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Before the  
Federal Communications Commission  
Washington, D.C. 20554

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In the Matter of )  
)  
Revision of the Commission's Rules )  
To Ensure Compatibility with )  
Enhanced 911 Emergency Calling Systems )  
)  
)

CC Docket No. 94-102

ORDER ON RECONSIDERATION

Adopted: December 21, 2001

Released: December 28, 2001

By the Commission:

I. INTRODUCTION

1. We have before us a petition for reconsideration of the *Fourth Report and Order*<sup>1</sup> in the above-captioned proceeding filed by the Cellular Telecommunications & Internet Association (CTIA). In the *Fourth Report and Order*, the Commission established a deadline of June 30, 2002, by which digital wireless service providers must be capable of transmitting 911 calls using text telephone (TTY) devices. CTIA requests clarification of the scope of the Commission's directive concerning digital wireless networks having the capability of supporting proprietary enhanced TTY protocols.<sup>2</sup> We grant the petition to clarify that the *Fourth Report and Order* did not require carriers to support proprietary enhanced TTY protocols for emergency calls over their systems by the deadline.

II. BACKGROUND

2. In the *Fourth Report and Order*, the Commission adopted a requirement that carriers operating digital wireless systems obtain all software upgrades and equipment necessary to make their systems capable of transmitting 911 calls from TTY devices by December 31, 2001, but allows carriers an additional six-month period to integrate, test, and deploy the technology in their systems in conjunction with the public safety community.<sup>3</sup> The *Fourth Report and Order* also requires carriers to submit quarterly progress reports to enable the Commission to monitor carrier progress toward implementation of digital wireless solutions, but allows them to fulfill this requirement by reporting through the TTY Forum.<sup>4</sup>

<sup>1</sup> Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Fourth Report and Order, 15 FCC Rcd 25216 (2000) (*Fourth Report and Order*).

<sup>2</sup> CTIA Petition for Reconsideration at 1-2. Comments and reply comments filed in response to CTIA's Petition for Reconsideration are listed in Appendix A.

<sup>3</sup> *Fourth Report and Order*, 15 FCC Rcd at 25218 (para. 8) (requiring full implementation by June 30, 2002); 47 C.F.R. § 20.18(c) and accompanying note (2001).

<sup>4</sup> *Fourth Report and Order*, 15 FCC Rcd at 25221 (para. 15). The TTY Forum is comprised of wireless service providers and phone manufacturers, manufacturers of TTY equipment, emergency and relay service providers, and consumer groups that represent individuals who are deaf or hard-of-hearing. The TTY Forum has been working (continued....)

moot in light of this Order's clarification that no new regulatory requirements were imposed in the *Fourth Report and Order* with respect to proprietary enhanced protocols used with TTY devices.

10. Finally, we are pleased to note that the cooperative broad-based industry coordination sought by the *Fourth Report and Order* has worked to address the concerns about the possible disruption of emergency calls placed by users of TTYs with proprietary enhanced protocols. TTY manufacturers have now decided to modify their products so that they will default to Baudot when connected to digital wireless devices. Accordingly, the implementation of digital wireless-TTY solutions based on Baudot signaling will not preclude users of TTY's with enhanced protocol features from placing 911 calls on digital wireless phones.

11. With respect to CTIA's request that the Commission require TTY manufacturers to harmonize their products and make them compatible with advanced telecommunications technology,<sup>30</sup> we see no need to take any specific action at this time. However, we encourage TTY manufacturers and wireless service providers and manufacturers of wireless devices to continue to work together to achieve compatibility between their products and services.

#### IV. ORDERING CLAUSE

12. Accordingly, IT IS ORDERED that pursuant to Section 4(i) and 405 of the Communications Act of 1934, 47 U.S.C. § 154(i), 405, and Section 1.429 of the Commission's Rules, 47 C.F.R. § 1.429, the Petition for Reconsideration filed by the Cellular Telecommunications & Internet Association IS GRANTED to the extent discussed above.

