

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Facilitating the Deployment of Text-to-911 and
Other Next Generation 911 Applications

Framework for Next Generation 911
Deployment

PS Docket No. 11-153

PS Docket No. 10-255

REPLY COMMENTS OF VERIZON AND VERIZON WIRELESS

Michael E. Glover
Of Counsel

John T. Scott, III
Robert G. Morse
1300 I Street, N.W.
Suite 400 West
Washington, DC 20005
(202) 589-3740

*Attorneys for Verizon
and Verizon Wireless*

February 9, 2012

TABLE OF CONTENTS

I. THE RECORD SUPPORTS VOLUNTARY DEPLOYMENT OF INTERIM TEXT SOLUTIONS TO ENABLE STAKEHOLDERS TO FOCUS RESOURCES ON IP-ENABLED NG911 NETWORK AND SERVICE DEPLOYMENT 2

A. The Limitations of Existing Text-Based Platforms for 911 Warrant the Use of Voluntary Interim Text-Based Solutions 2

B. The Record Supports a Commission Policy Framework that Incentivizes Stakeholders to Deploy Collaborative, Standards-Based IP-Enabled NG911 Systems Without Regulatory Micromanagement 7

C. The Commission Should Not Uniformly Exempt Non-Tier 1 Service Providers from NG911 Obligations..... 11

II. STATEWIDE NG911 READINESS IS PREFERABLE BUT ANY CRITERIA SHOULD ENCOMPASS A LARGE GEOGRAPHIC AREA 13

III. NG911 CONNECTIVITY DETAILS ARE APPROPRIATELY LEFT TO MUTUAL AGREEMENTS AND BEST PRACTICES AMONG SERVICE PROVIDERS AND PSAPS 15

IV. THE COMMISSION SHOULD ENCOURAGE COLLABORATIVE CONSUMER EDUCATION EFFORTS AMONG STAKEHOLDERS WITHOUT NEW REGULATION 17

V. COMMENTERS SUPPORT THE DEVELOPMENT OF STANDARDS AND BEST PRACTICES TO GOVERN 911 CALL PRIORITIZATION 18

VI. THE COMMISSION SHOULD CAREFULLY CONSIDER AND SEEK COMMENT ON THE EMERGENCY ACCESS ADVISORY COMMITTEE’S RECOMMENDATIONS..... 20

SUMMARY

The record underscores that Verizon's proposed NG911 policy framework sets forth an achievable and technically feasible approach that will enable the Commission to meet its public safety and accessibility objectives consistent with the scope of its authority under Section 106 of the Communications and Video Accessibility Act (CVAA) and the Communications Act. The record supports (1) allowing service providers to offer interim solutions, including SMS-based solutions or IP Relay, on a voluntary basis, and (2) focusing its and stakeholders' efforts toward the funding, planning and deployment of standards-driven IP-enabled NG911 networks and services. Proposed SMS-based solutions would be time and resource intensive and divert resources from the deployment of IP-enabled LTE and NG911 technology that will more effectively improve the accessibility of emergency services for individuals with disabilities, contrary to Congress's CVAA objectives. Proponents of interim SMS-based requirements do not show how such capabilities could be implemented without detracting from timely NG911 deployment. Providers should remain free to voluntarily provide near-term SMS-based or other text-based solutions without a regulatory mandate.

The record shows that industry is well on track toward deployment of NG911 solutions to capable PSAPs, including affordable real-time-text (RTT) services that will better serve the needs of individuals with disabilities, as early as 2015. This anticipated timeframe will enable the Commission to implement "achievable and technically feasible" NG911 regulations as the CVAA requires. A stand-alone RTT requirement in advance of NG911, and intrusive regulation of the technical and operational aspects of networks and devices, are unwarranted. Also, there is no record basis for applying disparate NG911 obligations on nationwide and non-nationwide

service providers. Verizon's proposed framework would generally accommodate non-nationwide carriers' particular circumstances.

Commenters widely support a statewide approach to NG911 readiness as a condition of NG911 deployment. It is not necessary that every PSAP within a state be NG911 capable before a provider initiates service, but a coordinated wide area program and architecture will help ensure that NG911 is cost-effective for taxpayers, PSAPs and service providers. Any alternative regional approach should cover large geographic areas in multiple counties and include all PSAPs within the region.

The record supports affording service providers and PSAPs flexibility in establishing connectivity arrangements, the details of which are appropriate for standards bodies and industry best practices. Regulations should not preclude new 911 service provider entrants, as carriers should instead have appropriate incentives to timely negotiate connectivity arrangements in good faith. The Commission also should not address IP-IP interconnection issues in this proceeding.

The record also supports stakeholder collaboration in the areas of consumer education and 911 call prioritization. Collaboration will be necessary to ensure that consumers are educated and their expectations managed about NG911 availability. Such efforts, including potential best practices, do not require new regulation. Similarly, the record supports addressing the important and complex issue of 911 call prioritization in service provider and PSAP networks through the CSRIC and any resulting best practices.

Finally, the Commission should separately seek comment on those Emergency Access Advisory Committee recommendations it believes warrant consideration as rules and remain cognizant that many of those recommendations would be more effectively implemented through non-regulatory means rather than new burdensome regulatory obligations.

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Facilitating the Deployment of Text-to-911 and
Other Next Generation 911 Applications

Framework for Next Generation 911
Deployment

GN Docket No. 11-153

PS Docket No. 10-255

REPLY COMMENTS OF VERIZON¹ AND VERIZON WIRELESS

The initial comments in this proceeding² affirm the merits of adopting the policy framework recommended by Verizon and others that will enable industry and public safety to efficiently and expeditiously deploy both voluntary interim text-based solutions and longer-term IP-enabled and Next Generation 911 (“NG911”)-capable service provider networks, devices and PSAP networks. The record underscores that this framework will enable the Commission to meet its public safety and accessibility objectives consistent with the scope of the Commission’s authority under Section 106 of the Communications and Video Accessibility Act (CVAA) and the Communications Act.

