**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 |
| | ) | |
| Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements; Petition of the National Telecommunications and Information Administration to Amend Part 25 of the Commission's Rules to Establish Emissions Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band | ) | IB Docket No. 99-67 |

# COMMENTS OF VERIZON


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## COMMENTS OF VERIZON[1]

The Commission should not adopt additional requirements regarding multi-line telephone system operators' access to Enhanced 911 ("E-911") services.[2] Local exchange carriers ("LECs") are currently required under FCC rules to provide E-911 access to all customers, including multi-line telephone system users. To that end, Verizon provides *all* multi-line telephone system operators with fully functional E-911 access to *all* central offices in Verizon's footprint, and works with individual multi-line telephone system operators to implement customer-specific solutions if economically and technically feasible. In short, LECs provide all of the necessary tools to facilitate multi-line telephone system access to E-911. As a result,

[1] The Verizon telephone companies ("Verizon") are the local exchange carriers affiliated with Verizon Communications, Inc., and are listed in Attachment A.

[2] Enhanced 911 or E-911 refers to the addition of location-specific and call-back information to a traditional 911 call, permitting more efficient and speedy response by emergency service personnel. *See* Section I, below.

adopting the National Emergency Number Association's ("NENA") proposed Part 64 regulations, which would obligate LECs to provide additional, customer-selected E-911 access technologies to multi-line telephone systems, and provide unchecked access to vital E-911 databases, would be unnecessary and counterproductive.[3] The proposed regulations would impose an invasive and costly burden on LECs – based on the requests of individual customers – to upgrade, replace, and update central office functionalities that already provide adequate E-911 access to multi-line telephone systems. Such an open-ended requirement would require hundreds of millions of dollars of unnecessary investments and would take years to implement, without any demonstrated increase or improvement with regard to E-911 compliance.

Further, the Commission should not permit multi-line telephone system operators to have direct access to E-911 databases; doing so would jeopardize the integrity and accuracy of those databases without any countervailing benefit to multi-line telephone systems or the public at large. Nor should the Commission allow multi-line telephone system operators to incorporate false numbers, *e.g.*, non-direct inward dialing ("DID") numbers, into E-911 databases. Imposing the proposed onerous regulations on LECs would endanger the E-911 system and undermine the E-911 wireline infrastructure serving multi-line telephone systems.

## I. No Regulatory Action is Warranted Because LECs Provide E-911 Access to Multi-Line Telephone Systems Today

LECs provide all telecommunications systems users, including multi-line telephone systems, with E-911 access, despite the complications and difficulties inherent in provisioning E-911 solutions to multi-line telephone systems. Because LECs *already* facilitate access to E-911

[3] *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 25430, ¶ 117 (2003)("*Order*" or "*Notice*").

services for such systems, imposing new requirements on LECs is not necessary to provide these customers with E-911 services. Rather, as discussed below, the responsibility for ensuring that multi-line telephone systems have access to E-911 must ultimately rest with the customers of such services.

A standard emergency call begins with an end user dialing 9-1-1. The LEC end office recognizes that the call is an emergency and routes the call to its 911 selective router along with the end user's telephone number, the Automatic Number Identification ("ANI") or Calling Party Number ("CPN"). The ANI/CPN provides the necessary information to route the call to the proper Public Safety Answering Point ("PSAP"). The ANI/CPN is used by the PSAP to access the necessary Automatic Location Identification ("ALI") information in the E-911 databases to provide emergency services to the caller, *i.e.*, the caller's location, the closest public safety organizations, and the necessary callback information. The ALI information is automatically generated and provided to the E-911 dispatcher.

