

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington D.C. 20554**

In the Matter of )  
  
Revision of the Commission's Rules ) CC Docket No. 94-102  
To Ensure Compatibility with Enhanced )  
911 Emergency Calling Systems )  
  
**ENTERPRISE WIRELESS PCS, LLC** )  
  
Petition For Waiver of Section 20.18(c) ) FCC 00-436  
of the Commission's Rules and the )  
Deadlines Established in the )  
Fourth Report and Order )

To: Chief, Wireless Telecommunications Bureau

**PETITION FOR WAIVER**

Enterprise Wireless PCS, LLC (Enterprise), by its attorney, pursuant to Section 1.3 of the Commission's Rules, hereby requests a waiver of the deadline in the *Fourth Report and Order*<sup>1</sup> in the above-captioned proceeding, and of Section 20.18(c) of the Commission's Rules, with respect to the December 31, 2001 deadline for carriers operating digital wireless systems to have obtained all software upgrades and equipment necessary to make their systems capable of transmitting 911 calls from TTY devices; and the June 30, 2002 deadline for operators of digital wireless systems to be capable of transmitting 911 calls from individuals with speech or hearing disabilities through means other than conventional mobile radio handsets, e.g., through the use of TTY devices.

In support of this waiver request, the following is respectfully shown:

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<sup>1</sup> In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Fourth Report and Order*, CC Docket No. 94-102, 15 Fcc Rcd 25216, 65 Fed. Reg. 82293 (December 28, 2000), ("*Fourth Report and Order*").

## I. BACKGROUND AND INTRODUCTION

In the *Fourth Report and Order*, the Commission established December 31, 2001 as the deadline for carriers operating digital wireless systems to have obtained all software upgrades and equipment necessary to make their systems capable of transmitting 911 calls from TTY devices. It further established June 30, 2002 as the deadline for carriers to integrate, test and deploy the technology in their systems in conjunction with the public safety community.

Pursuant to the quarterly reporting requirements set forth in the *Fourth Report and Order* in CC Docket No. 94-102, Enterprise has periodically informed the Commission of its status on meeting these deadlines and the status of the various technological solutions aimed toward attaining that goal.

Enterprise has advised the Commission that matters beyond its control might well impede its ability to meet these deadlines. As detailed below, ancillary costs associated with deploying TTY-compatible software will require a capital expenditure of nearly two million dollars. Moreover, major technological changes announced by major carriers in the wireless industry, a matter beyond Enterprise's control, has all but formally sealed the fate of time-division multiple access (TDMA) as a viable long-term digital technology. These factors combine to create circumstances that make compliance with the present December 31, 2001 deadline unattainable and the June 2002 service date unduly burdensome for a rural carrier, such as Enterprise. Moreover, as Enterprise will show below, waiving the December 31, 2001 deadline will not frustrate the Commission's intent in setting that interim deadline on the way to TTY/E911 compliance. Likewise, waiver of the June 2002 deadline is not likely to result in the denial of TTY/E911 access to any customers. Accordingly, Enterprise herein seeks a waiver of those deadlines.

Enterprise is the licensee of Broadband Personal Communications Service (PCS) stations KNLF545 (Dothan-Enterprise, Alabama BTA), KNLF546 (Opelika-Auburn, Alabama BTA), KNLF547 (La Grange, Georgia BTA) and KNLF548 (Albany-Tifton, Georgia BTA). ). These licenses were acquired in the PCS C-Block auction and each is for 15 MHz of spectrum resulting from the disaggregation option, as provided in the Commission's Rules Regarding Installment Payment Financing for PCS Licensees.<sup>2</sup> When Enterprise constructed its PCS facilities, it chose primarily for economic reasons to utilize the switch infrastructure already in place that was employed by an affiliated company, Public Service Cellular, Inc. (PSC). Accordingly, Enterprise is presently tied to the TDMA technology utilized by PSC, including its problems and limitations, insofar as E911 issues are concerned.