¹ In addition to Verizon Wireless, the Verizon companies participating in this filing are the regulated, wholly owned subsidiaries of Verizon Communications Inc.

² See *Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, Notice of Proposed Rulemaking, 26 FCC Rcd 13615 (2011) (“NPRM”).

DISCUSSION

I. THE RECORD SUPPORTS VOLUNTARY DEPLOYMENT OF INTERIM TEXT SOLUTIONS TO ENABLE STAKEHOLDERS TO FOCUS RESOURCES ON IP-ENABLED NG911 NETWORK AND SERVICE DEPLOYMENT

The record supports Verizon's position that the Commission should (1) allow service providers to offer interim solutions, including SMS-based solutions or IP Relay, on a voluntary basis, and (2) focus its and stakeholders' efforts toward the funding, planning and deployment of standards-driven IP-enabled NG911 networks and services.

A. The Limitations of Existing Text-Based Platforms for 911 Warrant the Use of Voluntary Interim Text-Based Solutions

Service providers, manufacturers, and several public safety stakeholders demonstrate the continued limitations of SMS as a best efforts commercial technology for emergency purposes. The comments show that SMS-based solutions have inadequacies, would be time and resource intensive, and would divert resources from the deployment of IP-enabled LTE and NG911 technology that will more effectively improve the accessibility of emergency services for individuals with disabilities.³ In particular, the comments of the Alliance for Telecommunications Industry Solutions (ATIS) and its accompanying Report highlight the various benefits and shortcomings of potential near-term solutions.⁴ Moreover, no commenter suggests that interim SMS-based solutions should be a substitute for a robust IP-enabled NG911

³ See, e.g., 4G Americas Comments at 8-10; APCO Comments at 4-5, 8-9; AT&T Comments at 2-6; Alliance for Telecommunications Industry Solutions (ATIS) Comments at 13-17; Blooston Rural Carriers Comments at 2-4; CTIA Comments at 6-8; MetroPCS Comments at 3-6; Sprint Nextel Comments at 6-9, 17-19; Rave Mobile Comments at 2; T-Mobile Comments at 4-5, 10-13; Motorola Mobility Comments at 3-5; Qualcomm Comments at 9-10 n.10; Telecommunications Industry Association (TIA) Comments at 5-7; see also Northrop Grumman Comments at 8-9; Neustar Comments at 5 ("any SMS text-based system ... has shortcomings").

⁴ See ATIS Comments at 4-9 and Appendix 1, *ATIS Interim Non-Voice Emergency Services (INES) Report and Recommendations*.

system. Notably, several prominent public safety organizations and agencies strongly favor long-term NG911 deployment instead and describe the burdens and challenges that PSAPs would face in implementing direct SMS-based technology.⁵ NENA itself neither opposes nor endorses SMS-based solutions at this time, but does acknowledge the shortcomings of SMS technology for emergency services and the superiority of IP-based solutions.⁶

Accessibility organizations, even those supportive of SMS, also acknowledge that the real time text (RTT) services that will be available in an IP-enabled NG911 environment are preferable to SMS for deaf and hard of hearing individuals.⁷ Solution providers supportive of SMS-based solutions also concede that service providers and PSAPs alike would incur upgrades and costs for direct SMS-based solutions. For example, with respect to the location determination capability required for a more robust SMS-based solution, Neustar, TCS and TruePosition acknowledge that modifications to service provider and PSAP systems would be necessary to incorporate caller location information,⁸ and Verizon anticipates that device-level

⁵ NASNA Comments at 3-7; APCO Comments at 2-8; State of California Comments at 3-5; Colorado 9-1-1 Task Force (“Boulder”) Comments at 19-21; Texas 911 Agencies Comments at 4-7; *see also* King County Comments at 4-5 (short-term SMS solution without location information will have adverse impact on PSAPs).

⁶ *See* NENA Comments at 5-7, 13-15.

⁷ *See* Donna Platt, Hearing, Speech & Deafness Center Comments at 1-2; RERC on Telecommunications Access (“RERC-TA”) Comments at 2, 10-11; Wireless RERC Comments at 10 (supporting efforts to transition consumers from TTY to advanced mobile devices); Comments of Telecommunications for the Deaf and Hard of Hearing, Inc. et al. (the “Consumer Groups”) at 4 (“concur[ring] with the Commission’s observations” that NG911 capabilities will “make the system more accessible to ... people with disabilities”) and 8-9 (real time text is “an improvement over instant messaging, SMS and email”).

⁸ *See* Neustar Comments at 3-4 (providers would require “cell ID query mechanisms where they are not already deployed for itinerate use”); TeleCommunication Systems (TCS) Comments at 11-13 (describing handset- and network-based location applications that are not currently integrated to the 911 network); TruePosition Comments at 3 (“Work would be needed on both operator and PSAP systems”). GreatCall also asserts that location information could be

upgrades or new applications would be required as well. Even with respect to general cell sector or “Phase 1” location data, significant changes to 911 location systems and PSAP software would be necessary. Existing technology trends will address this problem without regulatory intervention, as RTT in an IP-enabled NG911 environment will be deployed with GPS-derived location information and dynamic routing capability. Thus, it makes far more sense for the Commission to encourage service providers’ and PSAPs’ NG911 deployment than to force them to expend resources to reconfigure their legacy SMS and PSAP platforms.⁹

Various solution vendors proposing their own SMS-based solutions do not demonstrate otherwise. If their technologies are technically and economically viable and commercially available, service providers should be free to test and voluntarily deploy them as an interim solution. Service providers, however, may not be compelled to adopt any particular vendor technology, as the CVAA prohibits the Commission from imposing proprietary solutions on service providers.¹⁰ Some vendors, moreover, provide only limited information for the record. Neustar, for example, asserts without elaboration that its proposed interim SMS-to-TTY emulation solution could be deployed in a short time at low cost, although it has also “acknowledged that its proposal needs more testing” and is based on a pending patent.¹¹ Neustar also downplays the need for Cell ID for its solution to function; Cell ID information is not

transmitted to the PSAP as an SMS. *See* GreatCall Comments at 4. This is not currently feasible, however, given the time to first fix necessary for generating a GPS location fix, and could require new standards development.

