

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

In the Matter of)
)
Revision of the Commission's) CC Docket No. 94-102
Rules to Ensure Compatibility)
with Enhanced 911 Emergency)
Calling Systems)
)

TRITON PCS LICENSE COMPANY, L.L.C.
STATUS REPORT AND REVISED PETITION FOR WAIVER OF THE
E911 PHASE II LOCATION TECHNOLOGY IMPLEMENTATION RULES

LAURA H. PHILLIPS
CARLOS M. NALDA
DOW, LOHNES & ALBERTSON, PLLC
1200 NEW HAMPSHIRE AVENUE, NW
SUITE 800
WASHINGTON, DC 20036
(202) 776-2000

Its Attorneys

Triton PCS
Glen Robinson
Senior Vice President of Engineering
and Information Technologies
1100 Cassatt Road
Berwyn, PA 19312
(610) 722-4424

NOVEMBER 30, 2001

SUMMARY

Triton PCS License Company, L.L.C. (“Triton”) respectfully requests a waiver of the Federal Communications Commission’s (“Commission” or “FCC”) E911 Phase II requirements to afford Triton additional time to implement Phase II service using a network-based solution from the Phase II position determining equipment (“PDE”) vendor ultimately selected by AT&T Wireless Services, Inc. (“AT&T”) for its TDMA network, and to implement Phase II service using Enhanced Observed Time Difference of Arrival (“E-OTD”) technology in Triton’s planned GSM network. As discussed below, Triton’s waiver request is specific, focused, limited in scope and provides a clear path the full compliance with the FCC’s rules.

Triton has taken its E911 responsibilities very seriously, and has devoted the time and resources necessary to prepare for the implementation of E911 Phase II in its service area. However, as a member of the AT&T Wireless Network, Triton is directly affected by AT&T’s decisions relating to the deployment of network technologies. In this connection, AT&T recently decided that it will no longer pursue a Mobile-Assisted Network Location System (“MNLS”) solution for its TDMA network, and is actively engaged in negotiations with two PDE vendors to procure a network-based Phase II solution. As a result of AT&T’s decision, Triton has concluded that it can no longer pursue an MNLS solution and instead should adopt the E911 Phase II technology to be selected by AT&T for its TDMA network. Accordingly, Triton has developed an alternative Phase II implementation plan that, while linked to AT&T’s selection of a PDE vendor, commits Triton to an aggressive Phase II deployment schedule and preserves the relative implementation priority of existing and future Phase II PSAP requests.

In addition, Triton’s Phase II strategy is affected by its plans to deploy a GSM “overlay” network that ultimately will replace its current TDMA facilities. Triton intends to provide Phase

II services in its planned GSM network using E-OTD technology, a hybrid handset and network-based solution. Although E-OTD does not currently satisfy the E911 Phase II location accuracy requirements, it is expected to meet and even exceed the prescribed accuracy requirements in the near future. For these and other reasons, the FCC recently granted a waiver of its Phase II rules for AT&T to utilize E-OTD in its GSM system. Like AT&T and other carriers, Triton requires a temporary waiver of the FCC's accuracy rules to employ E-OTD in its planned GSM system.

The Commission has recognized the substantial difficulties experienced by wireless carriers in attempting to comply with the existing E911 Phase II rules in the recent waivers granted to major national wireless carriers. In addition, the Commission invited small and mid-sized carriers, such as Triton, to file new or revised requests for relief from the Phase II rules. Triton has worked diligently in an effort to satisfy the FCC's E911 Phase II requirements and has responded at all times in a forthright and reasonable manner to Phase II PSAP requests, but circumstances beyond Triton's control have forced Triton to revise substantially its Phase II implementation plans. As a result, Triton requests that the Commission grant a limited waiver of its rules to afford Triton additional time to implement the E911 Phase II compliance plan set forth herein.

TABLE OF CONTENTS

	Page
SUMMARY	i
I. INTRODUCTION	2
II. BACKGROUND AND STATUS OF TRITON’S E911 IMPLEMENTATION	4
A. Triton Has Been Forced To Alter Its Phase II Plans Because of Circumstances Beyond Its Control	5
B. Status of Triton’s E911 Implementation.....	7
III. THE COMMISSION’S E911 PHASE II REQUIREMENTS AND WAIVER STANDARDS.....	12
IV. THE COMMISSION SHOULD WAIVE ITS E911 PHASE II RULES TO PERMIT TRITON TO IMPLEMENT A NETWORK-BASED SOLUTION FOR ITS TDMA NETWORK AND E-OTD FOR ITS PLANNED GSM NETWORK	14
A. Adoption of a Network-Based Phase II Solution Is the Best Approach for Triton’s TDMA Network.....	15
B. E-OTD Technology Is The Best Phase II E911 Solution For Triton’s Planned GSM Network.....	18
C. Grant of a Waiver Is Warranted in the Unique Circumstance of this Case	20
IV. CONCLUSION.....	23

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

In the Matter of)	
)	
Revision of the Commission's)	CC Docket No. 94-102
Rules to Ensure Compatibility)	
with Enhanced 911 Emergency)	
Calling Systems)	
)	