PSC currently provides analog and digital TDMA wireless service in the Columbus, GA/AL MSA; Georgia RSA 6; Alabama RSA 5; Alabama RSA 8; Georgia RSA 5; Georgia RSA 9; and TDMA wireless service in the Anderson, SC; Anniston, AL; and Columbus, GA BTAs.<sup>3</sup> As with most small rural carriers, the decision on which digital technology to deploy was essentially mandated by the technology decision of PSC's primary roaming partners in the nearby major markets. In PSC's case, these markets are primarily influenced by the Atlanta, Georgia MSA. At the time that PSC

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<sup>2</sup> See, *Second Report and Order and Further Notice of Proposed Rule Making*, WT Docket 97-82, 12 FCC Rcd 16436 (1997), as modified by *Order on Reconsideration of the Second Report and Order*, WT Docket 97-82, 13 FCC Rcd 8345 (1998).

<sup>3</sup> PSC holds the licenses for cellular Stations KNKA415 (CMA153B), KNKN872 (CMA376B1), KNKN913 (CMA376B2), KNKN883 (CMA376B3), KNKN687 (CMA311B2), KNKN932 (CMA314B2), KNKN934 (CMA375B2), and KNKN976 (CMA379B1). In addition, PSC holds licenses for personal communications service ("PCS") Stations KNLG210 (BTA016F), KNLH422 (BTA017D), and KNLH421 (BTA092F).

began rollout of its digital migration, its primary roaming partner, the B-side licensee in the Atlanta market (Bell South, now Cingular Wireless) had already migrated its system to TDMA digital.

As the Commission is well aware, during the past twelve months, the two major carriers utilizing TDMA technology (Cingular and AT&T) announced their plans to migrate their TDMA deployments to a totally different, non-compatible digital technology. Just recently, US Cellular was also reported as having decided to migrate its remaining markets to a different, non-compatible digital technology. The Cingular/AT&T announcements led to the announcements by virtually all major wireless infrastructure providers, including Lucent Technologies (PSC's and Enterprise's infrastructure provider) to announce plans to cease development of new features and functionality for its TDMA infrastructure equipment. Moreover, most handset providers have ceased development of new TDMA handsets to include features such as those needed to provide handset-based E911 Phase II location technologies; the only location technology which appears to provide an economical means of meeting the FCC's E911 Phase II requirements in rural areas. While the handset providers have made it clear that there will be no E911 Phase II ALI-compatible handsets for TDMA, less clear is whether there will be a TTY compatible TDMA handset (since development of that handset began prior to the Cingular and AT&T announcements) and, if so, at what cost. In any event, the size of the potential market for such TDMA handsets now appears to be extremely limited.

## **II. DISCUSSION**

### **A. Basis For a Waiver of the December 31, 2001 Deadline**

The Commission may grant a waiver for "good cause shown," if the waiver is deemed in the public interest, or if there are unique factual circumstances that render application of the rule

inequitable or particularly burdensome.<sup>4</sup> Citing *WAIT Radio*, the Commission has stated that it may waive a rule “where waivers are founded upon an ‘appropriate general standard,’ ‘show special circumstances warranting a deviation from the general rule’ and ‘such deviation will serve the public interest.’”<sup>5</sup> As shown below, the instant petition complies with all the waiver standards articulated in the above-cited rules and decisional precedent.

Lucent has announced the availability of the requisite software to meet the TTY/E911 compatibility requirements. However, Enterprise was advised that the Lucent software would only operate with base software load ECP17. The problem arises in that software load ECP17 includes significant upgrades and requires a processor replacement *at virtually all Enterprise cell sites* before it can be installed on the switch. Moreover, Enterprise has been advised that in addition to these upgrades, the vast majority of vocoders in its network would also need to be upgraded. The cost of the processor and vocoder upgrades, coupled with the associated software upgrade, is substantial.<sup>6</sup>

Significantly, the ECP17 software load is also required in order for carriers to comply with the Commission’s CALEA, E911 Phase II and wireless local number portability requirements, as well as the TTY/E911 compatibility requirement. Accordingly, Enterprise has been implementing its cell

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<sup>4/</sup> 47 C.F.R. §§ 1.3, 1.925; *Northeast Cellular Telephone Co v. FCC*, 897 F. 2d 1164, 1166 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969) *cert. denied*, 409 U.S. 1027 (1972).

<sup>5/</sup> “Wireless Telecommunications Bureau Outlines Guidelines For Wireless E911 Rule Waivers For Handset-Based Approaches To Phase II Automatic Location Identification Requirements,” DA 98-2631, released December 24, 1998 at page 4.