⁹ *See* 4G Americas Comments at 8-9; NASNA Comments at 5; Verizon Comments at 7; *see also* APCO Comments at 5-6; (describing the costs of SMS-based solutions to PSAPs other than relay-type solutions).

¹⁰ *See* CVAA § 3.

¹¹ *See* Neustar Comments at 2-5; Letter from Aaron Goldberger, Neustar to Marlene H. Dortch, FCC, PS Docket Nos. 11-153 and 10-255, at 2 (Feb. 3, 2012).

provided with the SMS message, but requires a Home Location Register query to identify the serving MSC – a third party query which Verizon Wireless does not currently allow – followed by a query to that MSC to obtain the Cell ID. Establishing the connectivity throughout Verizon Wireless’s nationwide network necessary to accommodate this functionality – not to mention every other carrier’s network – entails a much more cumbersome and time-consuming process than Neustar suggests. Moreover, Cell ID enables the retrieval of “Phase 1” location, but caller location information would be available only if the customer has turned the *commercial* location feature “on” in his or her device; ALI is handled very differently for 911 calls in which the device is aware that 911 has been dialed.

Intrado argues for imposition of direct SMS-911 as a glidepath toward full NG911. Its proposed short-term mandate for direct SMS-to-911, however, would impose unnecessary costs on service providers and distract service providers and PSAPs alike from longer-term NG911 deployment.¹² By its own admission, Intrado does not include “IP connectivity expense throughout this system,” the costs of relay solutions, or the costs of new SMSC installations or modifications, which Verizon estimates could amount to several million dollars per carrier.¹³ Thus, Intrado’s estimate of \$4 million for industry-wide annual costs substantially understates the total. Also, nationwide implementation of this technology would likely require new technical standards for the proposed 911 SMSC platform, the SMS processing, timing and retry functionality, and the location determination functionality, which would delay its widespread commercial availability. Intrado’s approach notably relies upon idle mobile location capability,¹⁴

¹² See Intrado Comments at 13-17 (describing cost estimates for service providers and PSAPs).

¹³ See *id.* at 15 n.21.

¹⁴ See Letter from Lynn Stang, Intrado to Marlene H. Dortch, FCC, PS Docket Nos. 11-153 and 10-255, Attachment at 14 (Feb. 6, 2012).

which must be employed in both the network *and* the device, and which requires an override of the device's privacy setting.

Importantly, parties supporting the imposition of interim direct SMS-based requirements do not demonstrate how such capabilities could be implemented appreciably earlier than – and without detracting from – timely NG911 deployment and service launch.¹⁵ Moreover, Sweden's SMS-to-911 experience cannot and should not be duplicated here. As AT&T explains in its comments, the SMS-based technology employed in Sweden for “112” dialing faces significant limitations¹⁶ and is not, as the Consumer Groups suggest, an example of an SMS-based approach that service providers and PSAPs could easily implement here.¹⁷

The record thus clearly demonstrates that any short-term regulations that require costly new or upgraded SMSC facilities¹⁸ or PSAP facility and equipment upgrades will divert service provider, state and local government and taxpayer resources from the funding and deployment of IP-enabled NG911 networks. Such action would be unwarranted and undermine Congress's CVAA objective of achieving “the migration to a national Internet protocol-enabled emergency network ...”¹⁹ The Commission should thus encourage the voluntary deployment of interim

¹⁵ See GreatCall Comments at 3 (calling for priority delivery and support for non-service activated handsets, neither of which exist today); Intrado Comments at 7-10 (describing the numerous service provider and PSAP network/equipment supplements and enhancements necessary to implement its proposed technology); Neustar Comments at 3-4 (its proposed solution “*after appropriate testing*, can be deployed relatively quickly” and asserting that carriers would require only “small investments in providing cell ID query mechanisms” (emphasis added)); Consumer Groups Comments at 7-8 (asserting without explanation that some earlier comments “have suggested that it is possible to overcome or mitigate some of the technical limitations of SMS at a reasonable cost to providers, PSAPs, and consumers.”).

¹⁶ See AT&T Comments at 4-6.

¹⁷ See Consumer Groups Comments at 5-6.

¹⁸ See Intrado Comments at 8.

¹⁹ See CVAA §§ 106(a), (c) and (g).

solutions that leverage existing SMS and PSAP platforms and equipment to deploy the solution expeditiously, and can be phased out as NG911-capable LTE networks and PSAPs are rolled out.²⁰ As noted in its comments, Verizon continues to evaluate the viability of SMS-based solutions that potentially meet these criteria, including direct-SMS and SMS-TTY emulation.²¹ Such a voluntary approach, as Verizon recommends in its comments, would also ensure that the Commission stays within the scope of its CVAA authority.²²

B. The Record Supports a Commission Policy Framework that Incentivizes Stakeholders to Deploy Collaborative, Standards-Based IP-Enabled NG911 Systems Without Regulatory Micromanagement

The record in comments shows that industry is well on track toward completing the underlying LTE technical standards as early as the end of this year, and Verizon anticipates it will be capable of deploying NG911 and RTT solutions that will best serve the needs of individuals with disabilities as early as the 2015 timeframe.²³ By way of comparison, wireless E911 Phase II and hearing aid compatibility requirements were subject to five- and four and one

²⁰ See APCO Comments at 10-11; ATIS Comments at 12; Texas 911 Agencies at 4; United States Cellular Corp. (“US Cellular”) Comments at 4; *see also* Motorola Mobility Comments at 3 (supports “voluntary testing of interim solutions”).

²¹ Verizon has agreed to extend the duration of its SMS-to-911 trial in Durham, North Carolina through April 2012, to accommodate Durham’s additional outreach to individuals with disabilities. See City of Durham, *Durham 911 Center Extends Texting Trial for Emergency Help*, News Release, Jan. 25, 2012, available at <http://durhamnc.gov/Pages/NNDetails.aspx?detailId=60>.

