in this E-911 proceeding and is in the public interest.

## **I. Background**

Petitioner is a small Cellular Radiotelephone Service provider which offers wireless telecommunications service in rural western North Carolina (North Carolina RSA 3 – Ashe and in a partitioned area of North Carolina RSA 2 - Yancey). In its Implementation Report filed with the Commission on November 9, 2000, Petitioner indicated its intent to employ a network-based

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<sup>1</sup> Petitioner received a letter dated October 30, 2001 from the Watauga County, North Carolina, Department of Planning and Inspections, requesting implementation of Phase II E911 service in that county. See Attachment 1.

Phase II E-911 solution and, consistent with Section 20.18(g) of the Commission's rules, to 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 accuracy requirements in the prescribed time is not feasible. Petitioner has, to the best of its ability, studied available Phase II location technology offerings, has determined viable paths to compliance with the FCC Phase II performance requirements, and has made efforts to acquire portions of the supporting technology components where commercially viable. These efforts are described below.

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

Petitioner provides wireless service to a rural, mountainous area in western North Carolina using a combination of AMPS and TDMA cellular technologies. Neither of the two categories of location technology – network-based or handset-based – has proven completely viable in this market. (See Petitioner's previously delivered Implementation Plan.<sup>2</sup>)

Network-based. Network-based solutions, as they currently exist, do not meet the FCC's accuracy requirements throughout Petitioner's rural market due to the fact that current technological solutions do not go as far as the Commission requires for accuracy.

Handset-based. 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>3</sup>) Petitioner's sales volume is so small that it is not adequate to entice

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<sup>2</sup> E-911 Phase 2 Implementation Plan, North Carolina RSA 3 Cellular Telephone Company, November 9, 2000.

<sup>3</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.

vendors to leverage this technology into their product. Petitioner was 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, for the foreseeable future.

### **B. Status of ongoing Carolina West Wireless Activities**

In spite of the difficulties described above of obtaining a 100 percent viable location technology, Petitioner has pursued the groundwork for the future deployment of a compliant E911 system. Petitioner has worked diligently within the industry to define compliance standards and identify the best solutions for E-911 compliance. In fact, despite its small size, Petitioner was the first carrier in North Carolina to become 100 percent E-911 Phase I compliant. Petitioner has entered into negotiations with Grayson Wireless to provide the infrastructure necessary to triangulate its cell sites for Phase II implementation.

PSAP Readiness: Petitioner has received a Phase II implementation request from Watauga County, North Carolina. However, Watauga County's request does not contain representations consistent with those required by the Commission in its Order in response to a declaratory ruling request by The City of Richardson, Texas, CC Docket No. 94-102 (FCC 01-293), \_\_\_ FCC Rcd \_\_\_, released October 17, 2001 ("Richardson Order"). A representative of Watauga County subsequently informed Petitioner by telephone that the county is in compliance with the requirements of the Richardson Order. Nevertheless, there has been no demonstration of such by the county and it is not yet appropriate to classify the county's request as a "valid PSAP request" binding upon Petitioner for Phase II implementation. In any event, Petitioner is

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Petition for Limited Waiver of Section 20.18(e) and (g) 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).

in discussion with the county to assist it in taking sufficient steps to assure that the county will be able to receive and utilize the E-911 data prior to the delivery of service by Petitioner. Petitioner anticipates the possibility that the county will supplement its request for Phase II implementation with the necessary demonstrations of readiness, such that it will be classifiable as a valid PSAP request satisfying the Richardson Order.

Phase I Compliance: Petitioner has shown good faith in meeting the Commission's Phase I requirements. Petitioner is currently 100 percent Phase I compliant in all of the counties that make up its wireless service area.

Studies: Petitioner has studied the viability of a network-based location capability as previously mentioned. In addition Petitioner is carefully observing the plans of the larger carriers, who will necessarily (because of their market presence) provide some leadership in the location services area. In reviewing the findings of others Petitioner has determined that network-based location solutions do not meet the FCC accuracy requirements throughout the expansive rural areas of Petitioner. As a result Petitioner plans to work with existing technology to roll out Phase II implementation with the maximum level of accuracy technologically possible at this time. (It is expected that Petitioner's system will be capable of locating 67 percent of calls within 100 meters for the eastern and central parts of Watauga County; within 101 – 300 meters for the areas surrounding the central most portion of Watauga County; and, within greater than 300 meters for the far northern and western portions of Watauga County. Petitioner's system will also be capable of locating 95 percent of calls within 300 meters for a majority of Watauga County and within greater than 501 meters for only the outlying edges of Watauga County based upon a recent propagation study. See Attachments 2 & 3). Upon deployment in those areas, careful field-testing will yield a better characterization of the actual performance of the selected

network-based location system. Once additional technology is available to increase the level of accuracy to meet FCC required levels Petitioner will upgrade its network to meet those levels.

