Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	CC Docket No. 94-102
E911 Requirements for IP-Enabled Service Providers	WC Docket No. 05-196
Wireless E911 Location Accuracy Requirements	PS Docket No. 07-114
Framework for Next Generation 911 Deployment	PS Docket No. 10-255

COMMENTS OF VERIZON[1] AND VERIZON WIRELESS

The Commission's new inquiry into the E911 capabilities of multi-line telephone system ("MLTS") manufacturers and operators, as mandated by Congress in the Next Generation 911 Advancement Act, is timely and important in light of the transition of public safety networks from legacy to IP-enabled platforms and the important public safety benefits to MLTS users.[2] Verizon and other service providers already provide the transmission and database functionalities necessary for MLTS operators to provide their users with E911 location capability, but nationwide standardization is needed for such capability to be technically feasible within a

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

[2] *Public Safety and Homeland Security Bureau Seeks Comment on Multi-Line Telephone Systems Pursuant to the Next Generation 911 Advancement Act of 2012*, Public Notice, CC Docket No. 94-102, WC Docket No. 05-196, PS Docket No. 07-114, and PS Docket No. 10-255, DA 12-798 (PSHSB rel. May 21, 2012) ("Public Notice").

reasonable period. The NENA Model Legislation[3] provides a good starting point for development of such a nationwide approach, and the Commission should encourage manufacturers and operators to initiate the standards efforts necessary to achieve that objective.

I. The Services Necessary for MLTS Operators to Enable E911 Location Capability for MLTS Users Are Already Widely Available

As Congress recognized, in order to evaluate the need for (or extent of) any new E911 service requirements for MLTS system operators, it is necessary to first determine the technical feasibility of such capabilities for MLTS system manufacturers.[4] Service providers already make E911 location capabilities widely available to MLTS operators purchasing new systems. Verizon offers both traditional circuit-switched and IP platforms that enable MLTS E911 capability. Verizon's services include Primary Rate Interface ISDN ("PRI ISDN") trunks that enable the transmission of ANI to the 911 ALI database. Verizon and other third party providers, such as RedSky and Intrado, also offer MLTS operators Private Switch/Automatic Location Identification ("PS/ALI") service, a software database solution that permits operators to update extension location and ANI/ALI information, including a more precise location such as an apartment or floor number, on an ongoing basis. Verizon offers PS/ALI without regard to the identity of the MLTS operator's telephone service provider where it is the 911 service provider. In addition, some new innovative products will enable users to wirelessly connect to an enterprise's PBX-based system customers. All of these services are available under contract or

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[3] NENA, *Technical Requirements Document on Model Legislation, E9-1-1 for Multi-Line Telephone Systems*, NENA 06-750 (Ver. 3 Feb. 5, 2011), available at http://www.nena.org/resource/collection/C9292FAF-6B47-4CEB-83D1-3982DBE77186/NENA_06-750_v3_MLTS_Model_Legislation.pdf.

[4] *See* Middle Class Tax Relief and Job Creation Act of 2012, P.L. 112-96, 126 Stat. 156, 242, § 6504(b) (2012) ("NG911 Advancement Act").

(depending on the state in which the service is offered) intrastate tariff at competitive rates, terms and conditions.

Verizon and other service providers thus have a demonstrated ability to develop new and innovative services to meet the demands of their MLTS operator customers for E911 services, without the need for regulation. Thus, information from operators and manufacturers is necessary for the Commission to answer the narrow question raised in the statute – a date certain for "the feasibility of MLTS manufacturers including within all such systems … one or more mechanisms to provide a sufficiently precise indication of a 9-1-1 caller's location."[5] In Verizon's experience, MLTS systems with precise E911 location capability are now widely available to MLTS operators, including systems with (1) the basic ability to transmit the individual calling party's number for a 911 call, and (2) the ability to update location information either electronically (*e.g.*, via an Input file sent to the PS/ALI provider) or manually. In that regard, the MLTS equipment market is highly competitive, and a new Part 68 regulatory mandate should be unnecessary as long as MLTS operators universally demand the necessary E911 capabilities.[6]

II. Uniform Nationwide Technical Standards Are Needed to Determine Technical Feasibility of E911 Location Capability for All MLTS Systems

In evaluating E911 technical requirements for MLTS systems last year, the Commission's Communications Security, Reliability and Interoperability Council ("CSRIC") aptly concluded that "private systems are not easily regulated" given the technical, jurisdictional,

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[5] *Id.* § 6504(b)(1).

[6] *See* Public Notice at 4 (seeking comment on merits of new equipment regulations).

and operational challenges involved.[7] These same considerations create uncertainties that make it difficult to determine when it would be technically feasible for all MLTS systems to have "sufficiently precise" E911 location capability for purposes of the NG911 Advancement Act. A uniform approach to the underlying technical challenges for MLTS systems is an appropriate first step toward addressing these uncertainties.

