

**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)	
)	
)	

COMMENTS OF ERICSSON

Ericsson Inc ("Ericsson") hereby submits comments in support of Cingular Wireless LLC's ("Cingular") Request for Waiver of the E911 Phase II Location Technology Implementation Rules, filed on July 6, 2001 ("Petition for Waiver").¹ Cingular seeks a waiver of the Commission's accuracy rules in order to deploy Enhanced Observed Time Difference of Arrival ("E-OTD") technology throughout its GSM networks.² Cingular also proposes to deploy an additional location technology solution for its GSM networks, similar to the NSS solution approved for VoiceStream, as a safety net whereby GSM subscribers without E-OTD handsets could be located to a specific degree of accuracy. In this way, Cingular proposes to implement a location technology solution that will provide location capabilities to the broadest range of Cingular customers in the shortest time frame.

¹ Specifically, Cingular seeks a waiver of 47 C.F.R. § 20.18 (e)-(h).

² Ericsson is not submitting comments on the TDMA portion of the Cingular's Petition for Waiver in light of Cingular's recent withdrawal of this part of the Petition. See Cingular withdrawal letter dated July 24, 2001.

Ericsson has significant technical expertise in GSM networks and location technologies and will provide GSM location technologies to Cingular. Ericsson concurs with Cingular's assessment that the combination of E-OTD, plus a safety net solution that addresses legacy GSM handsets, is the most appropriate and feasible location solution for Cingular's GSM networks. Ericsson has committed to meet Cingular's infrastructure needs for GSM E-OTD plus a safety net solution by Q1 2002, and its terminal needs by Q2 2002.³

Cingular presents compelling evidence that E-OTD plus the safety net solution is the best currently available location solution for its GSM network because it will permit Cingular to implement core location technologies for the entire subscriber base in the shortest time frame. E-OTD and the safety net solution can be used in virtually all GSM networks, which ensures support for roaming users of Cingular's network. As outlined by Cingular, E-OTD and the safety net solution will be readily available to existing GSM network users beginning in the first quarter of 2002 and will provide a locating solution that works with all legacy GSM handsets.

Cingular's Petition for Waiver demonstrates that there is good cause for a limited waiver of the Commission's rules. Moreover, there is sufficient evidence to conclude that Cingular's Petition for Waiver is in the public interest.⁴ In light of the limited waiver the Commission has already granted for VoiceStream, the Commission should grant Cingular's Petition for Waiver under similar circumstances.

³ Ericsson can commit to meeting time estimates set forth above if Cingular uses a BSS-centric network solution for its E-OTD location technology.

⁴ *In the Matter of 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 (2000) ¶ 43 (citing *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (other citations omitted)).

I. BACKGROUND

The Commission is mandated to promote safety of life and property through the use of wire and radio communication.⁵ More recently, this mandate has been enhanced by the enactment of the Wireless Communications and Public Safety Act of 1999 (“911 Act”).⁶ The 911 Act aims to enhance public safety by encouraging and facilitating the prompt deployment of a nationwide, seamless communications infrastructure for emergency services that includes wireless communications.⁷ To this end, the Commission promulgated rules for the phase-in of E911 location technologies as well as standards for the accuracy and reliability of such technologies.⁸

The Commission has recognized that, in certain circumstances, such as where technology-related issues or other exceptional circumstances arise, the Commission’s rules may be waived for good cause shown.⁹ In addition, if special circumstances warrant a deviation from the rules, and such a deviation will serve the public interest, the Commission may waive strict compliance with its rules.¹⁰ Cingular’s Petition for Waiver demonstrates both good cause and special circumstances to justify a limited waiver of the location accuracy requirements. Moreover, it is in the public interest to allow Cingular to use E-OTD location technology for its GSM networks as its Phase II E911 location technology.¹¹

⁵ See Section 1 of the Communications Act, 47 U.S.C. § 151.

⁶ Wireless Communications and Public Safety Act of 1999, Pub. L. No. 106-81, enacted Oct. 26, 1999.

⁷ *Id.*

⁸ See 47 C.F.R. § 20.18 *et seq.*

⁹ See *Fourth Memorandum Opinion and Order*, ¶ 43.

¹⁰ *Id.*

¹¹ See *generally* Cingular Petition for Waiver.

II. E-OTD PLUS A SAFETY NET SOLUTION OFFERS THE BEST CHOICE FOR CINGULAR'S GSM NETWORKS

The combination of E-OTD plus the safety net solution is the most advantageous location technology for Cingular's GSM customers as it is the only location combination that can be successfully implemented in the near term. Moreover, it is currently the only viable combination for the GSM air interface.