### **C. The Path to Compliance**

Petitioner has declared a network-based solution in its Implementation Plan, and has developed the following proposed schedule to become compliant as soon as possible:

- Petitioner will purchase and take delivery of infrastructure equipment necessary to triangulate its cell sites in Watauga County, North Carolina as soon as possible. This deployment should allow Petitioner to achieve an accuracy level of 67 percent of calls within 100 meters for the eastern and central parts of Watauga County; within 101 – 300 meters for the areas surrounding the central most portion of Watauga County; and, within greater than 300 meters for the far northern and western portions of Watauga County. Petitioner’s system will also be capable of locating 95 percent of calls within 300 meters for a majority of Watauga County and within greater than 501 meters for only the outlying edges of Watauga County (See Attachments 2 & 3)
- Petitioner will begin the assessment of the initial deployed area and will begin a deployment plan for the remainder of its service area regardless of whether or not it has received a PSAP request for those areas. Petitioner has already talked to the PSAPs in these areas and those entities have indicated that they are not ready to receive the location data, however, the North Carolina E-911 Board has agreed to Petitioner’s rollout of Phase II for reimbursement purposes despite the lack of a valid PSAP request.
- As soon as suitable technology is available, Petitioner will upgrade its system to

meet the additional level of accuracy that is required by FCC rules.

Current technology limits Petitioner's ability to meet the FCC's mandated accuracy requirements. Short of rebuilding its entire system with a different technology (which would be prohibitively expensive for such a small carrier), meeting the accuracy requirements as they exist is impossible. Therefore, Petitioner plans to begin implementing location-capable technologies immediately even though it will not meet the accuracy requirements for the foreseeable future.

In addition, as Petitioner considers a technology change in a move toward 3G services, it continues to evaluate other options. Some leading candidates under consideration are mentioned here:

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 migrate its airlink from TDMA to GSM, this technology would be a prime candidate for Petitioner's upgraded network.

CDMA handset: The preferred location technology for CDMA networks at this time is a handset-based solution. Should Petitioner elect to migrate its airlink from TDMA to CDMA, this technology would be 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>4</sup> and "when special circumstances warrant deviation from the general rule, and such deviation will serve the public interest."<sup>5</sup> In the context of E-911, the Commission has recognized that

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<sup>4</sup> 47 C.F.R. § 1.3.

<sup>5</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, 17457 (released September 8, 2000) ("Fourth

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 applicable deadline.<sup>6</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 Section 20.18(h). Petitioner has made good faith efforts and has successfully complied with other sections of Section 20.18 by implementing E-911 Phase I requirements. Furthermore, Petitioner only seeks a temporary waiver with respect to its service in its small North Carolina market area. 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>7</sup> Petitioner has formulated a proposed schedule that will enable Petitioner to begin implementing the best level of location-capable technologies currently available within the next six months, in compliance with Sections 20.18(f) and (g). This constitutes the best implementation timeline possible. Delivery of Phase II to Petitioner’s customers is not slowed in any way.

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 a solution that will fully meet the FCC’s accuracy requirements. As a small carrier with a primarily rural subscriber base, Petitioner is not

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MO&O”); 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>6</sup> See Fourth MO&O at 17457.

<sup>7</sup> See id.

able to negotiate directly with the manufacturers which are rolling out network based solutions. As such, it lacks the ability that larger carriers with regional or nationwide footprints might have to demand that manufacturers provide it with the requisite technology. Furthermore, the FCC has previously granted large carriers such as AT&T and Cingular Wireless some flexibility in meeting the accuracy requirements.<sup>8</sup>

Being a small carrier, Petitioner cannot dictate when manufacturers must roll out the solution needed for its specific network. Under the circumstances, Petitioner has done all it can to come as close as possible to meeting the FCC's accuracy requirements by developing a compelling deployment plan which takes into account the current location technology capabilities, engaging in Phase I and II service contracts and 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 is reasonably possible.<sup>9</sup> Allowing Petitioner to comply with Section 20.18(h) on a more graduated schedule would serve this objective. Not only would a postponement of the obligation to meet accuracy requirements make it possible for Petitioner to provide superior location accuracy by implementing the best possible solution as it becomes available, the proposed implementation schedule would have no appreciable effect on the availability of basic Phase II E-911 in

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<sup>8</sup> See Order In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems Request for Waiver by AT&T Wireless Services, Inc., CC Docket 94-102 (October 2, 2001); See Order In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems Request for Waiver by Cingular Wireless, LLC, CC Docket 94-102 (October 2, 2001).