TRITON PCS LICENSE COMPANY, L.L.C.
STATUS REPORT AND REVISED PETITION FOR WAIVER OF THE
E911 PHASE II LOCATION TECHNOLOGY IMPLEMENTATION RULES

Triton PCS License Company, L.L.C. ("Triton"), by its attorneys, pursuant to Sections 1.3 and 1.925 of the Federal Communications Commission's ("Commission" or "FCC") rules and in accordance with the Commission's instructions to small and mid-sized wireless carriers, respectfully requests a waiver of the Phase II implementation requirements of Sections 20.18(e)-(h) of the rules to afford Triton additional time to implement Phase II service using the network-based solution ultimately selected by AT&T Wireless Services, Inc. ("AT&T") for its TDMA network, and to implement Phase II service using Enhanced Observed Time Difference of Arrival ("E-OTD") technology in Triton's planned GSM network. As demonstrated herein, a waiver of the Commission's rules would serve the public interest and is justified based upon the unique circumstances of Triton's request.¹

¹ This Status Report and Revised Petition for Waiver is intended to replace request for waiver filed by Triton on August 3, 2001. See Triton PCS License Company, L.L.C. Petition for Waiver of the E911 Phase II Location Technology Implementation Rules, CC Docket No. 94-102 (filed August 3, 2001) ("*Waiver Request*"). Although Triton has not altered its original proposal to implement an E-OTD solution for its planned GSM system, the proposal is restated herein (rather than incorporated by reference) for administrative convenience.

I. INTRODUCTION

Through its parent, Triton PCS Holding Company, Inc., Triton is the first member of the AT&T Wireless network of affiliates. Triton markets its wireless services under the brand SunCom, and is licensed to build and operate a digital wireless network in a contiguous area covering approximately 13 million people in Virginia, North and South Carolina, northern Georgia, northeastern Tennessee and southern Kentucky. Triton commenced service to the public in January 1999, and currently operates a network consisting of seven mobile switches and over 1900 cell sites.

As an affiliate member of the AT&T Wireless Network with contractual responsibilities to support AT&T services within its service territories, Triton is directly affected by AT&T's decisions related to deployment of network technologies. As the Commission is aware, AT&T recently decided that it will no longer pursue a Mobile-Assisted Network Location System ("MNLS") solution for its TDMA network, and AT&T is actively engaged in negotiations with Grayson Wireless Division of Allen Telecom, Inc. ("Grayson") and TruePosition, Inc. ("TruePosition") to procure a network-based Phase II solution.² Furthermore, AT&T is in discussions with the FCC Enforcement Bureau staff concerning an appropriate implementation schedule for the Phase II solution ultimately selected for its TDMA network.³

AT&T's decision not to pursue the MNLS solution – a development entirely beyond Triton's control – has had an inevitable and substantial impact upon Triton's ability to continue

² See Written Ex Parte Presentation from AT&T Wireless Services Inc. to Thomas Sugrue, CC Docket 94-102 (Sept. 17, 2001) ("*AT&T Ex Parte*").

³ See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Request for Waiver by AT&T Wireless Services, Inc., *Order*, CC Docket No. 94-102 (rel. Oct 12., 2001) ("*AT&T Waiver Order*") at ¶11.

to pursue implementation of MNLS for its existing TDMA facilities.⁴ Triton has concluded that it can no longer pursue an MNLS solution, and instead should adopt the E911 Phase II technology to be selected by AT&T for its TDMA network. However, because AT&T remains in discussions with potential vendors, Triton is not yet in a position to finalize a vendor selection for location technology. As described below, however, Triton commits to an aggressive Phase II implementation schedule with explicit milestones that commence when AT&T contracts with a location vendor.

Specifically, Triton requests 30 days from the date that AT&T contracts with its Phase II location vendor to finalize its own Phase II implementation contract for position determining equipment (“PDE”) and to begin deployment of its network-based Phase II solution. With respect to existing Phase II requests from Public Safety Answering Points (“PSAPs”), Triton proposes to shift the request date for all requests originally due for Phase II service on October 1, 2001 to the date by which Triton must finalize a contract with a PDE vendor, thereby making the new implementation date for these pending PSAP Phase II requests six months from the contract date. The Phase II implementation dates for all other PSAP requests already received by Triton will be shifted an equivalent amount so that the relative order and priority of Phase II implementation is maintained. Any new PSAP requests received prior to August 31, 2002 will have their request date shifted to August 31, 2002 (to maintain the relative priority of the last request already received), thereby making their Phase II implementation date six months later.

⁴ Triton previously filed a petition for waiver of the E911 Phase II rules to obtain FCC authority to implement MNLS in its TDMA network based, in part, on its conclusion that adoption of MNLS would enhance its provision of Phase II services by affording access to AT&T’s developmental work on the technology, promoting seamless network integration and providing potential economies of scale.

