

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules to	)	CC Docket No. 94-102
Ensure Compatibility with Enhanced 911	)	
Emergency Calling Systems	)	
	)	
Request for Waiver	)	TRS ID Nos. 808439, 820852

**ERICSSON'S COMMENTS ON QWEST WIRELESS' PETITION FOR EXTENSION  
OF TIME OR WAIVER OF TTY RULES**

Ericsson Inc ("Ericsson") herein submits its comments in response to the Qwest Wireless LLC and TW Wireless petition for a limited waiver of the June 30, 2002 deadline established in the Federal Communications Commission's (the "Commission") *Fourth Report and Order*<sup>1</sup> and Section 20.18 of the Commission's rules.<sup>2</sup> The request relates only to those markets in which Qwest operates an open wireless architecture ("Open A") network using multiple vendors' equipment, including Ericsson base stations and base station controllers. In the petition, Qwest seeks a waiver so that it can deploy its TTY 911 solution in these markets by December 31, 2002. According to Qwest, the Open A networks are only a small portion of its network.

Ericsson's comments do not address Qwest's need for additional time beyond the FCC's deadline of June 30, 2002. Ericsson believes that TTY carriers are best suited to determine how to deploy digital TTY solutions reliably in their networks. However, Ericsson asks that

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<sup>1</sup> *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Fourth Report and Order*, 15 FCC Rcd. 25216 (2000).

<sup>2</sup> Qwest Wireless, LLC and TW Wireless, LLC Petition for Extension of Time or Waiver of Section 20.18 of the Rules, dated March 18, 2002.

the Commission review these comments as further background to Qwest's concerns. In particular, the Commission should give due consideration to the unique circumstances of Qwest's Open A markets and the inherent complexity of ensuring multiple vendor interoperability.

### **Ericsson Has Been A Leader In TTY Technology Development**

Ericsson has been one of the earliest and most committed supporters of the Commission's initiative to ensure TTY access to digital wireless systems for 911 calls. This initiative has posed some difficult technical issues related to digital compatibility with TTY devices. Along with other industry members and carriers, Ericsson has worked hard to resolve these technical challenges, so that hearing-impaired users can be guaranteed this important emergency access.

For example:

- Ericsson/SonyEricsson have taken a lead position in the TTY Forum (resolving technical issues);
- Ericsson/SonyEricsson created the TTSI incubator (the industry wide interoperability group);
- Ericsson/SonyEricsson have led the effort to isolate and identify TTY issues in the network, in the PSAPs, and in the handsets for TDMA, CDMA and GSM;
- Ericsson was the first vendor to FOA GSM;
- Ericsson was the first to demonstrate an error-free TDMA solution and an error-free GSM solution;
- Ericsson developed the CTM solution which was standardized for use in GSM networks;
- Ericsson was the first to make the bit exact codes work in all technologies; and
- SonyEricsson has written more technical white papers for all technologies than all other manufacturers combined.

These examples clearly demonstrate that Ericsson and SonyEricsson have taken key steps to put a well-tested and reliable solution to work to aid the hearing impaired.

### **Ericsson Provided Testable Code To Qwest**

Ericsson has worked diligently to address Qwest's need for software for its Open A network, as it has with its other customers. Qwest's Open A network posed unique challenges,

largely due to Qwest's use of multiple vendors for different equipment. While this unique design enables Qwest to provide service efficiently and economically, it complicates the deployment of new or updated equipment and software. Equipment and software must be compatible with the products of several different manufacturers.

Both through its active participation in the TTY Forum and in individual communications and meetings with Qwest, Ericsson clearly defined the status of and progress toward providing TTY carrier verification test level software. For example, at TTY Forum 18 (held on June 12, 2001), Ericsson discussed dates for First Office Application and General Availability of software for CDMA networks.<sup>3</sup> At TTY Forum 19 (held on September 26, 2001), Ericsson sketched its lab testing plans and expected date for system level delivery for carrier testing.<sup>4</sup> At that meeting, it stated that carrier verification test level software would be available for CDMA systems in mid-December 2001. Following that, system verification test release software would be available in January 2002.

Further, at TTY Forum 20 (held on December 11, 2001), Ericsson reported that it had nearly completed the development of code for CDMA networks, having completed simulation testing for the Enhanced Variable Rate Codec software.<sup>5</sup> Ericsson reported that it had completed the TTY capability testing in a lab environment. Ericsson also reported that it had scheduled delivery for carrier initial verification test level software for December 31, 2001. It stated that Cricket and Qwest planned to take delivery of acceptance level code upgrades to start field-

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<sup>3</sup> See TTY Forum 18, Meeting Summary Report, Appendix L, "Ericsson Inc TTY Forum 18 Report, July 11, 2001," at p. 67.

<sup>4</sup> See TTY Forum 19 Meeting Summary Report, Appendix L, "Sony Ericsson Mobile Communications and Ericsson, Inc TTY Forum Report, October 10, 2001."