²² See AT&T Comments at 20-22; CTIA Comments at 20-21; Verizon Comments at 24-28. No commenting parties provide a statutory basis for the Commission to impose short-term text-based requirements on legacy SMS networks and services.

²³ See 4G Americas Comments at 3-6; AT&T comments at 11-12; ATIS Comments at 4-9 and App. 1 at 18; Qualcomm Comments at 9-10; Sprint Nextel Comments at 22; TIA Comments at 7-8; Verizon Comments at 2-12.

half-year implementation periods, respectively.²⁴ The Commission's own CVAA implementation regulations, which do not entail the same degree of ongoing standards development as NG911, have a deadline of two years *from adoption of the Report and Order* in that proceeding.²⁵ Moreover, as Verizon explained in its comments, handset pricing will not be an obstacle to consumers.²⁶ Further, the data usage required to accommodate RTT is expected to be orders of magnitude lower than other mobile broadband uses, and Verizon Wireless already offers its deaf and hard of hearing customers data-only smartphone plans that are substantially discounted from its bundled voice and data packages.²⁷ Verizon thus anticipates that service and equipment costs will not be an insurmountable obstacle to the adoption of LTE for deaf and hard of hearing individuals.

In light of these developments and trends, there is no need for the Commission to impose a stand-alone RTT requirement in advance of a separate NG911 deadline.²⁸ Moreover, commenters suggesting that the Commission should consider imposing NG911 deadlines irrespective of the completion of 3GPP/ATIS standards that account for IMS networks are mistaken.²⁹ The recently-adopted CSRIC Working Group 1 report has classified ongoing ATIS

²⁴ See *Wireless E911 Location Accuracy Requirements*, Report and Order, 22 FCC Rcd 20105, 17 (2007), *voluntarily vacated*, *Rural Cellular Ass'n v. FCC*, 2008 U.S. App. LEXIS 19889 (D.C. Cir. Sep. 27, 2008); *Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones*, Report and Order, 18 FCC Rcd 16753, ¶ 65 (2003).

²⁵ See *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 14557, ¶¶ 105-113, 213 (2011).

²⁶ Verizon Comments at 4.

²⁷ See <http://www.verizonwireless.com/b2c/splash/messagingplans.jsp> and <http://aboutus.verizonwireless.com/accessibility/FAQs%20in%20ASL.html>.

²⁸ See Consumer Groups Comments at 8-9 (supporting stand-alone interim RTT rule).

²⁹ See Neustar Comments at 7-9; Consumer Groups Comments at 9.

and 3GPP standards efforts as critical for NG911 deployment, thus affirming Verizon's and other commenters' assessment that NG911 deployment timetables should be premised on the completion of those standards, followed by a reasonable period thereafter for implementation.³⁰

The standards-based approach to NG911 deployment and service provision that has already evolved will obviate the need for detailed regulation of the technical and operational aspects of NG911 and is consistent with the Commission's obligation to implement "achievable and technically feasible" NG911 regulations.³¹ Some commenters, however, propose that the Commission play a gatekeeper role in approving NG911 technology. US Cellular, for example, recommends that the Commission develop "vendor credibility" requirements for 911 solution vendors.³² Such regulation is neither necessary nor appropriate given the emerging standards-based NG911 environment and the existing best practices that exist among stakeholders. While wireless service providers need certainty that the PSAP and its 911 vendors have deployed a reliable system, contractual arrangements among service providers, vendors and PSAPs will best achieve this objective, and a PSAP should be free to select its vendor of choice.

Other commenters propose a similar gatekeeper role for devices, including the adoption of an NG911 device certification process.³³ Such requirements, however, would delay and create uncertainty for the entry of new innovative 4G devices, and should not be adopted. The

³⁰ See Communications Security, Reliability and Interoperability Council, Working Group 1 Subgroups 1 and 2, *Report*, § 2.3.6 Table 2-3 (Dec. 2011) (citing ATIS IMS ESInet P0030 Project Specification and 3GPP TS 23.167 IMS Emergency Sessions); see also 4G Americas Comments at 5-6 (describing status of IMES-based MMES standards at 3GPP).

³¹ See CVAA § 106(g); see also CTIA Comments at 4-5; MetroPCS Comments at 3-6; Motorola Mobility Comments at 5-6.

³² US Cellular Comments at 9.

³³ See Bandwidth.com Comments at 8-9; see also L.R. Kimball Comments at 12 (stating that NG911 rules should apply to all devices capable of accessing the Internet).

Commission never deemed it necessary to impose such requirements for E911 Phase II handset-based solutions, and there is no basis for applying a different policy here.³⁴ Another commenter proposes an outright ban on the device-initiated transmission of data directly to PSAPs.³⁵ While the use of such devices and services should always be coordinated with affected PSAPs, an overly proscriptive regulatory approach could deter the development of innovative public safety services and applications and, in any event, the proposal appears to be beyond the scope of the *NPRM*, which is expressly focused on text-based communications from individuals.³⁶ There is also no basis for imposing NG911 requirements on “all IP-enabled devices” as L.R. Kimball proposes.³⁷ There is broad consensus that not all devices or communications methods will necessarily need PSAP connectivity,³⁸ and the Commission’s focus in the *NPRM* is on the “primary media” of text-based communications from individuals.³⁹

Finally, the RERC-TA states that an NG911 system requires a gateway to transcode between TTY and RTT.⁴⁰ New regulations are unnecessary here as well given current trends.

³⁴ See *Wireless E911 Location Accuracy Requirements*, Second Report and Order, 25 FCC Rcd 18909, ¶¶ 40, 43-49 (2010) (acknowledging proposed requirement that all 3G handsets manufactured or imported “be A-GPS-capable after a date certain” but imposing phased-in location accuracy benchmarks instead).

³⁵ See Alarm Industry Communications Committee (AICC) Comments at 13-14.