Finally, any PSAP request received after August 31, 2002 will have a Phase II implementation date of six months after the request was received, in accordance with the FCC's current rules. Triton further commits to reporting the status of Phase II deployment to requesting PSAPs on a monthly basis, and to complying with the quarterly reporting requirements imposed by the Commission in the context of recent E911 Phase II waivers.⁵

In addition to a network-based Phase II solution for its current TDMA facilities, Triton must implement a Phase II solution for its planned GSM network.⁶ In this connection, the Commission has granted AT&T a waiver of the Phase II rules to implement an E-OTD solution for its GSM network.⁷ Triton seeks similar FCC authority to implement E-OTD in its follow-on GSM network.

II. BACKGROUND AND STATUS OF TRITON'S E911 IMPLEMENTATION

From the outset of its E911 Phase II implementation efforts, Triton has kept the Commission fully informed of the status and progress of its E911 Phase II program.⁸ Triton has at all times been forthcoming and honest about its capability to ensure timely deployment of Phase II technology. However, a number of material and unavoidable events beyond Triton's control have forced Triton to revise significantly its E911 Phase II implementation plans.

⁵ See, e.g., *AT&T Waiver Order* at ¶¶21-24.

⁶ AT&T has announced that it will overlay a GSM platform onto its existing TDMA network, and Triton plans to implement a similar GSM overlay strategy in the regions it serves to maintain consistency and interoperability with AT&T's network.

⁷ See *AT&T Waiver Order* at ¶¶13-20.

⁸ See Report of Triton PCS License Company, L.L.C., CC Docket No. 94-102 (filed November 9, 2000); Amended Report of Triton PCS License Company, LLC, CC Docket No. 94-102 (filed December 21, 2000) ("*Amended E911 Report*"); Update to Amended Report of Triton PCS License Company, LLC, CC Docket No. 94-102 (filed June 11, 2001) ("*E911 Update*"); see also Waiver Request; Written *Ex Parte* Presentation of Triton PCS License Company, L.L.C., CC Docket No. 94-102 (filed September 27, 2001) ("*Ex Parte Presentation*").

Despite these unanticipated difficulties, Triton remains committed to implementing E911 Phase II service at the earliest possible time, consistent with the need to deploy a Phase II solution adopted for the AT&T Wireless Network.

A. Triton Has Been Forced To Alter Its Phase II Plans Because of Circumstances Beyond Its Control

In its *Amended E911 Report* of December 2000, Triton stated that it believed a handset-based solution was its best option for Phase II implementation, and that it was working with handset manufacturers to develop a handset-based ALI solution using GPS technology in TDMA subscriber handsets.⁹ Consistent with the diligence the Commission requires of carriers, Triton maintained contact with its handset vendors regarding their plans and timetables for Phase II compliant TDMA handset production and availability. On June 11, 2001, Triton informed the Commission that manufacturers from which Triton planned to obtain Phase II-compliant handsets had confirmed that GPS-equipped TDMA handsets would not be available for use in Triton's Phase II implementation program.¹⁰ This development left Triton with no alternative but to abandon its handset-based E911 Phase II strategy and to develop alternative Phase II implementation plans.

After receiving confirmation that Phase II-compliant TDMA handsets would not be available, Triton worked diligently to obtain and evaluate updated information concerning alternative Phase II technologies for its TDMA network. For example, Triton obtained and

⁹ See *Amended E911 Report* at 3. However, Triton also stated that it might need to revise its E911 Phase II technology selection based on vendor availability, equipment availability, technological developments and other factors. See *id.* at 7.

¹⁰ See *E911 Update* at 4-5; see *id.* at Attachment 1 (Letter from Michael Flemming, Nokia Mobile Phones, to Jim Sheehan, TritonPCS, dated June 8, 2001), Attachment 2 (Letter from Lenny Frucht, Motorola, to Jim Sheehan, TritonPCS, dated June 5, 2001) and Attachment 3 (Letter from Robert J. Miklosko, Panasonic, to Jim Sheehan, TritonPCS, dated May 30, 2001).

evaluated in detail responses to a Request for Proposal (“RFP”) seeking information from vendors on available network-based E911 Phase II wireless location systems and services. In addition, because severe time constraints and Triton's limited resources precluded independent field testing of alternative Phase II technologies, Triton analyzed test results of proposed E911 Phase II solutions filed in the docket of this proceeding in an effort to validate the accuracy claims of prospective vendors.

Based on its independent analysis of available information, Triton concluded that MNLS would provide the best E911 Phase II solution for its existing TDMA facilities. Triton’s decision to pursue an MNLS solution was based, in part, on the current performance and anticipated accuracy improvements of MNLS technology, and on AT&T’s decision to implement an MNLS solution in its own TDMA network. Because MNLS technology does not currently meet the FCC’s existing E911 Phase II accuracy requirements, however, Triton filed a request for waiver of the Phase II rules to implement this technology and E-OTD technology on August 3, 2001.¹¹

Shortly thereafter, on September 17, 2001, AT&T filed a written *ex parte* presentation with the FCC announcing that it was substituting a network-based Phase II solution in place of the MNLS solution for its TDMA network.¹² Citing the concerns of the public safety community about the accuracy of MNLS, and its belief that its efforts to provide E911 service to the public cannot succeed without the support of that community,¹³ AT&T informed the Commission that it was engaged in contract discussions with network-based vendors TruePosition and Grayson

¹¹ *See* Waiver Request.

¹² *See* AT&T *Ex Parte*.