FEDERAL COMMUNICATIONS COMMISSION



Magalie Roman Salas  
Secretary

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<sup>30</sup> *Id.* at 2.

industry should not be required to address proprietary enhanced protocols until TTY protocol standards are developed.<sup>12</sup>

5. Several parties, including NENA and APCO, filed comments supporting CTIA's position.<sup>13</sup> The Rural Cellular Association expresses concern that the Commission is seeking to hold carriers responsible for matters that are beyond their control and are, in fact, solely in the control of equipment manufacturers.<sup>14</sup> Nextel, Sprint PCS, and Verizon support CTIA's position and endorse the Commission's proposal to require TTY manufacturers to ensure that, if an enhanced protocol cannot be used on a particular digital system, the devices should revert to Baudot in order for an emergency call to go through.<sup>15</sup> NENA, APCO, Motorola, and Sprint PCS agree with CTIA that, instead of requiring wireless carriers and manufacturers to upgrade their equipment and services to accommodate every new proprietary enhanced protocol developed by TTY vendors, the protocol developers and users should be required to participate in efforts to harmonize standards among TTY devices and telecommunications equipment.<sup>16</sup>

6. In its reply comments, Sprint PCS asserts that the obligations imposed in the TTY Order are procedurally deficient under the Administrative Procedure Act (APA) since the Commission never released a Notice of Proposed Rulemaking (NPRM) with respect to wireless carrier obligations pertaining to TTY devices.<sup>17</sup> Instead, Sprint PCS argues that the Commission adopted final rules based on a Public Notice released by the Wireless Telecommunications Bureau.<sup>18</sup> However, Sprint asserts that the APA issue becomes moot if, as CTIA and the other commenters recommend, the Commission vacates the portion of the order containing the directive that industry attempt to accommodate proprietary enhanced protocols.<sup>19</sup>

7. On March 27, 2001, the Alliance for Telecommunications Industry Solutions (ATIS) submitted an *ex parte* letter on behalf of the TTY Forum.<sup>20</sup> In the *Fourth Report and Order*, the Commission asked the TTY Forum to investigate the potential disruption of emergency communications when a consumer's TTY device utilizes a proprietary enhanced protocol over a digital wireless air

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<sup>12</sup> *Id.*

<sup>13</sup> See NENA and APCO Comments at 1 (concurring that proprietary enhanced protocols cannot be used on emergency calls unless the PSAPs have equipment that utilizes these protocols); Nextel Comments at 2-3 (arguing against requiring wireless carriers to continually modify their systems to accommodate changing proprietary TTY protocols); Rural Cellular Association Reply Comments (expressing concern that the Commission is seeking to hold carriers responsible for matters that are beyond their control). See also Motorola Comments; Sprint PCS Reply Comments; Verizon Comments.

<sup>14</sup> Rural Cellular Association Reply Comments at 3-4.

<sup>15</sup> Nextel Comments at 2; Sprint PCS Reply Comments at 2-3; Verizon Comments at 2.

<sup>16</sup> NENA/APCO Comments at 2; Motorola Comments at 3; Sprint PCS Reply Comments at 2; Verizon Comments at 2-3.

<sup>17</sup> Sprint PCS Reply Comments at 3 (citing 5 U.S.C. § 553, requiring agencies to publish in the Federal Register general notice of proposed rule making before adopting final rules).

<sup>18</sup> Wireless Telecommunications Bureau seeks Comment on New Implementation Deadline for TTY Access to Digital Wireless Systems for 911 Calls, Public Notice, DA 00-1091, 15 FCC Rcd 8860 (2000). According to Sprint PCS, even if the Public Notice could be equated with an NPRM, the Bureau never indicated that the Commission intended to adopt rules on subjects other than the TTY compliance deadline. Sprint PCS Reply Comments at 3-4.

<sup>19</sup> *Id.* at 4.