Multi-line telephone systems, however, do not provide accurate ANI/CPN or ALI information unless the multi-line telephone system operator affirmatively sets up its multi-line telephone system to be E-911-compliant. A 911 call from a non-compliant multi-line telephone extension poses a series of complications because the ANI/CPN and ALI information associated with the call may be the multi-line telephone system's main number or billing number. The addresses of the main number and the extension number may well be different, or may not exist in the E-911 database. Indeed, the main address and the extension's address may be a significant distance apart resulting in the wrong PSAP being contacted or the wrong public safety personnel being dispatched. In addition, the main number will not provide relevant information as to the exact floor location of the extension, even where the extension number is not in a separate

building. The PSAP dispatcher also would not have the ability to call back the extension's number.

In order to remedy these problems, LECs offer multi-line telephone systems special trunking configurations to ensure that the proper ANI and ALI information are transmitted to the PSAP. The most widely available solution is the use of CAMA (Centralized Automated Message Accounting) trunks.[4] CAMA trunks are dedicated facilities that provide the ANI information of specific multi-line telephone system extensions directly to the LEC's 911 selective router. In some parts of the country, a second option, ISDN PRI (Integrated Services Digital Network Primary Rate Interface), is also available. ISDN PRI permits multi-line telephone systems to transmit correct E-911 information utilizing ISDN trunks to LEC central offices. One or both of these options are available in all Verizon central offices, and both options provide equivalent levels of E-911 access.[5] In fact, the FCC has acknowledged that "both CAMA and ISDN are well-known, readily available technologies." *Order*, ¶ 61.

Under either configuration, LECs require multi-line telephone system operators to acquire DID numbers for all extensions. DID numbers are required to populate the E-911 databases, ensure that a call-back number will be available, and guarantee that false or "dummy"

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[4] Trunking for Private Switch 9-1-1 Service, Technical Information Document (TID), NENA 03-502, at 1 (Apr. 11, 2003) ("*NENA Trunking Report*") ("The most common means of providing PS/911 over the past decade has been the use of dedicated CAMA-type circuits that connect a PBX to the 9-1-1 selective router"); *Order*, n. 211 ("CAMA technology … is presently the only widely available network solution").

[5] *See generally NENA Trunking Report at* 6 ("The processing of 9-1-1 calls by the 9-1-1 Selective Router should be the same regardless of whether the call was delivered to the 9-1-1 Selective Router via message trunks serving a Central Office switch or via dedicated CAMA-type circuits that connect a PBX directly to the 9-1-1 Selective Router.").

numbers are not repeated or duplicated in the E-911 database.[6] Multi-line telephone system operators must also provide location-specific information for each extension. To that end, Verizon offers specialized software to multi-line telephone systems to allow operators to update extension location information on a daily basis, which Verizon then incorporates into the E-911 databases.

Nevertheless, RedSky correctly notes, "[t]he operators of multi-line systems are ultimately responsible for deployment of the technology throughout the enterprise."[7] LECs lack access to the necessary information to input and update the location-specific information for multi-line telephone systems. As a result, those system's operators have an affirmative obligation to provide the necessary location information to the LEC for each DID number in the E-911 database, and to provide timely updates to the LEC of any changes to that information based on employee movement, office reconfiguration, or any other change that impacts the location of individual DID numbers.

## II. The FCC Cannot Allow Multi-Line Telephone System Operators To Dictate the Form of E-911 LEC Access

NENA's proposed Part 64 regulations would permit individual multi-line telephone system operators to demand E-911 access from LECs using any "accepted industry standard." *Notice*, ¶ 117. Yet Verizon provides multi-line telephone system operators with their choice of E-911 solutions available in the applicable central office. Specifically, in areas where Verizon provides both CAMA and ISDN PRI, Verizon offers multi-line telephone system customers the

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[6] *Id.*, at 5. ("[P]rogramming in the PBX must ensure that the station lines that are not assigned full 10-digit numbers are associated with an active 10-digit, NANP-valid number").