¹³ *See id.* (citing comments filed on AT&T Wireless’ waiver request by the following parties: Comments of APCO and NENA (filed May 7, 2001); Further Comments of APCO, NENA and NASNA (filed July 24, 2001); Ex Parte Comments of APCO, NENA and NASNA (filed Sept. 4, 2001)).

regarding the use of their network overlay technologies in AT&T's TDMA network. According to AT&T, both TruePosition and Grayson have represented that the current versions of their location solutions will meet the FCC's accuracy requirements, and that they have the resources available to install their solutions in those TDMA markets where AT&T currently has valid PSAP requests for Phase II E911 service.¹⁴

Because Triton is a member of the AT&T Wireless Network, AT&T's decision not to pursue the MNLS solution has a direct and material impact on Triton's Phase II deployment plans. Triton is not, on its own, a large enough carrier to incent a manufacturer to develop MNLS technology. Thus, Triton concluded that it again must revise its E911 Phase II implementation plans, and requests FCC authority to implement the Phase II TDMA solution to be adopted by AT&T.

B. Status of Triton's E911 Implementation

Triton has worked closely with the Commission and PSAPs and to ensure that its customers will obtain the public safety benefits of automatic location information ("ALI") technologies. Triton has consistently met or exceeded expectations for E911 Phase I implementation and Triton remains committed to the implementation process for Phase I throughout its service area. Triton also looks forward to the ultimate implementation of Phase II service to requesting PSAPs, and has engaged RADDCOMM Wireless Consulting Services, LLC to assist the company further in focusing on E911 implementation. Triton's E911 implementation efforts to date are outlined below.

¹⁴ *See id.*

Triton has implemented E-911 Phase I in much of its coverage area. The following chart summarizes the percentage of PSAP counties or entities that have requested Phase I and are capable of receiving Phase I data versus the number in which Phase I service has been implemented:

North Carolina	97% ¹⁵
South Carolina	92% ¹⁶
Georgia	100% ¹⁷
Tennessee	0% ¹⁸
Virginia	27% ¹⁹
<hr/>	
Total	65% ²⁰

¹⁵ This figure reflects 36 of 39 requests implemented (one requesting PSAP is not ready to receive; one has not fully responded to newly installed sites).

¹⁶ This figure reflects 24 of 32 requests implemented (two requesting PSAPs are not ready to receive, two need new equipment, two have no selective router; two need CAS/NCAS solution from Ericsson).

¹⁷ This figure reflects 7 of 8 requests implemented (one requesting PSAP has no selective router and therefore cannot receive Phase I service).

¹⁸ This is a statewide request (eight counties/entities to be implemented, but are waiting on a CAS/NCAS solution from Ericsson).

¹⁹ This figure reflects 12 of 44 requests implemented (10 are in testing). Ericsson’s NCAS Phase I feature was initially released in areas of Virginia, and working out the “bugs” in the system has caused delays in the deployment of Phase I in these areas.

²⁰ This figure reflects 79 of 122 requests implemented. Triton notes that while it is licensed to operate in portions of Kentucky, it has no cell sites physically located in that state.

Triton also has contracted with Intrado (formerly SCC Communications Corp.) to manage all of its Phase I NCAS deployments and to prepare for Phase II implementation. The Intrado system architecture, with its Mobile Positioning Center (a core location database essential to ALI functionality), enables full integration with J-STD-036 and makes Triton ready to begin the implementation of E911 Phase II service when it ultimately procures a Phase II location equipment vendor.

Moreover, Triton is in the process of converting all of its operating areas and host PSAPs over to NCAS, which, as the Commission has recognized, is a virtual prerequisite to the provision of Phase II service. Twenty-five percent of Triton's switches have been converted to Phase I NCAS to date. These switches cover a service area that encompasses more than 80 percent of the Phase II PSAP requests received by Triton.

Triton also has met on numerous occasions with the various E-911 boards and individual PSAPs in its operating area to coordinate E911 implementation issues, including:

6/27/2000	Richmond County, GA meeting to plan implementation of E911 Phase I
7/27/2000	NC Wireless Board Meeting to present Triton Cost Recovery Proposal
10/17/2000	TN Wireless Board Meeting to present Triton Cost Recovery Proposal
10/20/2000	VA Wireless Board Meeting
12/13/2000	Richmond County, GA meeting to discuss E911 Phase I implementation and cost recovery
3/1/2001	Presented Cost Recovery Proposal to Richmond, Columbia and McDuffie Counties
4/6/2001	Presented Cost Recovery Proposal to Oconee, Jackson and Clark Counties
4/11/2001	VA Wireless Board Meeting
7/11/2001	VA Wireless Board Meeting
8/29/01	TN Wireless Board Meeting
10/29/2001	TN Wireless Board Meeting

Indeed, Triton PCS is committed to providing E911 Phase I if the PSAP has made a request for the service and there is any way possible to provide the service. Triton's efforts in connection with one PSAP in North Carolina provide an example of its commitment to providing E911 service. There is no selective router in this particular area, so Triton was required to provide direct trunking to that PSAP. Identifying and procuring appropriate trunking required substantial coordination by Triton with both BellSouth and Verizon, and a significant commitment by Triton in terms of personnel hours and additional costs to make the PSAP Phase I-capable. Triton also was required to address many issues associated with the PSAP's stand-alone ALI database, which is managed by a third-party provider. For example, Triton conducted numerous tests and worked with the database provider's technicians to resolve significant coding and translation problems.