³⁶ See *NPRM* ¶ 24 (“we primarily focus on developing text-based mechanisms that would serve as new primary media types for contacting a PSAP, supplementing voice calling capability and also supplementing or replacing TTY-based text.”).

³⁷ See L.R. Kimball Comments at 12.

³⁸ See, e.g., AT&T Comments, *Framework for Next Generation 911 Deployment*, PS Docket 10-255, at 17-20 (Feb. 28, 2011) (“NOI Comments”); ATIS NOI Comments at 17-18; D.C. Office of Unified Communications NOI Comments at 23-24; IACP-IAFC-NSA NOI Comments at 4; Verizon NOI Reply Comments at 11 (March 14, 2011).

³⁹ See *NPRM* ¶ 24.

⁴⁰ See RERC-TA Comments at 6-8.

The NENA i3 specification, which is currently being supplemented to accommodate IMS, already requires all call handling elements in the ESInet to accommodate RTT over IP using SIP.⁴¹ Moreover, 3GPP standards will provide for a media gateway that performs the transcoder function when sending RTT to a PSAP that is not connected to an ESInet. The Commission must remain mindful, however, of Congress’s intention that any regulations accommodate the “phase out of the use of current-generation TTY technology” as it “is replaced with more effective and efficient technologies and methods,”⁴² such as LTE-enabled RTT. The Commission should therefore ensure that its regulations do not require the maintenance of TTY capability in perpetuity as NG911-capable services and devices become universally available.

C. The Commission Should Not Uniformly Exempt Non-Tier 1 Service Providers from NG911 Obligations

Some commenters request that the Commission apply less stringent requirements on smaller carriers.⁴³ It is inappropriate for the Commission to apply disparate public safety-related regulatory obligations on nationwide (“Tier 1”) and non-nationwide service providers. Consumers should not be denied access to NG911 services based solely on their choice of provider. In any event, several non-Tier 1 carriers are already deploying LTE, including several rural carriers participating in Verizon’s Rural 4G LTE Program.⁴⁴ RTT and NG911 compatibility will be a standard component of LTE networks and handsets, and there is no basis

⁴¹ See NENA 08-003 § 4.1.8.3.

⁴² See CVAA § 106(c)(6); see also Wireless RERC Comments at 10 (supporting date after which “TTY will no longer be accepted as a method to contact 9-1-1”).

⁴³ See Blooston Rural Carriers Comments at 5; MetroPCS Comments at 6-8; Rural Cellular Ass’n (RCA) Comments at 7-10.

⁴⁴ See Verizon Comments at 3-4, n.7.

for concluding, at this time, that non-Tier 1 carriers with standards-compliant LTE networks will be unable to connect to PSAPs' NG911-capable platforms.

Moreover, it is highly questionable whether a provider's "non-Tier 1" status, in itself, bears any correlation to its ability to meet an NG911 mandate. MetroPCS, Leap, and US Cellular all have more or nearly as many subscribers as T-Mobile when the Commission classified it as "Tier 1" for E911 purposes, and C-spire (which is already deploying LTE) would now qualify as a Tier 2 carrier under that clarification.⁴⁵ The wireless NG911 framework that Verizon has proposed, whereby any service provider's NG911 obligations would (1) follow a reasonable period after the completion of standards and the commercial availability of new technologies, (2) be preceded by a valid PSAP request, (3) be subject to mutually-agreed deadline extensions between the PSAP and service provider, and (4) apply only insofar as the provider offered a compatible IP-enabled service such as LTE, would accommodate non-Tier 1 carriers' particular circumstances.

Finally, the Commission has generally sought to ensure that 911 regulations are applied in a competitively neutral manner, and disparate requirements would reflect a step backward from that objective.⁴⁶ To the extent that any service provider, regardless of size, is unable to

⁴⁵ See *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers*, Order to Stay, 17 FCC Rcd 14841, ¶ 7 n.16, ¶¶ 22-23 (2002); *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Fifteenth Report, 26 FCC Rcd 9664, ¶ 31 at Table 3 (2011) (listing subscribership of top 14 facilities-based mobile service providers).

⁴⁶ See *Amending the Definition of Interconnected VoIP Service in Section 9.3 of the Communication's Rules, Wireless E911 Location Accuracy Requirements, E911 Requirements for IP-Enabled Service Providers*, Notice of Proposed Rulemaking, Third Report and Order, and Second Further Notice of Proposed Rulemaking, 26 FCC Rcd 10074, ¶¶ 19, 23 (2011) ("conclud[ing] that the network-based solution should sunset at an appropriate point ... at which

comply despite its diligent and good faith efforts, it could seek to demonstrate grounds for an interim waiver. Disparate obligations at the outset, however, are not warranted.

II. STATEWIDE NG911 READINESS IS PREFERABLE BUT ANY CRITERIA SHOULD ENCOMPASS A LARGE GEOGRAPHIC AREA

There is widespread support among commenters for a statewide approach to PSAP readiness as a condition of NG911 deployment.⁴⁷ A statewide approach provides a bright-line mechanism that is consistent with funding mechanisms, which are generally governed at the state level, and encourages the current trend in state governments toward greater PSAP consolidation and statewide coordination of NG911 efforts. It is not necessary that every jurisdiction within a state be NG911 capable prior to a service provider's initiation of service within the state. It is essential, however, that (1) individual jurisdictions deploy IP-enabled NG911 in accordance with a coordinated statewide program, (2) they connect to a statewide, multistate or national NG911 architecture, and (3) service providers' NG911 obligations to a particular PSAP be based on the PSAP's *actual* NG911 readiness. This framework will help ensure that NG911 deployment is

point all carriers would be obligated to meet the handset-based location accuracy standard” and applying the handset-based standard to “all new CMRS network providers” to “ensur[e] technological neutrality”); *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; et al.*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 8064, ¶ 135 (2007) (criteria for imposing E911 obligations are useful to “ensure technological and competitive neutrality”); *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Report and Order and Second Further Notice of Proposed Rulemaking, 18 FCC Rcd 25340, ¶ 19 (2003) (same); *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Third Report and Order, 14 FCC Rcd 17388, ¶¶ 79-82 (1999) (“technological and competitive neutrality best promotes the public safety and welfare goals of this proceeding”).

