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November 9, 2000

Magalie Roman Salas, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Attn: Jay Whaley, Policy Division, Wireless Telecommunications Bureau

Re: Missouri RSA No. 7 Limited Partnership dba Mid-Missouri Cellular
TRS#803175
Carrier Reports on Implementation of Wireless E911 Phase II
Automatic Location Identification - CC Docket No. 94-102

Dear Ms. Salas:

Missouri RSA No. 7 Limited Partnership dba Mid-Missouri Cellular ("Mid-Missouri") hereby files the attached report on implementation of Wireless E911 Phase II Automatic Location Identification ("ALI") (CC Docket No. 94-102) pursuant to Section 20.18(i) of the Commission's Rules.

Please contact the undersigned with any questions regarding this report.

Respectfully submitted,

John Kuykendall
Its Attorney

Attachment

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List ABCDE

Report on Implementation of Wireless E911 Phase II Automatic Location Identification, CC Docket No. 94-102
November 9, 2000

Missouri RSA No. 7 Limited Partnership dba Mid-Missouri Cellular ("Mid-Missouri Cellular") pursuant to requirements set forth in CC Docket 94-102,[1] hereby files this report on implementation of wireless E911 Phase II Automatic Location Identification.

I. Background/Contact Information

Carrier Identifying Information:

Carrier's Name:	Missouri RSA No. 7 Limited Partnership dba Mid-Missouri Cellular
Carrier's TRS Number:	803175

Contact Information:

Kathie Zentgraf
General Manager
1500 South Limit
Sedalia, Missouri 65301
(660) 620-1114 (voice)
(660) 620-1116 (fax)
kzentgraf@mid-mo.net

II. E911 Phase II Location Technology Information

Type of Technology:

Mid-Missouri Cellular is the licensee of the B block cellular system serving Missouri RSA 7. Mid-Missouri Cellular currently intends to deploy a Phase II handset-only location technology. After evaluating alternative solutions, Mid-Missouri Cellular favors this solution as it may well prove to be the only alternative available. Mid-Missouri Cellular's network continues to utilize a significant

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[1] *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); *Third Report and Order*, FCC 99-245, rel. Oct. 6, 1999; *Fourth Memorandum Opinion and Report*, FCC 00326, rel. Sept. 8, 2000; and "Wireless Telecommunications Bureau Provides Guidance on Carrier Reports on Implementation of Wireless E911 Phase II Automatic Location Identification," *Public Notice*, DA 00-2099, rel. Sept. 14, 2000.

number of rural, omni-directional cell sites. Moreover, many of these sites are designed to provide service along major traffic arteries and, therefore, provide coverage to significant areas where a sufficient number of other cells are not available. Under current network-based technology proposals, the use of omni-directional cell sites, coupled with the lack of coverage to most areas of the Mid-Missouri Cellular market from multiple cell sites, might well preclude Mid-Missouri Cellular's ability to provide a Phase II compliant network-based solution in a timely and cost effective manner, based on any of the network-based technologies currently being advanced. However, several key handset providers have indicated that their ALI-compliant handsets might not be available on a timely basis to ensure a sufficient supply for all carriers proposing handset-based solutions to meet the Commission's deployment requirements. Accordingly, Mid-Missouri Cellular could find itself in a situation where, absent sufficient availability of ALI-compliant handsets, Mid-Missouri Cellular is unable to timely implement either a network-based, handset-based or hybrid system that fully complies with the Commission's current E911 requirements. In that instance, Mid-Missouri Cellular may be required to modify its planned deployment and/or seek a waiver or extension of the implementation deadline.

Testing and Verification: ***Provide a complete description of the testing method used, or to be used, to determine the accuracy of the ALI solution(s) selected, and a description of the results of tests already conducted.***

Mid-Missouri Cellular will use empirical testing of ALI equipment of systems in operation. Mid-Missouri Cellular currently envisions taking accuracy measurements at each point of a sample set of randomly selected locations representing 911 call locations. Tests will then be performed at each of these sample locations to determine the distance between the actual location and the location reported by the ALI system. Mid-Missouri Cellular presently envisions that random selection of sample locations will occur as follows: Mid-Missouri Cellular will use one of the random number generator algorithms found on computers applied to scientific/engineering problems to generate a number of locations from random latitude-longitude pairs. The latitude and longitude numbers generated will first be uniformly distributed inside a coordinate rectangle containing the operating area, and points out of the operating area itself subsequently dropped. If it is later found that a point is inaccessible, it will be replaced by another point no more than three meters beyond the nearest point on the boundary within an accessible area. If the point is inside a building, the floor of the building to be tested will be selected when the test crew arrives. Initially, no weighting factors will be used for the likelihood that a 911 call will be made from a particular site. However, as more data is gathered, Mid-Missouri Cellular may incorporate weighting factors into its methodology. Mid-Missouri Cellular agrees to utilize the conventions indicted in OET Bulletin No. 71 to ensure reliability and comparability of data. (*See* OET Bulletin No. 71 at 7-8). No tests have been conducted to date.