<sup>20</sup> Letter from Ed Hall, Vice President – Technology Development, ATIS, to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 94-102 (filed March 27, 2001) (ATIS March 27<sup>th</sup> *Ex Parte*).

## APPENDIX A

LIST OF COMMENTS AND REPLY COMMENTS FILED IN RESPONSE TO  
PETITION FOR RECONSIDERATION**Comments**

Motorola

National Emergency Number Association and  
Association of Public-Safety Communications  
Officials-International, Inc.

Nextel Communications, Inc.

Verizon Wireless

**Abbreviation**

Motorola

NENA/APCO

Nextel

Verizon

**Reply Comments**

Rural Cellular Association

Sprint PCS

Rural Cellular Association

Sprint PCS

3. In the *Fourth Report and Order*, the Commission noted several additional consumer issues related to the digital wireless solutions, including the effect of the solutions on TTYs with proprietary enhanced protocols.<sup>5</sup> These protocols can increase the speed of TTY transmissions to up to 100 plus words per minute (wpm), as compared with 60 wpm for Baudot, and also allow for interruption. In the *Fourth Report and Order*, the Commission was troubled by the potential disruption of emergency communications that could result from the garbling or failure of transmissions that could occur when TTYs equipped with enhanced protocols are used on digital wireless systems.<sup>6</sup> The Commission stated:

We direct the industry, through the TTY Forum, to investigate these issues and to work towards necessary solutions. [citation omitted] This will require a cooperative effort on the part of digital-TTY solution developers, developers of enhanced protocols, handset manufacturers, and TTY manufacturers. We ask the TTY Forum to keep us apprised of its work and to address this issue in its quarterly reports.<sup>7</sup>

The Commission suggested that one possible interim solution might be to ensure that, if an enhanced protocol cannot be used on a particular digital wireless system, the devices could revert to the slower Baudot signaling protocol in order for the emergency call to go through.<sup>8</sup>

4. In its petition, CTIA contends that the Commission improperly imposed an obligation upon digital wireless carriers to incorporate support for proprietary enhanced protocols into their digital-TTY solutions by June 30, 2002. CTIA states that the wireless industry has been focusing its efforts on developing solutions for compatibility with TTY devices using the 45.45 Baudot protocol because of the embedded base of TTYs using this protocol and the initial reluctance of TTY manufacturers to share data on proprietary enhanced protocols in an open technical forum such as the TTY Forum.<sup>9</sup> CTIA asserts that requiring the wireless industry to support proprietary enhanced protocols would necessitate the reopening of the standards process, forcing the redirection of resources away from implementation and delaying solutions. In addition, CTIA contends that proprietary enhanced protocols cannot be used for emergency calls without support by the approximately 6,500 public safety answering points (PSAPs) in the United States.<sup>10</sup> CTIA asks us to impose an obligation on TTY manufacturers to harmonize their products and make them compatible with advanced telecommunications technology.<sup>11</sup> CTIA argues that the wireless

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since September 1997 to develop technically feasible solutions for TTY users to access 911 over digital wireless systems.

<sup>5</sup> *Id.*, 15 FCC Rcd at 25222 (para. 20).

<sup>6</sup> *Id.*, 15 FCC Rcd at 25222-23 (paras. 20-21). Although proprietary enhanced protocols can interfere with digital wireless transmissions, they appear to provide the benefits of increased communications speed and interruptability when used on wireline telephone networks and on analog wireless systems.

<sup>7</sup> *Id.*, 15 FCC Rcd at 25223 (para. 21).

<sup>8</sup> *Id.*, 15 FCC Rcd at 25223 (para. 22).

<sup>9</sup> See CTIA Petition at 2. CTIA states that the wireless industry relied upon assurances by TTY manufacturers that TTY devices with proprietary enhanced protocols were capable of defaulting to 45.45 Baudot. *Id.*

<sup>10</sup> *Id.* at 4. CTIA further argues that a directive to support proprietary enhanced protocols would contravene federal policies requiring the use of voluntary consensus standards wherever possible and would be inconsistent with Commission rules and policies encouraging the use of non-proprietary consensus standards to provide access to telecommunications services and equipment. *Id.* at 4-6 (citing OMB Circular A-119, the National Technology and Transfer and Advancement Act of 1995, and the Commission's rules governing Section 255 of the Telecommunications Act of 1934, as amended).