Triton also has worked diligently to address difficulties in providing E911 Phase I service to two PSAPs in South Carolina. In these cases, both PSAPs can receive the P-ANI and the site address but they do not get the call-back number. Over the past year, Triton has worked closely with the PSAPs and the local exchange carrier to investigate why the remaining information is not being received. Apparently, the equipment these two PSAPs currently have in place simply will not display all of the information. After numerous discussions with the local exchange carrier and the PSAPs, Triton now believes that the PSAPs will receive all the information when NCAS is fully implemented. As noted above, Triton is working to implement NCAS in all of its service areas in preparation for E911 Phase II. Triton will continue to work cooperatively with these and other PSAPs and governmental entities on both Phase I and Phase II implementation.

With respect to its Phase II efforts, once it became apparent that Triton's preferred solution of a handset-based Phase II deployment could not be achieved due to lack of handset

vendor development of GPS-equipped TDMA handsets, Triton distributed an E911 Phase II RFP on May 3, 2001 to major PDE vendors. The responses to RFP were then evaluated in detail to determine the vendor best able to provide network-based Phase II service.

In addition, although AT&T has not yet selected its Phase II location vendor, Triton has renewed contact with both Grayson and TruePosition regarding the implementation of their network-based solutions in Triton's TDMA network. TruePosition has not responded formally to Triton's new request (presumably because of its focus on negotiations with AT&T). However, Grayson has provided a draft agreement to Triton and Triton is in contract negotiations with this vendor. Of course, Triton expects to be able to finalize its PDE contract negotiations quickly once AT&T has chosen its Phase II PDE vendor.

Triton also is working aggressively with its network vendor, Ericsson, to deploy necessary software in Triton's switching systems to support Phase II services. Full E911 Phase II functionality is only available using Ericsson's Switch Software version 7, and Triton is working with Ericsson to establish a complete deployment for this software. The deployment is currently 90 percent complete and should be done by the end of 2001. In addition, a Phase II E911 feature must be added to support NCAS. Triton is working with Ericsson to achieve reasonable feature dates and availability.

Finally, as described more fully in Section IV *infra*, Triton has developed a detailed E911 Phase II implementation plan that is keyed to the date of AT&T's PDE vendor selection/contract execution. Triton's Phase II proposal contains specific deployment milestones that, while triggered by AT&T's execution of a contract with a Phase II PDE vendor, are independent of any implementation schedule the Commission may impose on AT&T and are designed to provide Phase II service to requesting PSAPs as rapidly as Triton can possibly proceed.

In summary, Triton remains committed to E911 implementation throughout its network and has taken all measures possible to ensure that the full benefits of ALI technology can be realized by its customers at the earliest possible time. However, Triton's E911 Phase II implementation program has been directly and inevitably affected by developments beyond Triton's control. As a result, Triton has been forced to revise substantially its E911 Phase II implementation plans. Despite these difficulties, Triton is prepared to move forward with procurement and deployment of a network-based solution for its existing TDMA facilities once AT&T has identified and executed a contract with its Phase II vendor.

III. THE COMMISSION'S E911 PHASE II REQUIREMENTS AND WAIVER STANDARDS

In 1996, the Commission adopted rules to ensure the availability of 911 emergency telecommunications services for callers using wireless handsets.²¹ Sections 20.18(e)-(h) of the Commission's rules require, among other things, commercial mobile radio service ("CMRS") licensees to provide E911 Phase II (latitude and longitude) information to PSAPs beginning as early as October 1, 2001.²² The Commission's requirements were ambitious and, at the time they were adopted, no technology existed that would yield the required level of accuracy.²³

²¹ See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd. 18676 (1996).

²² The accuracy requirement for E911 Phase II information depends upon the type of technology employed: (i) network-based technologies must locate a caller within 100 meters for 67 percent of calls, and within 300 meters for 95 percent of calls; and (ii) handset-based technologies must locate a caller within 50 meters for 67 percent of calls, and within 150 meters for 95 percent of calls. See 47 C.F.R. § 20.18(h)(1)-(2).

²³ The Commission based its prescribed accuracy standards on the assumption that adequate location technologies could be developed and fully implemented by wireless carriers prior to the implementation deadline. See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Fourth Memorandum Opinion and Order*, 15 FCC Rcd. 17442, 17451 (2000) ("Fourth MO&O").