Implementation Details and Schedule: ***Provide a complete description of the carrier's strategy and schedule for the installation of the hardware and software needed to implement its chosen technology (handset-based, network-based or hybrid systems). For example, indicate whether both hardware and software changes will be necessary and fully describe the precise nature of the changes. In addition, please provide the roll-out schedule for the installation of the ALI technology(ies).***

Mid-Missouri Cellular is currently working with both infrastructure and handset vendors to determine the availability of products as well as interoperability between products from different vendors to meet the Commission's timeline for a handset-based solution. Before deploying a solution, Mid-Missouri Cellular will conduct interoperability tests to ensure reliability and quality of service. The interoperability tests can be expected to last several months. Assuming satisfactory verification of the solution, Mid-Missouri Cellular expects to be able to meet the general time frame from PSAP request to initial deployment will comply with Commission Rules provided that ALI-compatible handsets are available in sufficient quantities to meet the FCC's deadlines at that time. Presently, the lack of availability of ALI-compliant handsets has made software delivery dates from Mid-Missouri Cellular's network provider, tentative. Mid-Missouri Cellular's network utilizes a Nortel SNSE MTSO. That manufacturer is currently predicting the general availability of the requisite hardware/software to implement handset-based E911 to be late in the fourth quarter of 2001. Mid-Missouri Cellular has no control over the manufacturer's ability to actually meet this schedule and may be required to modify its E911 proposal or request a waiver or extension of its current deadlines if its manufacturer is unable to timely supply these key components.

PSAP Interface: ***Provide a description of hardware and software changes necessary to transmit Phase II data to PSAPs and the carrier's strategy and schedule for the installation and/or modification of such hardware or software changes.***

In addition to supporting the interface between Mobile Positioning Center and the Emergency Service Messages Entity, the Public Service Answering Points will be required to obtain mapping software and software to extrapolate the latitude and longitude coordinates.

Existing Handsets: ***Provide a description of the carrier's strategy and schedule for the upgrade and/or replacement of existing customer handsets, if handset based solution is desired.***

After successful completion of the empirical testing and the availability from handset manufacturers of ALI-capable phones, Mid-Missouri Cellular will begin selling ALI-capable handsets by October 1, 2001 and plan to follow the recommendation of the Commission for the phase in schedule, as listed below:

December 31, 2001:	at least 25 percent of all new handsets activated are to be ALI-capable;
June 30, 2002:	50 percent of all new handsets activated are to be ALI-capable;
December 31, 2002:	100 percent of all new digital handsets activated are to be ALI-capable; and
December 31, 2005:	plan to reach full penetration of ALI-capable handsets in our total subscriber base.

The availability of sufficient quantities of handsets will be crucial to Mid-Missouri Cellular's ability to meet these time frames. To date, to Mid-Missouri Cellular's knowledge, no handset manufacturer has been willing to commit that there will be sufficient handsets available to enable compliance with this deployment schedule. Accordingly, Mid-Missouri Cellular may need to modify its deployment plans and/or seek waivers of the Phase II handset deployment schedule.

Location of Non-Compatible Handsets: ***Provide a description of the best efforts that carriers employing a handset-based or hybrid system will take to accommodate handsets that are incompatible with the carrier's ALI system, e.g. handsets that do not have ALI capability, or handsets that are ALI-capable, but are not compatible with the carrier's particular handset-based or hybrid system.***

Mid-Missouri Cellular does not believe that, with the deployment of a handset-based solution, that it will be able to provide Phase II compliant E911 services to incompatible handsets. Phase I compliant E911 services will be offered to any such units.

Other Information: ***Please provide any other information, including a description and history of any Phase II requests received from PSAPs, that will assist the Commission and affected parties in monitoring and coordinating the deployment of E911 Phase II in accordance with the timetables set forth in the Commission's rules.***

At this time Mid-Missouri Cellular has not received any requests from PSAP's for Phase II requirements.

III. Conclusion

This report does not constitute a final or irrevocable commitment to the ALI technology that Mid-Missouri Cellular will employ. Mid-Missouri Cellular may make good faith changes in its

implementation plans after its initial report is filed, including changes in ALI technologies. Any changes will be filed within thirty (30) days of adoption of any such change.

Respectfully submitted,

Missouri RSA No. 7 Limited Partnership dba
Mid-Missouri Cellular

By: _____
Kathie Zentgraf, General Manager