[7] Comments of RedSky Technologies, Inc., CC Docket No. 94-102, at 3 (Feb. 18, 2003) ("*RedSky Comments*").

option to select either configuration. Moreover, Section 64.3001 of the FCC's rules already requires "[a]ll telecommunications carriers [to] transmit all 911 calls to a PSAP," including calls from multi-line telephone systems.[8] There is no basis to alter, or expand, that obligation. Importantly, the proposed regulation would not expand E-911 access to any multi-line telephone systems that could not acquire it today; rather, it would simply require LECs to provide multi-line telephone system customers with their choice of any "accepted industry standard," regardless of the cost or burden to the LEC. There is simply no basis for imposing such an extraordinary burden on LECs, simply so certain customers can have their choice of available E-911 options.

Specifically, NENA would allow individual multi-line telephone system operators to select the access configuration of their choice and mandate that LECs upgrade their central offices to provide the requested access. A different customer in that same central office could demand a different access configuration, and so on. This is an unworkable solution that would result in the forced investment of millions of dollars by LECs with no means for cost recovery.

For example, NENA acknowledges that "[a]ll central offices are not equipped for ISDN PRI," yet suggests that multi-line telephone system operators should be able to compel ISDN PRI deployment, without any obligation to compensate LECs for that roll out.[9] Verizon conservatively estimates that upgrading all central offices to be ISDN PRI compatible would require millions of dollars of investment. Beyond the exorbitant cost of such a requirement,

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[8] 47 C.F.R. § 64.3001. The FCC adopted this requirement after the NENA proposal was submitted to the Commission, and NENA has never updated or altered its recommendations based upon this new obligation. *See Implementation of 911 Act*, Fifth Report and Order, 16 FCC Rcd 22264 (2001).

[9] MLTS Proposal of NENA and APCO, CC Docket No. 94-102, at Attachment C, pg. 13 (July 24 2001) (*"NENA Proposal"*).

updating and upgrading every central office in Verizon's footprint with ISDN PRI would take many years to plan and implement. Moreover, ISDN PRI is only the tip of the iceberg, because NENA's proposal would require more than a one-time investment. LECs would need to update and alter the services offered in their central offices as new multi-line telephone system E-911 solutions are developed. Neither the multi-line telephone system operators nor the Commission can predict the types of network upgrades that may be necessary to provide E-911 access to next-generation multi-line telephone systems, IP-based systems, and wireless systems.

By way of example, the FCC held a Solutions Summit this moth bringing together government and industry leaders to develop E-911 access solutions for IP-enabled devices and services. The ultimate technological developments that permit greater E-911 access for such devices will require additional rounds of updates and upgrades to *all* Verizon central offices for each of the related "accepted industry standards" developed. Still more upgrades may be required for wireless solutions. Multi-line telephone system operators cannot be permitted to demand that LECs roll out their choice of central office equipment, regardless of whether such options are economically practical, and expect LECs to simply internalize the costs.[10]

To underscore the problems with this proposal, NENA fails to provide any mechanism or process by which multi-line telephone system operators would request central office upgrades or modifications, or a timetable for LEC action on such requests. Nor are there procedures

[10] Nonetheless, if the Commission were to actively consider this proposal, it would need to provide a means for direct recovery of all LEC costs associated with the related upgrades either from all end users or from multi-line telephone system operators. NENA has provided no mechanism by which LECs would recover the costs of upgrading and expanding its central offices to comply with this indefinite requirement

proposed for recognizing "approved industry standards."[11] The FCC, in short, has correctly already declined to adopt these proposed amendments once, noting that they "may be too vague, making them operationally unenforceable." *Order*, ¶ 60.

There is also no clear benefit to imposing such a broad and open-ended obligation on LECs. NENA suggests that allowing multi-line telephone system operators to choose the trunking configuration of their choice would encourage further deployment of E-911 solutions, yet there is no evidence that LEC infrastructure options are an impediment to E-911 deployment. *NENA Proposal* at 12. Likewise, NENA has not attempted to quantify the number of multi-line telephone system operators that would adopt or modernize their E-911 compliance if NENA's proposed rules were imposed on LECs.[12] The Commission's only legitimate concern should be that LECs provide E-911 access to this class of customers, and they do.