Since that time, it has become evident that ALI equipment vendors have been unable to develop the technology necessary for wireless carriers to satisfy the Commission's Phase II requirements within the time frames set forth in the rules. As a result, prior to the October 1, 2001 implementation deadline, a substantial number wireless carriers requested the FCC to waive the E911 Phase II rules to afford additional time for the deployment of Phase II solutions, and to permit the use of technologies that do not yet meet the Commission's stringent accuracy requirements but are anticipated to do so in the future.²⁴ Recognizing the difficulties associated with compliance with the E911 Phase II rules, the Commission recently granted waivers of the Phase II rules to several national wireless carriers and invited small and mid-sized carriers to file new or revised requests for relief from the rules by November 30, 2001.²⁵

The Commission may waive its rules in circumstances where strict enforcement would not serve the underlying purpose of the rules, and grant of the waiver would further the public interest; or where unique factual circumstances would make application of the rule in a given case inequitable, unduly burdensome, contrary to the public interest or there is no reasonable alternative.²⁶ In addition, the Commission has recognized that a waiver of the E911 Phase II rules is warranted where technology-related issues or other exceptional circumstances make it impossible for a carrier to implement compliant Phase II services by the October 1, 2001

²⁴ See generally Petitions for Waiver filed in CC Docket No. 94-102.

²⁵ See FCC Acts on Wireless carriers and Public Safety Requests Regarding Enhanced Wireless 911 Services, *News Release*, CC Docket 94-102 (Oct. 5, 2001); see also Commission Establishes Schedule for E911 Phase II Requests by Small and Mid-Sized Wireless Carriers, *Public Notice*, CC Docket 94-102, FCC 01-332 (Oct. 12, 2001); Wireless telecommunications Bureau provides Guidance on Filings by Small and Mid-Sized Wireless Carriers Seeking Relief from Wireless E911 Phase II Automatic Location Identification Rules, *Public Notice*, CC Docket 94-102, DA 01-2459 (Oct. 19, 2001).

²⁶ See 47 C.F.R. §§ 1.3, 1.925; see also *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).

deadline.²⁷ The Commission has indicated that a request for waiver of the E911 Phase II implementation rules should be “specific, focused and limited in scope, and with a clear path to full compliance,”²⁸ but also has noted that “if no solution is available that fully complies, the carrier [is] expected to employ a solution that comes as close as possible, in terms of providing reasonably accurate location information as quickly as possible.”²⁹ As demonstrated below, Triton’s waiver request satisfies these standards.

IV. THE COMMISSION SHOULD WAIVE ITS E911 PHASE II RULES TO PERMIT TRITON TO IMPLEMENT A NETWORK-BASED SOLUTION FOR ITS TDMA NETWORK AND E-OTD FOR ITS PLANNED GSM NETWORK

When Triton learned that GPS-equipped TDMA handsets would not be available for its E911 Phase II implementation program, Triton kicked off a new and intensive round of evaluation of alternative Phase II technologies for its TDMA system. As a result of those efforts, Triton concluded at that time that MNLS was the best Phase II solution for its TDMA facilities. AT&T’s recent decision not to pursue MNLS effectively precludes the use of this technology by Triton. As a result, Triton now has concluded that it must implement the network-based Phase II solution built around the technology supported by Grayson and TruePosition.

Triton also has evaluated potential Phase II solutions for its planned GSM overlay network. Triton’s efforts were aided by the substantial information available regarding E-OTD technology, including the Commission’s decision to grant VoiceStream a waiver to implement this technology in its GSM system.³⁰ More recently, the Commission granted AT&T authority to

²⁷ See *Fourth MO&O* at ¶ 43.

²⁸ See *id.*, ¶ 44.

²⁹ See *id.*, ¶ 45.

³⁰ See generally *id.*

implement E-OTD in its GSM system.³¹ Like VoiceStream, AT&T and other GSM wireless carriers, Triton believes that E-OTD is the most viable Phase II solution for its planned GSM network.

A. Adoption of a Network-Based Phase II Solution Is the Best Approach for Triton's TDMA Network

As noted above, AT&T has decided that it will no longer pursue an MNLS solution for its TDMA network, and is actively engaged in negotiations with Grayson to procure a network-based Phase II solution. Although AT&T's decision has had a direct and substantial impact on Triton's Phase II implementation plans, Triton has developed an alternative Phase II plan using both Angle of Arrival ("AOA") and Time Differential of Arrival ("TDOA") location technology supported by Grayson and TruePosition. As a result, as soon as AT&T selects its PDE vendor, Triton may begin to implement its alternative Phase II solution.

Triton requests a waiver of the Phase II rules to afford Triton additional time to implement its new Phase II solution. Specifically, Triton requests 30 days from the date that AT&T selects its Phase II location vendor and executes a contract to finalize its own PDE contract and to begin deployment of its network-based Phase II solution.³² From that date, Triton seeks to implement Phase II service on a staged basis linked to the order in which Phase II PSAP requests were received by Triton.

Thus, with respect to existing Phase II requests, Triton proposes to shift the request date for all requests originally due for Phase II service on October 1, 2001 to the date by which Triton

³¹ See *AT&T Waiver Order*.