<sup>11</sup> *Id.* at 2.

interface.<sup>21</sup> According to materials submitted to the TTY Forum, these protocols had grown in popularity because of the improved speed and features over the existing Baudot protocol, and TTY manufacturers began to design their products in such a way that the device defaulted to the proprietary enhanced protocol when first turned on by the user.<sup>22</sup> To switch back to the slower Baudot signaling required specific intervention by the user. In its letter, ATIS reported that two large TTY manufacturers, Ultratec and Ameriphone, agreed to alter those TTY products that are designed to default to a proprietary enhanced protocol so that the enhancement will automatically be switched to "off" when the TTY device is connected directly to digital wireless phones via the audio jack.<sup>23</sup> This will allow the user to communicate over digital wireless systems accurately once a Baudot solution has been implemented, rather than having the call garbled or not placed at all.<sup>24</sup> ATIS indicated that, because of the approach taken by the TTY manufacturers, the use of enhanced protocols would not be an issue for the foreseeable future. As a result, the TTY Forum disbanded its Enhanced Protocol Working Group.<sup>25</sup>

### III. DISCUSSION

8. We grant CTIA's petition to clarify that the *Fourth Report and Order* did not mandate that carriers support proprietary enhanced protocols for emergency calls over their systems by the June 30, 2002, deadline. In the *Fourth Report and Order*, the Commission merely noted its concern over the potential disruption to emergency calls placed by TTY users in the event their TTYs' proprietary enhanced protocols resulted in garbling the message, and it directed the industry "to investigate these issues and work towards necessary solutions."<sup>26</sup> Nothing in the final rules in Appendix B of the *Fourth Report and Order* refers to any requirements with respect to enhanced protocols.<sup>27</sup> In addition, in the official notice of the *Fourth Report and Order* in the Federal Register, no mandatory language was used. The summary states:

The Fourth R&O, in paragraphs 20 through 32, notes several additional consumer issues related to the solutions, including the effect of the solutions on TTYs with proprietary enhanced protocols, the support of voice carry over in the solutions, and concerns about the capability of certain handsets to allow for simultaneous connections to the audio jack and the power cord input. With respect to these issues, the Commission *encourages* handset and TTY manufacturers and carriers to work toward resolution of these issues.<sup>28</sup>

9. Therefore, CTIA's assertion that the Commission improperly imposed an obligation upon digital wireless carriers to incorporate support for proprietary enhanced protocols into their digital-TTY solutions by June 30, 2002, is incorrect. In addition, the procedural arguments advanced by Sprint PCS are without merit. Sufficient notice in the Federal Register was provided of the final rules adopted in the *Fourth Report and Order*.<sup>29</sup> Nevertheless, Sprint PCS's arguments with respect to enhanced protocols are

<sup>21</sup> *Fourth Report and Order*, 15 FCC Rcd at 25223 (para. 21)

<sup>22</sup> See ATIS March 27<sup>th</sup> *Ex Parte* at 1 (describing submission by Ultratec).

<sup>23</sup> ATIS March 27<sup>th</sup> *Ex Parte* at 2.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Fourth Report and Order*, 15 FCC Rcd at 25223 (para. 21).

<sup>27</sup> *Id.* at Appendix B.

<sup>28</sup> 65 Fed. Reg. 82293 (Dec. 28, 2000) (emphasis added).

<sup>29</sup> See 65 Fed. Reg. 33506 (publication of notice of a proposed revised deadline for compliance with the Commission's TTY 911 rule, as well as on other aspects of the various TTY/digital wireless systems compatibility solutions, including consumer impacts and technical issues).