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[11] For instance, NEC America admits that its requested interface ANSI T1.628-2000 ISDN is not widely used in the industry, yet suggests that it should nevertheless be treated as an "accepted industry standard." *Notice*, ¶ 117; Comments of NEC America, Inc., CC Docket No. 94-102, at 6 (Feb. 19, 2003). NEC America's request highlights the FCC's concerns about how industry standards are designated and selected. NEC America wrongly suggests that its standard would eliminate the need for multi-line telephone systems to purchase DID numbers for E-911 purposes. *Id.* To the contrary, LECs, including Verizon, require DID numbers for sound reasons beyond the technical limitations of some E-911 configurations. Specifically, DID numbers are required to guarantee that a working callback number is available and to ensure that no false or duplicative numbers corrupt the E-911 databases. Because there is no clear market demand for NEC America's proposed standard and the asserted benefits of the standard are erroneous, NEC America's request should be rejected.

[12] Further, some multi-line telephone providers have suggested that if the LEC refuses to provide the requested means of access, the multi-line telephone system operator would be absolved of its obligation to provide E-911 access. During that time, multi-line system operators could avoid E-911 compliance costs altogether. The Commission cannot provide a regulatory approach that would open the door to no E-911 coverage at all.

## III. Permitting Multi-Line Telephone System Operators Direct Access to E-911 Databases Would Jeopardize Integrity of Those Databases

NENA's proposed Part 64 regulations would permit multi-line telephone system operators to have direct access to E-911 databases, risking corruption of those databases. *Notice*, ¶ 117. A direct access requirement would allow multi-line telephone system operators to directly add location data to vital E-911 databases without any validation or approval procedures. As a result, multi-line telephone system operators could provide incorrect or non-configuring data preventing public safety officials from retrieving accurate location information. Even more troubling, multi-line telephone system operators could incorporate location information for dummy or false numbers into E-911 databases that would conflict with database entries for NANP-assigned phone numbers, resulting in the duplication, alteration or corruption of database entries for both the multi-line telephone system end user and the traditional end user.[13]

The current system protects effectively the accuracy of all E-911 databases.[14] Specifically, Verizon's Private Switch/Automatic Location Identification ("PS/ALI") software provides multi-line telephone system operators an easy-to-use interface that allows E-911 location information to be provided to Verizon in an affordable and customer-friendly format. This software allows multi-line telephone system operators to input current, specific employee or

[13] All multi-line telephone system internal stations or lines are not necessarily associated with a NANP-assigned telephone number. These internal "dummy or "fake" numbers can access outside numbers through the multi-line telephone systems' trunk, but cannot directly receive incoming calls, unless forwarded by the PBX operator. These internal numbers typically allow end users within the system to contact each other with four-digit dialing. For example, a college student in a dorm can contact another student across campus by dialing 2233. 2233, however, is not associated with an actual phone number, so even if the school's area code is 202 and the exchange is 555, the student can not necessarily be reached by calling (202) 555-2233. That number may actually be assigned to another end user in that exchange, separate from the bank of numbers assigned to the college. The risk of E-911 database corruption arises, therefore, if a multi-line telephone system user adds location information for a dummy or fake number in the E-911 database that conflicts with information for the end user actually assigned that number.

[14] *See generally* Comments of Intrado Inc., CC Docket No. 94-102, at 11 (Feb. 19, 2003).

tenant location information that can expedite emergency response times. When updates are received by Verizon, the information is edited – just like Verizon's own information and that of other telecommunications providers – to ensure it passes all Verizon address and data validation requirements, before it is loaded into the ALI database.

None of the proffered rationales for direct database access withstands scrutiny. First, some manufacturers argue that "[d]irect MLTS operator access to the ALI database would reduce MLTS operators' ALI database management costs."[15] However, Verizon provides multi-line telephone system customers with an affordable, easy-to-use interface, which limits management and oversight costs. Without the Verizon software, multi-line telephone system operators would have to self-provide a mechanism to connect to the E-911 database or seek out third-party solutions.