<sup>5</sup> See TTY Forum 20 Meeting Summary Report, filed January 14, 2002, CC Docket No. 94-102, Appendix L, "Sony Ericsson Mobile Communications and Ericsson Inc TTY Forum #20 Report, December 10, 2001," at p. 92 ("Sony Ericsson Forum 20 Report").

testing in the first quarter of 2002.<sup>6</sup> Ericsson said that it would deliver system level software following the acceptance of carrier verification test level software.

At TTY Forum 21 (held on March 5, 2002), Ericsson reported that it had completed software code development for CDMA networks.<sup>7</sup> Further, Ericsson stated that lab and integration tests were complete. It confirmed that carrier verification test level software was available for carrier testing on February 8, 2002.

Contemporaneous with the status reports that it filed in TTY Forums 18-21, Ericsson worked directly with Qwest to coordinate delivery of testable code and discussed testing procedures and results. On October 1, 2001, Ericsson requested that Qwest organize a monthly group discussion for TTY delivery. In addition, Ericsson requested that Qwest describe the type of back-up data or statistics Qwest required to evaluate TTY testing. Ericsson also requested that Qwest list the mobile units to be tested so Ericsson could coordinate testing with Qwest's needs. Ericsson informed Qwest that an engineering release of the TTY software would be available in the ITC lab in mid-December.

In addition to these efforts, Ericsson responded to a significant software change request from Qwest in October 2001. Qwest asked that Ericsson modify the System Management Architecture of the software. Ericsson was able to accommodate this unexpected change within the overall TTY development schedule without causing any significant delay. However, it resulted in Ericsson having to divert resources to address this problem.

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<sup>6</sup> See Sony Ericsson Forum 20 Report, at p. 92. While Qwest did not attend this Forum according to the attendance list, the Sony Ericsson Forum 20 Report was publicly available following the Forum through both the ATIS and FCC websites.

<sup>7</sup> See TTY Forum 21 Meeting Summary Report, Appendix L, "Network Infrastructure Status for Ericsson, Inc, TTY Forum 21 Report, April 10, 2002," at p. 71.

In November 2001, as Ericsson continued to work on its software, it encountered technical problems with Nortel's new MSC release, making the Ericsson software incompatible. Specifically, Ericsson identified four distinct areas where Nortel's implementation of IOS version 4.0 was not backward compatible with Ericsson's implementation of IOS version 3.2. Given these technical problems, Ericsson, Qwest, and Nortel agreed that Ericsson would make alterations in its code. Ericsson, Qwest, and Nortel all understood that these modifications would take time and would delay the testing schedule slightly, but would not delay the overall TTY development schedule and deployment.

In a meeting with Qwest's engineers in December 2001, Ericsson advised Qwest that testable code would be ready by February 8, 2002. In a follow-up meeting on January 15, 2002, Ericsson again outlined its Release 8.6 First Market Application schedule for Qwest, and identified February 8, 2002 as the delivery date for testable code. On February 8, 2002, Ericsson shipped its R8.6 software to the Qwest ITC lab.<sup>8</sup>

Ericsson has maintained this same test schedule with other carriers. Further, it continues to participate in the Alliance for Telecommunications Industry Solutions and industry testing to validate the TTY portion of the code release. Ericsson also continues to apply full test support at multiple test locations in efforts to achieve the FCC's June 30, 2002 deadline.

Ericsson strongly supports the Commission's TTY 911 initiative as described in these comments. Ericsson will continue to work diligently with all manufacturers, wireless carriers, and the hearing-impaired community to ensure that its software can reliably provide hearing-

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<sup>8</sup> It appears that Qwest may have confused Ericsson's date for making software generally available with its date for providing Full Carrier Acceptance Test Units. Ericsson had given Qwest a date of May 28, 2002 for general availability of the software. However, Qwest states on page 3 of its Petition that Ericsson had stated that its 8.6 software would be *generally available* in February 2002. As described above, Ericsson stated clearly in both the December 6, 2001 and January 15, 2002 meetings with Qwest engineers that it would provide *testable code* by February 8, 2002.

impaired TTY users the critical communications link to emergency assistance they need, in a manner that is compatible with the products of all vendors.

**Qwest's Request**

Qwest has asked that the Commission grant a limited waiver of its June 30, 2002 deadline to permit it to deploy digital TTY software in its Open A markets by December 31, 2002. Ericsson does not comment on Qwest's need for additional time to ensure reliability and interoperability of the software in its Open A markets. As Ericsson suggested in its CC Docket No. 94-102 Reply Comments, carriers are best situated to make decisions about how to deploy digital TTY solutions reliably in their networks.<sup>9</sup> Ericsson's comments provide further background on Qwest's concerns and document Ericsson's efforts to communicate its TTY status, software verification releases, and interactions with carriers. Ericsson requests that the Commission consider these comments, and all filed TTY status reports when it addresses Qwest's petition for limited waiver of the June 30, 2002 deadline.

Respectfully submitted on this 25<sup>th</sup> day of April, 2002.

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<sup>9</sup> See Reply Comments of Ericsson, CC Docket No. 94-102, dated July 19, 2002, at p. 2.