The Commission already has, after careful consideration, permitted the use of E-OTD plus a safety net solution in a GSM environment.¹² The Commission expressly acknowledged, in the context of the VoiceStream Petition for Waiver, that E-OTD may be one of the only ALI solutions available for GSM networks in the near term.¹³ In fact, as the Commission noted in considering VoiceStream's Petition for Waiver, E-OTD may be the *only* method available to GSM carriers for compliance with Phase II for some time.¹⁴

Unlike GPS technology, E-OTD plus a safety net solution will ensure that Cingular can provide the full range of its GSM customers with a timely location solution. GPS terminals for GSM networks are not likely to be readily available in the United States in the near term.¹⁵ As a result, GPS presents a less viable and less desirable location solution for Cingular in the near term. Therefore, a waiver that permits Cingular to use E-OTD now is particularly important.

¹² See generally *Fourth Memorandum Opinion and Order*.

¹³ *Id.* at ¶ 56.

¹⁴ *Id.* The Commission also found that using E-OTD technology would provide substantial additional public safety benefits, including rapid initial deployment of ALI capability within a relatively brief period and more precise levels of accuracy. *Id.* at ¶¶ 58-60.

¹⁵ There is a substantial question as to whether GPS-capable handsets will be available for use in the near term with GSM networks. *Fourth Memorandum Opinion and Order* at ¶ 56. At present, no major handset manufacturer offers a commercial GSM GPS terminal for sale, nor are any expected to be available in the reasonably foreseeable future.

Moreover, E-OTD will meet the Commission's accuracy standards as defined by previous waivers.¹⁶ It can also be deployed more quickly and broadly than other location technologies in a cost-effective manner. Cingular's ability to deploy this technology in the near term is underscored by Ericsson's commitment to fulfill Cingular's location solutions needs by early 2002. In addition, Ericsson is committed to working towards refining the accuracy capabilities for E-OTD.

Further, Ericsson reiterates the fact that none of the GSM network-based solutions can work until a location equipment vendor's equipment is properly interfaced with the network infrastructure since GSM signals are heavily encrypted. Establishing this interface requires close collaboration between any location equipment vendor and a network infrastructure manufacturer, such as Ericsson. As one of the major infrastructure vendors, Ericsson can attest that such an interface between Ericsson and a location equipment vendor has not occurred. Yet, without this integration, network-based location technologies cannot work on a GSM network.

As the Commission has noted in selecting a location solution, accuracy is only one of several important means by which location technologies contribute to the public safety.¹⁷ The rate and extent of deployment, reliability, encouragement of further improvements, and cost are other relevant factors to consider.¹⁸ Moreover, if no solution is available to a carrier that fully complies with the rules, the carrier would be expected to employ a solution that comes as close as possible, providing reasonably accurate location information as quickly as possible.¹⁹

¹⁶ See, e.g., *Fourth Memorandum Opinion and Order*.

¹⁷ *Id.* at ¶ 40.

¹⁸ *Id.*

¹⁹ *Id.* at ¶ 45.

The implementation of E-OTD plus a safety net solution as its location solution, as set forth in detail in Cingular's Petition for Waiver, will fulfill the Commission's expectation: it will allow Cingular to provide reasonably accurate location service in the near term.²⁰ Thus, the foregoing considerations confirm that E-OTD is the most appropriate solution for Cingular's GSM Network. Moreover, based on the same considerations and determinations made by the Commission in ruling on VoiceStream's Petition for Waiver, the Commission should grant a waiver to Cingular for its GSM network. Thereby, the Commission will enable the benefits of this technology to extend to Cingular subscribers as well.

III. CONCLUSION

The foregoing reasons justify granting a waiver to Cingular for the use of E-OTD plus a safety net solution for its GSM networks. Cingular has shown good cause for the waiver and that the waiver will serve the public interest. In the event Cingular's Petition for Waiver is granted, Ericsson will commit to meet Cingular's technology needs, as set forth above, for E-OTD plus a safety net solution for its GSM networks. This commitment underscores Cingular's ability to meet its targeted deadlines. The foregoing will ensure that broadest range of customers receive the benefit of E911 location services without unduly delaying network upgrades that will allow consumers to access new technologies, advanced services, and superior quality communications as envisioned by the Commission.

²⁰ Further, as E-OTD software is refined and additional cell sites are added, the system will become more accurate.

Respectfully submitted on this 31st day of July, 2001.

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