<sup>6/</sup> A non-disclosure agreement with Lucent prohibits releasing specific pricing information; but that information can be made available to the Commission for *in camera* inspection, should the Commission so request. Suffice it to state that the requisite network upgrades referred to above would cost nearly \$2 million to implement.

sites with the requisite upgraded processors and has a systematic plan in place for the upgrade of its remaining cell site processors within the next twelve months. This orderly upgrade plan, while not reducing the size of the capital outlay, allows spreading the cost over a longer period of time and ensuring that the upgrade deployment takes place in a more orderly manner.

The Commission's apparent purpose in instituting the December 31, 2001 deadline was to allow time for carrier testing before the June 30, 2002 service-offering deadline. However, the TTY digital compatibility requirement, unlike the E911 Phase II location requirement which has market-specific accuracy issues, is a function of compatible network hardware, software and handsets. If a particular configuration works in one deployment for a particular vendor's infrastructure, it should work equally well in any other deployment. This is a compatibility requirement; the network is either compatible or not and Enterprise understands that testing is already underway by Lucent. Significantly, if a software problem is found in another Lucent deployment, Enterprise understands that the same software "patch" simply would be deployed in all Lucent systems operating that feature. Accordingly, a delay in Enterprise's deployment of the requisite software should not frustrate the purpose underlying the rule.

**B. Basis for a Waiver of the June 30, 2002 Deadline**

As the Commission is aware, vendors have decided no longer to support TDMA in light of AT&T's and Cingular's abandonment of TDMA technology - a situation clearly beyond Enterprise's control. Moreover, it is still unclear whether TDMA TTY-compatible handsets will be made commercially available and, if so, at what price - a situation also beyond Enterprise's control. Finally, even if such handsets are available, with the well-publicized move away from TDMA, it is doubtful that an end-user looking to invest in a TTY-compatible digital phone would elect to do so through

a TDMA carrier. Enterprise has been advised that, in PSC's experience, in its more than a decade of operation, it is not aware of a single TTY subscriber on its analog network that utilizes a TTY device. However, even if there were such a subscriber, grant of this waiver request would not impede such individual from continuing to operate his or her current analog handset with its TTY device. Finally, even if the TDMA digital network employed by Enterprise were to be made fully TTY compatible, if a subscriber approached Enterprise to purchase a TTY compatible digital phone (assuming such a phone were available), Enterprise would be constrained to advise that potential TDMA handset purchaser that, as set forth more fully below, Enterprise might not be supporting that handset in the long-term and that that handset would not be supported long-term by digital carriers in the Atlanta market. The likelihood of any potential subscriber proceeding with such a purchase under these circumstances is regarded as extremely remote.

Significantly, the press of other Commission mandates, most significantly the E911 Phase II location requirements, is forcing small and rural TDMA carriers to evaluate entire digital network replacements inasmuch as there does not appear to be an economical network-based E911 Phase II solution that will meet the Commission's accuracy requirements for rural carriers. Accordingly Enterprise, in conjunction with PSC, is currently exploring and obtaining vendor quotes for a change-out of its digital technology. Enterprise presently does not foresee any alternative to begin to overlay an alternate digital technology within the next 24 months. Accordingly, all expenditures for the requisite software to make the current TDMA network TTY compatible would result in stranded investment.

Most significantly, even if Enterprise were to spend the capital on meeting this obligation, as set forth above, there is very little likelihood that any Enterprise subscriber would ever use it.

Moreover, it is unlikely that any roamers would use the service either. As previously discussed, Cingular has announced its migration away from TDMA, making it far more likely that any Cingular subscriber looking to acquire a TTY compatible digital phone would select a unit compatible with the digital technology to which that carrier is migrating, rather than a unit compatible with TDMA technology. With respect to Enterprise's system, which presently only offers TDMA digital service, all areas where that system is deployed are presently served by other analog service providers; and a cellular non-TDMA mobile, for example, would revert to the analog cellular provider in that area in any event.

When Enterprise makes its migration to a new digital technology, it will deploy that technology in a mode fully compatible with TTY devices. In the meantime, it is respectfully submitted that requiring implementation of TTY compatibility on the current TDMA network would be unduly burdensome. Moreover, denial of the waiver would not appear to increase the likelihood that any actual TDMA TTY device would be used on Enterprise's network within the next 24 months. Finally, grant of the waiver would not preclude access to 911 services by TTY devices as those devices could still continue to be used in the analog mode, as they would have needed to be used for the past two decades on all cellular networks. Grant of this waiver would relieve Enterprise of the obligation to incur the cost of TDMA TTY-compatibility software as well as the vocoder upgrades.