³² Triton proposes a 30-day contract period in light of the advanced stage of its contractual negotiations with Grayson, and assumes that AT&T selects Grayson for all or part of its Phase II needs. To the extent AT&T procures PDE equipment from TruePosition only, additional time may be needed for Triton to negotiate and finalize an agreement.

must finalize a contract with a PDE vendor, thereby making each PSAP's new Phase II implementation date six months from the date of the PDE agreement. The Phase II implementation dates for all other requests already received by Triton will be shifted an equivalent amount so that the relative order and priority of Phase II implementation is maintained. Any new PSAP requests received prior to August 31, 2002 will have their request date shifted to August 31, 2002, thereby making their Phase II implementation date six months later and maintaining the relative priority of the last request Triton has already received. Finally, any PSAP request received after August 31, 2002 will have a Phase II implementation date of six months after the request was received, in accordance with the FCC's current rules.³³

The following chart depicts Triton's Phase II implementation proposal graphically:

³³ Triton's proposed deployment schedule is based on information received in the context of its contractual negotiations with Grayson. To the extent that TruePosition is selected as a sole-source PDE vendor by AT&T and cannot give Triton similar assurance regarding its Phase II deployment schedule, Triton may be required to amend its waiver request.

	PSAP Name	Month														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Chesterfield, VA															
2	City of VA															
3	York, VA															
4	Spartanburg, SC															
5	City of Hampton, VA															
6	City of Suffolk, VA															
7	City of Newport News, VA															
8	City of Chesapeake, VA															
9	City of Norfolk, VA															
10	James City County, VA															
11	City of Portsmouth, VA															
12	Charlottesville City/Ablemarle County, VA															
13	City of Richmond, VA															
14	City of Winchester, VA															
15	City of Martinsville, VA															
16	City of Lynchburg, VA															
17	Accomack/Northampton Coutnies, VA															
18	Henrico County, VA															
19	City Of Fayetteville, NC															
20	Greenville County, SC															
21	Warren County, VA															
22	New PSAP Request (Received prior to 8/02)															
23	New PSAP Request (Received after to 8/02)															

*The foregoing chart assumes AT&T executes a contract with a PDE vendor on or about January 1, 2002. Triton would be required to finalize a PDE contract and commence Phase II deployment by February 1, 2002, and would be required to implement Phase II service beginning six months thereafter on a staggered basis in the order in which Phase II PSAP requests were or will be received by Triton.

In addition, Triton commits to reporting the status of Phase II deployment to requesting PSAPs on a monthly basis. Triton also will comply with the quarterly reporting requirements imposed by the Commission in the context of recent E911 Phase II waivers.³⁴

Triton’s alternative Phase II implementation plan for its TDMA network is specific, focused and limited in scope. Triton will deploy a network-based Phase II solution using AOA/TDOA technology supported by both Grayson and TruePosition, so that Triton may move forward expeditiously regardless of the PDE vendor selected by AT&T. Triton has been assured by its prospective PDE vendors that their network-based solutions will comply with the

³⁴ See, e.g., *AT&T Waiver Order* at ¶¶21-24.

Commission's Phase II accuracy requirements. Thus, Triton merely requests a reasonable amount of time to implement its new Phase II solution, particularly because commencement of its Phase II program is contingent upon AT&T's selection of a PDE vendor – an event which has not yet occurred.

In fact, Triton's proposal implementation schedule is quite aggressive given the PDE vendor's need to serve AT&T, Triton and potentially many other wireless providers. Furthermore, Triton's Phase II program is entirely independent from any deployment schedule that may be imposed on AT&T, and contains specific and enforceable milestones based on the information currently available to Triton. Thus, Triton's alternative Phase II solution provides a clear path to full compliance with the Commission's rules.

Triton's deployment of the same network-based solution selected by AT&T will promote the public interest by enhancing Triton's ability to provide Phase II service by permitting access to AT&T's developmental work on the technology, promoting seamless network integration, and providing potential economies of scale. In addition, Triton proposed deployment schedule would maintain the relative priority of Phase II requests received by Triton, ensuring that PSAPs actual receive Phase II service in the order in which their requests were submitted.

B. E-OTD Technology Is The Best Phase II E911 Solution For Triton's Planned GSM Network

As noted above, as an affiliate member of the AT&T Wireless Network, Triton plans to implement a GSM overlay network in the regions it serves to maintain consistency and interoperability with AT&T's planned GSM network. Triton has selected E-OTD technology to provide E911 Phase II services on its planned GSM overlay network because, as has been generally recognized, E-OTD is the best solution for GSM systems.

First, as the Commission recognized when it granted the waiver request of VoiceStream, E-OTD is the standardized location method for GSM and will be included in future releases.³⁵ Thus, Triton’s GSM handset manufacturers can be expected to include E-OTD capability in all of its GSM handsets.

Second, implementing an E-OTD solution will ensure rapid initial deployment of Phase II service to Triton’s GSM subscribers because Triton intends that its GSM network will be E-OTD equipped from the moment it is installed. In contrast to VoiceStream, whose GSM network was already in place when the Commission granted it a waiver, Triton does not anticipate having to implement an interim solution to accommodate legacy GSM handsets.³⁶

Third, the use of the E-OTD solution in Triton’s GSM overlay network ultimately will provide the stringent Phase II location accuracy levels associated with handset-based solutions. Initially, E-OTD technology will be able to satisfy the accuracy standards required for network-based location solutions. As the Commission recognized in granting the VoiceStream and AT&T waivers, however, the accuracy of the E-OTD solution will “improve over time, as the software is refined, experience is gained, and additional cell site are added to serve increasing traffic.”³⁷

The use of E-OTD technology in Triton’s planned GSM system will result in substantial customer and public safety benefits, including ultimate compliance with the Commission’s most stringent E911 Phase II location accuracy requirements. Furthermore, the Commission already

³⁵ See *Fourth MO&O*, ¶ 59 and n.100.