⁴⁷4G Americas Comments at 7-8; AT&T Comments at 16-19; Blooston Rural Carriers Comments at 6-7; California Comments at 7; NASNA Comments at 8; CTIA Comments at 14-16; Sprint Nextel Comments at 23; TCS Comments at 14; T-Mobile Comments at 8-9; US Cellular Comments at 11-12; Wireless RERC Comments at 11; *see also* Bandwidth.com Comments at 3-5; L.R. Kimball Comments at 13-15; APCO Comments at 15-16; Boulder Comments at 22-23; King County Comments at 7-9.

technically efficient, more cost-effective for consumers, PSAPs and service providers alike, and that disparities in NG911 capabilities between local jurisdictions are mitigated.⁴⁸ As King County explains in its comments, Washington State has already employed such a framework by implementing a statewide ESInet to which individual jurisdictions can connect.⁴⁹ Other states, such as Tennessee, are following a similar path.⁵⁰ These comments and real-world examples underscore the merits of Verizon’s recommended approach.

Several parties, including some supportive of a statewide framework, suggest an alternative regional approach.⁵¹ If a regional approach is adopted, any region should cover large geographic areas and populations in multiple counties, and should always include all PSAPs within the region, in order to ensure that stakeholders are incentivized to deploy NG911 in the most efficient manner possible. In no event, however, should service providers be subject to deployment obligations based on *county* level readiness criteria.⁵² A substantial number of PSAPs and their legacy 911 networks are already county-level, and some states have dozens (in some cases well over 100) counties. A county-level approach would require development of

⁴⁸ See AT&T Comments at 18-20; MetroPCS Comments at 8; RCA Comments at 2-4; Sprint Nextel Comments at 23; T-Mobile Comments at 8-9; *see also* NENA Comments at 19 (“NG9-1-1 systems ... more likely to be operated by larger political units ... [and] will prove more efficient if requests for text service originate from these larger units”).

⁴⁹ See King County Comments at 6-9.

⁵⁰ See State of Tennessee Dept. of Commerce and Insurance, Media Release, *State’s emergency communications system clears 1st update phase*, Sept. 28, 2011, available at <http://www.tn.gov/commerce/911/documents/092811NewGenerationE911newsreleaseFINAL.pdf>.

⁵¹ AT&T Comments at 17; NASNA Comments at 8; Sprint Comments at 23; T-Mobile Comments at 8-9; *see also* APCO Comments at 15 (noting that protocol interwork functions should address “migration at a State or regional level.”); Qualcomm Comments at 11; TCS Comments at 14.

⁵² See 4G Americas Comments at 8 (supporting county, region or statewide).

more complex technical and call routing solutions, and frustrate service providers and PSAPs alike from realizing the cost and operational efficiencies of PSAP consolidation and wide-area NG911 deployment.

Motorola Solutions argues that the extent of PSAP consolidation should be determined at the state and local level.⁵³ While such decisions will necessarily involve state and local jurisdictions, the Commission's policy framework should not encourage individual localities to opt out of a statewide or wide area regional NG911 system, and therefore should not obligate a service provider to deploy duplicative facilities and services to accommodate such an outlier jurisdiction.⁵⁴

III. NG911 CONNECTIVITY DETAILS ARE APPROPRIATELY LEFT TO MUTUAL AGREEMENTS AND BEST PRACTICES AMONG SERVICE PROVIDERS AND PSAPS

The record supports Verizon's recommendation that the Commission continue to afford service providers and PSAPs flexibility in establishing E911 and NG911 connectivity arrangements.⁵⁵ Sprint Nextel and T-Mobile encourage the Commission to address the appropriate point of interconnection between service providers and PSAPs in circumstances where there is not a wireline ILEC selective router. The Commission's regulatory framework should give service providers and PSAPs the appropriate incentives to negotiate connectivity arrangements in good faith. Verizon agrees with Sprint that the details of these arrangements are appropriate for standards bodies and industry best practices. In this regard, Verizon is participating in a NENA Work Group to address this issue and a Technical Information

⁵³ See Motorola Solutions Comments at 6-7.

⁵⁴ See AT&T Comments at 19-20 (describing difficulties associated with duplicative facilities and PSAP-level disputes).

⁵⁵ See Verizon Comments at 11-12.

Document is close to a final draft stage that will provide NG911 participants with guidance on potential demarcation points and best practices on this very issue. Moreover, in no event should the Commission or state agencies adopt regulations that preclude or effectively preclude new 911 service provider entrants, as PSAPs should be free to select their vendor of choice.⁵⁶ State agencies should similarly remove regulations with that effect and ensure that legacy regulations do not impose unnecessary burdens on new entrants.

The Commission's current regulatory framework for wireless E911 deployment already facilitates such a flexible, best practices-based approach. In meeting their obligations to transmit 911 calls and E911 data, wireless service providers and PSAPs are already obligated to work in good faith in situations where a PSAP seeks to establish connectivity at a point other than the ILEC selective router.⁵⁷ Thus, for example, wireless providers migrating from the current ILEC selective router configuration to accommodate PSAPs' IP network upgrades should continue to have flexibility to reach mutual agreements with PSAPs and 911 vendors that ensure that points of interconnection are a reasonable distance from the service provider's network and PSAP, and

⁵⁶ See Verizon NOI Comments at 15-16; NASNA Comments at 9.