3. Scope of Waiver Requested

Enterprise respectfully requests a waiver of the December 31, 2001 software deadline in its entirety. Enterprise will proceed to upgrade its cell-site processors and, in conjunction with PSC, deploy ECP17 before the end of 2002. With those upgrades, it would require the additional feature

for the application-specific TDMA TTY compatibility as well as the vocoder upgrade. Significantly, the Lucent vocoders as well as the software feature required for TTY compatibility in a different digital technology, such as CDMA, is a separate and distinct software feature from that required to achieve TTY compatibility in the TDMA network. Accordingly, any expenditure to deploy those vocoders or the TDMA-specific feature would be stranded investment as the network is migrated to another digital technology. With respect to the June 30, 2002 full implementation deadline, Enterprise respectfully requests a waiver until December 31, 2003. This will enable Enterprise to implement a technology migration prior thereto. As set forth above, when the migration is completed, the Enterprise network will be compatible with TTY devices.

**D. Grant of the Instant Waiver Requests Will Serve the Public Interest.**

Enterprise submits that grant of this waiver is in the public interest by allowing the conservation of limited resources to be better used to move toward meeting the other three Commission-mandated system upgrades: E911 Phase II (which also appears to require a full digital network switch out in rural markets), CALEA and wireless local number portability. Significantly, while each of these service requirements further legitimates public needs, to a small rural carrier, such as Enterprise, collectively they represent a capital outlay of millions of dollars that are not envisioned to be revenue producing. Accordingly, it clearly would serve the public interest to free small rural TDMA carriers, such as Enterprise, from having to spend resources to meet the TTY compatibility requirements on TDMA. It is far from certain that there will ever be a TDMA TTY-compatible phone available in commercial quantities and, even if there is, it is doubtful that an end user would make the investment to purchase such a phone which is only compatible with a technology that appears to have been universally abandoned by all of its original large-carrier proponents. Thus,

small, rural carriers are being forced to migrate to alternate technologies in order to meet the other impending regulatory mandates as well.

Further, Enterprise will continue to provide the Commission with quarterly updates on the status of development and deployment, throughout the entire waiver period until such time as its new TTY-compatible network is deployed. Specifically included in such reports, in addition to handset availability matters, will be a full disclosure of any requests for TTY-compatible handsets received during the quarter.

### **III. CONCLUSION**

Enterprise will be unable to obtain the necessary ongoing vendor (infrastructure and handset) support for its existing TDMA digital network to allow it to meet such regulatory requirements as E911 Phase II; and it therefore plans to begin migration of its TDMA network to an alternate digital technology. Significantly, the same factors leading Enterprise to seek an alternative digital technology, combine to make it extremely unlikely that there would be a *bona fide* subscriber seeking to purchase or use a TDMA TTY-compatible handset on Enterprise's existing PCS system. Relieving Enterprise of this obligation, while having little possible negative impact, would preserve significant capital resources that will be needed to move toward meeting the other Commission mandates. These realities are based upon circumstances not of Enterprise's making and certainly beyond its control. Moreover, as demonstrated above, even if Enterprise were to spend the capital needed to upgrade its TDMA digital network to full TTY compatibility, it is extremely unlikely that TDMA TTY handsets (even if made available in commercial quantities) would ever actually try to access the Enterprise network. As such Enterprise submits that it would be unduly burdensome, with little

likelihood of any real public benefit flowing from requiring Enterprise to meet the June 30, 2002 full implementation deadline.

In light of the foregoing, Enterprise respectfully submits that good cause has been shown for the grant of the limited waiver sought herein.

Respectfully submitted,

**ENTERPRISE WIRELESS PCS, LLC**

By:

  
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## DECLARATION

Donald E. Bond hereby declares, under penalty of perjury, under the laws of the United States, that he is the president of Public Service PCS, Inc., which is the sole member of Enterprise Wireless PCS, LLC; that he has read the foregoing Petition for Waiver to the Federal Communications Commission; and that, except for those facts of which the Commission may take official notice, all of the facts stated therein are true and correct to the best of his knowledge, information and belief.

Dated, this 31st day of December, 2001



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Donald E. Bond