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

Petitioner's service area. Under these circumstances, the implementation timetable proposed herein allows for an expeditious phase-in of Petitioner's network-based solution.

**II. Conclusion**

For the reasons set forth above, Petitioner requests a temporary waiver of Section 20.18(h) 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 temporary extension be granted as proposed.

Respectfully submitted,

**NORTH CAROLINA RSA 3 CELLULAR  
TELEPHONE COMPANY**

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

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November 30, 2001

## DECLARATION

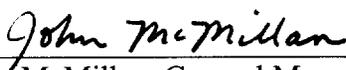
I, John McMillan, hereby state and declare:

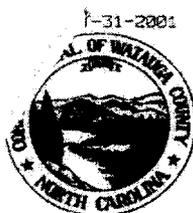
1. I am General Manager of the North Carolina RSA 3 Cellular Telephone Company, a Cellular Radiotelephone Service provider in North Carolina RSA 3 – Ashe and in a portion of North Carolina RSA 2 - Yancey.

2. I am familiar with the facts contained in the foregoing “Petition For Temporary Waiver of the Implementation Deadline for E-911 Phase II Enhanced Wireless Services,” 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 28 day of November 2001.

  
\_\_\_\_\_  
John McMillan, General Manager of  
North Carolina RSA 3 Cellular Telephone  
Company d/b/a Carolina West Wireless



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## WATAUGA COUNTY

Department of  
Planning & Inspections

842 W. King St. # 7 • Boone, North Carolina 28607

Phone (828) 265-8043  
TDD 1-800-735-2962  
Voice 1-800-735-8262  
Fax (828) 265-8080

October 30, 2001

Carolina West Wireless  
Attn: Michael Kennedy  
P.O. Box 959  
Wilkesboro, N.C. 28697

Dear Mr. Kennedy:

RE: Phase II Wireless 9-1-1 Service Request

In compliance with the FCC Rules and Orders that wireless carriers are to provide Phase II of Wireless 9-1-1 Service within six months of a request from a 9-1-1 authority, this letter is our official request for implementation of Phase II Service in our service area.

I suggest that we schedule a meeting with your 9-1-1 manager in the near future at my office to discuss the implementation process. Please ask your 9-1-1 manager to contact me to set up a meeting date and provide me information about your staff members who will be attending.

This meeting is important to assist us in understanding your Phase II plans and to be certain we are doing our part to assist your implementation. We expect to discuss such issues as timelines for deployment, responsibilities, and discussion about the characteristics of the location technology you have selected.

We plan to also request representatives of our local exchange carrier and equipment vendors to attend the meeting and discuss important network issues and technical issues along with the Administrator for the North Carolina Wireless 911 Board to discuss funding.

I am looking forward to working with you in this project. If you have questions please call me at (828)265-8043 or email me at [joe.furman@ncmail.net](mailto:joe.furman@ncmail.net).

Sincerely,

Joseph A. Furman, AICP  
Director

Cc: Bell South  
Sprint  
Southern Software  
NC Wireless 911 Board

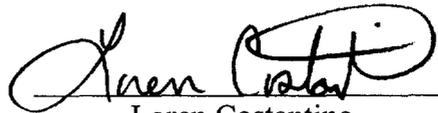
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**CERTIFICATE OF SERVICE**

I, Loren Costantino, an employee in the law offices of Lukas, Nace, Gutierrez & Sachs, Chartered, do hereby certify that I have on this 30<sup>th</sup> day of November, 2001, sent by hand-delivery, a copy of the foregoing PETITION FOR TEMPORARY WAIVER OF THE IMPLEMENTATION DEADLINE FOR E-911 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

Mr. Patrick Forster  
Policy Division  
Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

  
\_\_\_\_\_  
Loren Costantino