⁵⁷ See *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Second Memorandum Opinion and Order, 14 FCC Rcd 20850, ¶¶ 75, 89-90 (1999) (Commission has generally left "the development of the detailed technical and operational standards and the resolution of the numerous technical decisions necessary to implement E911 [as] matters for carriers, PSAPs, and other interested parties to address ... through mutual agreement or by submission to standards bodies" and with the expectation that they would proceed "in good faith"); *Letter from Thomas J. Sugrue, Chief, Wireless Telecommunications Bureau, to Marlys R. Davis, E911 Program Manager, Department of Information and Administrative Services, King County, Washington*, CC Docket No. 94-102, at 3 (dated May 7, 2001), *aff'd on recon.*, *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Order on Reconsideration, 17 FCC Rcd. 14789, ¶ 7 (2002) (affirming policy "favor[ing] negotiation between the parties as the most efficacious and efficient means for resolving disputes regarding cost allocations"). To the extent that commenters assert that the *King County* demarcation point applies outside of the wireline ILEC selective router configuration, they are mistaken. See Intrado Comments at 6.

that service providers have various transport options, including transiting 911 calls over the ILEC's network for 911 call delivery to PSAPs. The Commission should affirm a similarly flexible approach for NG911 and not dictate the connectivity terms and conditions between NG911 participants, while adopting a regulatory framework that provides the appropriate incentives to carriers to timely negotiate connectivity arrangements in good faith with public safety entities and their vendors.

Finally, a number of commenters assert that the Commission should require IP-IP interconnection or otherwise exercise authority expansively under Sections 251-252 of the Act.⁵⁸ The Commission should reject these arguments. IP-IP interconnection in particular raises complex technical and legal issues that the Commission has squarely raised in the pending *ICC/USF* notice of proposed rulemaking.⁵⁹ The Commission should address these issues in that proceeding.

IV. THE COMMISSION SHOULD ENCOURAGE COLLABORATIVE CONSUMER EDUCATION EFFORTS AMONG STAKEHOLDERS WITHOUT NEW REGULATION

A broad cross-section of commenting parties agree that collaborative efforts among stakeholders will be necessary to ensure that consumers are educated and their expectations managed about service provider and PSAP capabilities.⁶⁰ Several commenters underscore that

⁵⁸ See Texas 911 Agencies Comments at 3-4, 12-13; COMPTTEL Comments at 11-13; see also Bandwidth.com Comments at 5-6 (supporting “strong” interconnection requirements); Twilio Comments at 5 (“the Commission should exercise its [Section 251(e)] authority over numbering resources”).

⁵⁹ See *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, WC Docket No. 10-90 *et al.*, FCC 11-161, ¶¶ 1335-1398 (Nov. 18, 2011).

⁶⁰ See Verizon Comments at 16-19; APCO Comments at 4-7, 17; ATIS Comments at 10; AT&T Comments at 12; Boulder Comments at 54; California Comments at 7; CTIA Comments at 17-19; King County Comments at 9-10; NENA Comments at 20; NASNA Comments at 4-5; Qualcomm Comments at 11; Sprint Nextel Comments at 8, 24; TIA Comments at 7.

government stakeholders must play a principal role in informing consumers where PSAPs are NG911 capable.⁶¹ Those efforts can and should commence without the need for new regulation, once standards are completed and it becomes clearer when PSAPs will be able to initiate NG911 services.

Several parties also recommend specific customer notification obligations for service providers, including a mandatory standardized reply message when the PSAP is unable to handle a text-based communication.⁶² New rules are unnecessary, however, given the clear consensus among service providers to address consumer education through best practices or other collaborative efforts.⁶³ The Commission should thus reject device certification rules as a method of informing consumers, as Bandwidth.com proposes.⁶⁴ Verizon Wireless's practice of voluntarily providing such a reply message further underscores that new regulations are unnecessary.⁶⁵ The Commission should thus encourage and monitor collaborative stakeholder efforts in this area.

V. COMMENTERS SUPPORT THE DEVELOPMENT OF STANDARDS AND BEST PRACTICES TO GOVERN 911 CALL PRIORITIZATION

The record supports addressing the potential costs and benefits of call prioritization through the CSRIC and any resulting best practices. The comments reveal that 911 call

⁶¹ See APCO Comments at 17; CTIA Comments at 18-19; King County Comments at 9-10; Sprint Nextel Comments at 24; US Cellular Comments at 13-14; Verizon Comments at 17-18.

⁶² See APCO Comments at 18; Boulder Comments at 54; California Comments at 8; King County Comments at 9-10; NASNA Comments at 9-10.

⁶³ See APCO Comments at 18 (urging Commission “to develop best practices and model responses”); Verizon Comments at 18-19; Sprint Nextel Comments at 24; US Cellular Comments at 13-14; ATIS Comments at 10.

⁶⁴ Bandwidth.com Comments at 8-9.

⁶⁵ See Verizon Comments at 18-19.

prioritization would be extremely complex, as congestion during high volume calling events can occur in the service provider's network with respect to 911 and non-911 calls alike, and in the PSAP's network.⁶⁶ Ensuring the completion of 911 calls during high volume calling events would thus require the involvement of not only wireless carriers, but PSAPs and the various carriers and vendors that support them. Moreover, several parties echoed Verizon that addressing the issue is not merely a question of distinguishing between "emergency" versus "non-emergency" calls.⁶⁷ Industry and public safety entities alike acknowledge the challenges in addressing this issue, thus affirming the merits of addressing the issue through the CSRIC and standards organizations rather than in this rulemaking proceeding.

In addition, Boulder suggests the use of an intercept capability in localized congestion situations that "would answer calls to 9-1-1 received through cell towers in the vicinity of the accident and play a message" directing the caller to dial '1' or '2' depending on whether the call relates to, for example, a particular automobile accident that already resulted in 911 calls.⁶⁸ The merits of such a proposal are appropriate for standards bodies and stakeholders to consider, but handsets currently prevent a caller from dialing any digits after "911" is complete. Boulder also suggests that such a capability "could even be pushed out to" a service provider's Mobile Switching Center.⁶⁹ Service providers, however, are obligated to transmit *all* 911 calls to the

⁶⁶See 4G Americas Comments at 12-13; Verizon Comments at 19-24; AT&T Comments at 7-11; CTIA Comments at 11-13; Sprint Nextel Comments at 15-17; T-Mobile Comments at 16-18; *see also* Motorola Mobility Comments at 7-8; Motorola Solutions Comments at 7; NASNA Comments at 6; NENA Comments at 21-22; Qualcomm Comments at 10; Boulder Comments at 46-47.