³⁶ Unlike Triton, VoiceStream’s legacy GSM system required it to deploy a network software solution (“NSS”) to make use of existing network capabilities to provide immediate location information for all 911 calls on the network. *Id.*, ¶ 53.

³⁷ *Id.*, ¶ 59. see also AT&T Waiver Order at ¶¶18-19.

has granted a waiver to VoiceStream to implement E-OTD in its GSM network. Accordingly, the Commission should also grant Triton a temporary waiver of the E911 Phase II location accuracy requirements to permit Triton to provide Phase II services using E-OTD technology in its planned GSM overlay network.

As required by the Commission in the VoiceStream and AT&T waivers, Triton will commit to meeting the accuracy requirements for handset-based solutions of 50 meters for 67 percent of the time, and 150 meters for 95 percent of the time, by October 1, 2003, or will adopt another ALI technology that complies with the Commission's requirements.³⁸

Triton plans to implement E-OTD with the market-by-market rollout of the GSM network so that E-OTD will be available to all GSM subscribers from day one. Starting in the second quarter of 2002, Triton plans to deploy a GSM platform as an overlay to its existing TDMA network. Triton intends to complete deployment of its GSM overlay by fourth quarter of 2003. Triton does not currently plan to discontinue service over its TDMA network on a certain date as a result of its transition to GSM. The migration of existing customers from TDMA to GSM will be directly dependent on customer demand for new services and equipment. Although Triton does not have a set date for discontinuance of its TDMA service, it fully expects the offering of 2.5G and 3G services in its GSM network to be an incentive for its TDMA subscribers to migrate to GSM.

C. Grant of a Waiver Is Warranted in the Unique Circumstance of this Case

As discussed above, substantial public interest and safety benefits will result from implementing Triton's network-based solution and the E-OTD solution in Triton's TDMA and

³⁸*Fourth MO&O* at ¶¶ 59, 64. *see also* AT&T Waiver Order at ¶19.

planned GSM networks, respectively. These benefits include rapid deployment, interoperability and seamless integration within the AT&T Wireless Network, substantial economies of scale, elimination of the need for any “interim” PDE solution, as well as minimizing deployment complexities and delay. In addition, network-based location vendors have assured Triton that their solutions will meet the Commission’s most stringent Phase II accuracy requirements. Accordingly, grant of a waiver to Triton to deploy these technologies would further the public interest.

In addition, grant of the requested waiver would not undermine the purpose of the Commission’s rules. The Commission has recognized the substantial difficulties faced by wireless carriers, particularly small and mid-sized carriers such as Triton, in meeting the FCC’s stringent Phase II requirements within the timeframes set forth in the rules. Indeed, the Commission has already granted waivers to the major national wireless carriers and has invited small and mid-sized carriers to file requests for relief. In the context of such requests, the Commission has directed carriers to propose a solution that comes as close as possible to the FCC’s requirements in terms of providing reasonably accurate location information as quickly as possible. Triton’s proposal to implement a network-based solution for its TDMA network and E-OTD for its planned GSM system will do just that – it will provide ALI data that complies with the FCC’s accuracy requirements within a reasonable period of time.

Triton’s circumstances are unique. Six months ago, Triton learned that GPS-equipped TDMA handsets it had committed to deploy simply will not be available for use in its Phase II implementation plan, forcing Triton to develop an alternative Phase II plan that included the deployment of MNLS technology for its TDMA network. Less than nine weeks ago, however, Triton learned that AT&T had decided it would not pursue an MNLS solution, effectively

precluding the implementation of that solution by Triton. Accordingly, Triton had no alternative but to deploy the network-based solution ultimately selected by AT&T for its own TDMA network. Triton believes this proposal constitutes the most viable Phase II solutions for its TDMA facilities.

Finally, as a member of the AT&T Wireless Network, Triton's network operations are directly affected by AT&T's decisions related to network technologies. AT&T plans to deploy a network-based solution for its TDMA facilities and E-OTD technology in its planned GSM networks, and Triton seeks to implement these Phase II solutions in its network. The public interest would be served by granting authority for us to deploy similar Phase II solutions to maintain consistency and interoperability throughout the AT&T Wireless Network and the networks of AT&T affiliates.

IV. CONCLUSION

For all of the foregoing reasons, Triton respectfully requests that the Commission grant the waivers requested herein at the earliest possible time.

Respectfully submitted,

TRITON PCS LICENSE COMPANY, L.L.C.

Laura H. Phillips
Carlos M. Nalda
Dow, Lohnes & Albertson, PLLC
1200 New Hampshire Avenue, N.W.
Suite 800
Washington, D.C. 20036
(202) 776-2000

Its Attorneys

Triton PCS
Glen Robinson
Senior Vice President of Engineering
and Information Technologies
1100 Cassatt Road
Berwyn, PA 19312
(610) 722-4424

November 30, 2001