Second, proponents claim that direct access would "reduce the delays associated with updating such databases." *Fitzgerald Letter* at 2. NEC America asserts, without substantiation, that updates require "up to 30 days or more to complet[e] the updates." Yet RedSky acknowledges that database management providers, including Verizon, update databases within 24 hours,[16] and there is no factual support to suggest that LECs do not promptly transfer multi-line telephone system updates to the E-911 databases.

Third, NEC America contends that providing direct access would "eliminate any 'unfair market advantage' maintained by the LEC," yet the FCC already requires carriers to "maintain

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[15] Letter from Mr. Ari Q. Fitzgerald, Counsel to NEC America, to FCC, CC Docket 94-102, at 2 (Nov. 6, 2003) ("*Fitzgerald Letter*").

[16] *Compare* Comments of NEC America, Inc. CC Docket No. 94-102 at 10 (Feb. 19, 2003) *to RedSky Comments*, at 5.

the 911 database entries for competing LECs with the same accuracy and reliability that it maintains the database entries for its own customers."[17] There is no evidence of any LEC competitive advantage associated with E-911 database management. What is more, Verizon provides the same database access to its multi-line telephone system customers as it does for CLECs under the Act.

Finally, NEC America suggests that permitting multi-line telephone system operators direct access would "result in fewer database errors."[18] This is facially implausible. Expanding access to thousands of multi-line telephone system administrators with limited experience or knowledge of the E-911 database would risk the accuracy and integrity of the databases. LECs would be unable to maintain standards, ensure that only correct information is populated, and guarantee that records are not contaminated. NENA's proposed regulation would place the E-911 system at risk with no countervailing benefit to multi-line telephone system operators or end users.

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[17] Reply Comments of NEC America, Inc., CC Docket No. 94-102, at 8 (Mar. 25, 2003) ("*NEC Reply Comments*"). The Act requires BOCs to provide "[n]ondiscriminatory access to – (I) 911 and E-911 services." 47 U.S.C. § 271(c)(2)(B)(vii); *see also Application of Ameritech Michigan Pursuant to Section 271 of the Communications Act of 1934, as amended, to Provide In-Region, InterLATA Services in Michigan*, Memorandum Opinion and Order, 12 FCC Rcd 20543, ¶ 256 (1997). Verizon has been found fully compliant with this requirement. *See Application by Verizon Maryland Inc. et al to Provide In-Region InterLATA Services in Maryland, Washington, D.C., and West Virginia*, Memorandum Opinion and Order, 18 FCC Rcd 5212, ¶ 127 (2003).

[18] *NEC Reply Comments* at 6.

## Conclusion

For the foregoing reasons, the Commission should refrain from mandating any additional access requirements for LECs providing E-911 solutions to multi-line telephone system operators.

Respectfully submitted,

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ATTACHMENT A

THE VERIZON TELEPHONE COMPANIES

The Verizon telephone companies are the local exchange carriers affiliated with Verizon Communications, Inc. These are:

Contel of the South, Inc. d/b/a/ Verizon Mid-States
GTE Midwest Incorporated d/b/a/ Verizon Midwest
GTE Southwest Incorporated d/b/a/ Verizon Southwest
The Micronesian Telecommunications Corporation
Verizon California Inc.
Verizon Delaware Inc.
Verizon Florida Inc.
Verizon Hawaii Inc.
Verizon Maryland Inc.
Verizon New England Inc.
Verizon New Jersey Inc.
Verizon New York Inc.
Verizon North Inc.
Verizon Northwest Inc.
Verizon Pennsylvania Inc.
Verizon South Inc.
Verizon Virginia Inc.
Verizon Washington, DC Inc.
Verizon West Coast Inc.
Verizon West Virginia Inc.