⁶⁷ See Verizon Comments at 22; 4G Americas Comments at 12; AT&T Comments at 8-9; Wireless RERC Comments at 7.

⁶⁸ Boulder Comments at 46-47.

⁶⁹ *Id.*

PSAP, and the Commission has indicated that any “filtering” of 911 calls should be at the discretion of the PSAP, not the service provider.⁷⁰ Requiring service providers themselves to perform such a screening function would require a fundamental change in Commission rules and policies that should be considered by the CSRIC and standards organizations in the first instance.

VI. THE COMMISSION SHOULD CAREFULLY CONSIDER AND SEEK COMMENT ON THE EMERGENCY ACCESS ADVISORY COMMITTEE’S RECOMMENDATIONS

The EAAC recommendations are a fundamental component of Section 106 of the CVAA which, in turn, provides the Commission with its sole authority to adopt the NG911 and text-to-911 policy framework contemplated in the *NPRM*.⁷¹ As Verizon noted in its comments, members differed on whether certain of the EAAC’s initial recommendations fall within the scope of the Commission’s jurisdiction or are appropriate for Commission rules.⁷² While several consumer groups later expressed concern for industry’s Accompanying Statement addressing those issues,⁷³ the EAAC also agreed that the recommendations were not intended to prejudge the outcome of this proceeding, and that issues concerning the scope of the Commission’s authority to impose regulations remain to be determined through the rulemaking process.⁷⁴ For

⁷⁰ 47 C.F.R. § 20.18(b); *FCC Clarifies That 911 Call-Forwarding Rule Does Not Preclude Wireless Carriers From Blocking Fraudulent 911 Calls From Non-Service Initialized Phones Pursuant To State and Local Law*, Public Notice, 17 FCC Rcd 21877 (2002) (clarifying that “Where a PSAP has identified a handset that is transmitting fraudulent 911 calls and makes a request to a wireless carrier to block 911 calls from that handset in accordance with applicable state and local law enforcement procedures, the carrier’s compliance does not constitute a violation of Section 20.18(b).”).

⁷¹ See AT&T Comments at 20-22; CTIA Comments at 20-21; Verizon Comments at 24-28.

⁷² See Verizon Comments 28.

⁷³ See Non-ICT-Industry EAAC Members Reply Comments (“EAAC Consumer & Other Stakeholder Response”) (Dec. 23, 2011).

⁷⁴ See EAAC Report and Recommendations, PS Docket No. 10-255, at 18 (Dec. 12, 2011) (re-submitted in final Jan. 26, 2012) (“EAAC Recommendations”).

these reasons, it is important that the EAAC continue its work and that the Commission seek comment on those recommendations it believes warrant consideration as rules.

Notwithstanding the differences among EAAC members, Verizon does not dispute that many of the recommendations may prove to be desirable or ideal features of a robust and accessible NG911 system. The EAAC's recommendations will enable industry to better understand the communications needs of individuals with disabilities, and the uses and technologies that are preferable and ideal to those individuals in emergency situations. Regardless of the outcome of this proceeding, many recommendations will likely be appropriate for consideration as industry standards and best practices – an outcome entirely consistent with Congress's CVAA objectives.

As noted above, the principal issue the EAAC's recommendations will present to the Commission is not whether a particular recommendation is desirable, but whether codifying it as a rule is necessary to achieve the CVAA's NG911 objectives and consistent with the scope of the Commission's authority.⁷⁵ The CVAA authorizes the Commission to promulgate rules implementing the recommendations only to the extent "achievable and technically feasible."⁷⁶ Moreover, the CVAA directed that the EAAC's recommendations include not only "rules" and

⁷⁵ Recommendation P2.3, for example, calls for the Commission to "adopt requirements that ensure that the quality of video, text and voice communications is sufficient to provide usability and accessibility to individuals with disabilities based on industry standards for the environment." EAAC Recommendations at 23. Consumer groups state that "[i]t is assumed that the FCC will look for the appropriate rules as part of its NPRM and rulemaking," but as reflected in industry's separate statement, there is a more fundamental question of whether quality of service regulations – which the Commission has never imposed on mobile voice, text, or mobile video communications services and applications – are more appropriate for industry standards or best practices, where those issues are typically addressed. *See* EAAC Consumer & Other Stakeholder Response at 7; EAAC Recommendations at 66 (Accompanying Statement of the Industry Members of the EAAC).

⁷⁶ CVAA § 106(g).

“deadlines,” but “protocols, technical capabilities,” “technical standards,” “actions” and “procedures,” and thus does not presume that each and every recommendation would be appropriate for rules.⁷⁷ Section 106 of the CVAA thus does not preclude the Commission from determining that many of the EAAC’s recommendations would be more effectively implemented through standards and best practices rather than new burdensome regulatory obligations, and this statutory framework necessarily governs the Commission’s review of the EAAC’s recommendations.

CONCLUSION

The record demonstrates that Verizon’s and other commenters’ recommended framework for interim text-based solutions and NG911 deployment sets forth an achievable and technically feasible approach that will enable the Commission to meet its public safety and accessibility objectives, consistent with the scope of its authority under Section 106 of the CVAA. The Commission should thus (1) allow service providers to offer interim text-based solutions on a voluntary basis, and (2) focus its and stakeholders’ efforts toward the funding, planning and deployment of standards-driven IP-enabled NG911 networks and services.

⁷⁷ *See id.* § 106(c).

Respectfully submitted,

Michael E. Glover
Of Counsel

/s/ Robert G. Morse
John T. Scott, III
Robert G. Morse
1300 I Street, N.W.
Suite 400 West
Washington, DC 20005
(202) 589-3740

*Attorneys for Verizon
and Verizon Wireless*

February 9, 2012