Moreover, because MLTS technology continues to evolve, there is a risk that technology could quickly outpace any regulatory requirements and inadvertently lock MLTS customers into legacy technologies. For example, as commercial and public safety networks transition to IP-enabled platforms for NG911, including an i3-based architecture,[8] MLTS systems will need a SIP/IP interface with a PSAP's Emergency Services IP Network ("ESINet") because the location information is carried in a SIP header. An enterprise's large "premises" that extend beyond a single PSAP jurisdiction also can create 911 call routing challenges for some (but not all) MLTS products.[9] Technical issues such as these can be resolved, but at some cost to MLTS manufacturers and operators. In addition, MLTS systems can increasingly accommodate mobile or nomadic extensions, which create new E911 location determination challenges.[10]

Determining when E911 location capability could be technically feasible for all new MLTS systems will also depend on the availability of standards and technical criteria for such

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[7] *See* CSRIC Working Group 4C, *Technical Options for E9-1-1 Location Accuracy,* Final Report at 62 (Mar. 14, 2011) ("CSRIC Report"), available at http://transition.fcc.gov/pshs/docs/csric/CSRIC_4C_Comprehensive_Final_Report.pdf.

[8] *See* NENA, *Detailed Functional and Interface Standards for the NENA i3 Solution (TSD),* NENA 08-003 (Ver.1 June 14, 2011), available at http://www.nena.org/resource/collection/2851C951-69FF-40F0-A6B8-36A714CB085D/NENA_08-003_Detailed_Functional_&_Interface_Specification_for_the_NENA_i3_Solution-Stage_3.pdf.

[9] *See* CSRIC Report at 15.

[10] *See id.*

systems. There are no governing uniform technical standards, for example, to determine whether a system provides "a sufficiently precise indication of a 9-1-1 caller's location."[11] This is a critical threshold question, as some methods for maintaining location information are far more challenging and administratively burdensome for MLTS operators than others. Provisioning of location information for MLTS in an i2- or i3-compatible 911 call delivery architecture has not been defined. And, as noted above, NG911 and mobile/nomadic capabilities will present additional challenges for MLTS systems. Further, to the extent that states and localities may impose varying E911 requirements on MLTS operators, determining what capabilities should be deployed in a particular geographic area is challenging.

The Commission's technical feasibility determination must therefore account for the need to first establish national uniformity in E911 location standards and technical requirements for MLTS systems. As the CSRIC observed last year (with Verizon's support), the emergence of IP-enabled commercial enterprise and NG911 systems, and inconsistent requirements at the state level, merit a uniform nationwide approach today.[12] Adopting such a nationwide technical approach for manufacturers and operators, as the CSRIC recommends, will promote deployment of MLTS E911 location capability.

The NENA Model Legislation provides a good starting point for development of such a nationwide technical approach, but additional stakeholder efforts, and possibly additional Federal legislation, would be necessary to ensure that MLTS operators implement E911 location capability for all systems. Specifically, Verizon does not object to the 2011 version of the

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[11] NG911 Advancement Act § 6504(b)(1).

[12] *See* CSRIC Report at 62 (recommending "that the federal government adopt national MLTS legislation to provide consistent requirements for equipment manufacturers and MLTS installations").

NENA Model Legislation,[13] but public safety and industry stakeholders should remain vigilant in ensuring that the document and the associated guidance (such as NENA Document 77-501) accommodate future NG911 networks.[14]

As an initial matter, the Commission should build upon the important work that NENA has already undertaken in this area[15] and encourage manufacturers and operators, together with public safety stakeholders, to initiate an industry-based standards development process, under the auspices of a recognized standards development organization such as ATIS, to develop uniform standards for MLTS manufacturers to follow. Such efforts could obviate the need for regulatory or legislative solutions in the first instance. Regardless, as the NENA Model Legislation recognizes, any technical standards and accompanying regulatory regime, if necessary, should be "forward-looking and technology-neutral, and not enshrine legacy technologies such as analog CAMA trunks, where newer and more cost-effective technologies" such as IP platforms are available to MLTS operators.[16]

CONCLUSION

Service providers already provide the transmission and database functionalities necessary for MLTS operators to provide their users with E911 location capability. Nationwide uniform standards and technical requirements are needed for manufacturers to include such capability in

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[13] *See* Public Notice at 3-4 (seeking comment on NENA Model Legislation).

[14] *See* NENA, *NG911 Transition Plan Considerations*, Information Document (Ver. 1, Feb. 24, 2011) available at http://www.nena.org/resource/collection/C34466B1-DFD7-49F2-8908-ECA3F4BDA46B/NENA_77-501-v1_NG9-1-1_Transition_Plan_Considerations.pdf.

[15] NENA Technical Information Document 03-502, *Trunking for Private Switch 9-1-1 Service* (Apr. 11, 2003) *available at*: http://www.nena.org/general/custom.asp?page=TrunkingPS911_Svc; NENA Data Technical Committee (Private Switch Sub-Committee), *Private Switch (PS) E-9-9-1 Database Standard* (Aug. 2004) *available at*: http://www.nena.org/general/custom.asp?page=PS911_Database.

[16] *See* NENA Model Legislation at 21.

all systems. The NENA Model Legislation is an appropriate first step toward developing such a nationwide approach, and the Commission should encourage manufacturers and operators to initiate the standards development effort necessary to achieve that objective.

Respectfully submitted,

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