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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)

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

CC Docket No. 94-102

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COMMENTS

Tele-Communications Association ("TCA"), by its attorneys, respectfully submits its comments on the Notice of Proposed Rulemaking ("Notice") in the above-captioned proceeding.¹ TCA generally supports the Commission's PBX/E911 compatibility proposals. Nonetheless, as discussed herein, clarification and modification of the proposed rules is warranted in several significant respects in order to eliminate uncertainty and avoid placing unnecessary burdens on consumers.

I. STATEMENT OF INTEREST

TCA is a broadly based association of telecommunications managers. Its members represent approximately 1000 corporations, colleges and universities, health care institutions, and government agencies. TCA's government members include municipal and county agencies that are responsible for providing emergency response services.

As a result of its diverse membership, TCA has two distinct but complementary interests in this proceeding. TCA members who are PBX owners want to provide their employees with access to enhanced emergency response services in the most efficient, cost-

¹ FCC 94-237 (released Oct. 19, 1994).

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effective manner possible. At the same time, TCA members who provide 911 services wish to ensure that they receive from PBX owners information enabling them to respond rapidly and accurately to emergency calls.

In light of these interests, TCA supports the Commission's proposal to adopt "rules to require that PBX and other dispersed private telephone systems . . . operate effectively with enhanced 911 systems."² At a broad level, TCA believes that the Commission's proposals are both reasonable and desirable. In the remainder of these comments, TCA will respond to the inquiries in the Notice and suggest how the Commission should clarify and modify certain of its PBX-related proposals in order to assure both that compatibility is achieved promptly and effectively and that the regulations do not impose undue burdens on PBX owners.

II. THE COMMISSION'S PROPOSALS, WITH CERTAIN MODIFICATIONS, CAN EFFECTIVELY PROMOTE PBX/E911 COMPATIBILITY.

In order to ensure the compatibility of PBX equipment with enhanced 911 services, the Commission proposes to require that:

- PBX equipment be capable of transmitting to the PSAP the caller's telephone number, caller location identification, and a call-back number;
- users be able to reach public emergency services by dialing 9-1-1 without having to dial additional digits;
- PBX equipment be capable of notifying an on-premises attendant when a 911 call is placed;
- PBX owners be able to transmit updated caller location information to LECs in a timely fashion;

² Notice at ¶ 12.

- PBX owners provide LECs with information regarding trunk and station number verification;
- verification work be performed under the supervision of specially trained personnel or licensed professional engineers; and
- enough E911 trunks be in place to maintain an availability of $P=0.01$ based on the number of users served.

The proposed rules accurately identify the areas that must be addressed to promote compatibility. In most respects, these rules establish a workable framework for both PBX owners and emergency service providers. As discussed below, however, clarification and modification of the proposals will enable the Commission more efficiently and effectively to achieve its important objectives.

A. Ability of PBX to Pass ANI, ALI and Call-Back Number

The proposed rules would require that PBX equipment be able to provide a 911 caller's station number identification, caller location identification, and call back number to PSAP personnel. These requirements would apply prospectively to equipment that is manufactured or imported one year after, or installed 18 months after, the adoption of final rules. TCA supports adoption of a forward-looking obligation that PBXs be capable of passing the specified information.³ Nonetheless, TCA is concerned that the time frame for implementation of § 68.320(f) may not be feasible, given the significant technical developments needed to comply with the rule:⁴

³ Of course, TCA's support is predicated on a belief that any new requirements will not cause the price of PBXs to increase substantially or result in discriminatory, non-cost based service charges being imposed on multi-line customers.

⁴ In addition, the Commission may need to address the interplay between the proposed rules and existing state Caller ID rules that allow per-line blocking. Under a per-call

(continued...)

- First, PBXs currently do not pass calling station ANI. Rather, outgoing calls are routed to trunk groups, and the identifying number is associated with the trunk group rather than the originating phone. Software upgrades will be required.
- Second, new PBXs likely will need to include additional hardware and software in order to maintain an ALI database.
- Third, many users employ non-DID numbers in conference rooms and common areas. To provide an accurate call-back number for 911 calls originated from non-DID phones, PBXs and/or LECs will have to be capable of assigning these phones an alternate network address reachable directly from the outside.

Development of the necessary technology seems feasible. Nonetheless, because TCA's members do not manufacture PBX equipment, TCA is unable to assess how difficult the redesign process is likely to be. Accordingly, TCA will defer to the comments of equipment manufacturers in determining whether the proposed cut-off dates are reasonably achievable.

B. Ability to Reach 911 Without Dialing "9" First

The proposed rules would require that callers using PBX stations "have the ability to reach emergency services by dialing 911 without having to dial any additional digits."⁵ TCA's initial impression is that this requirement will create serious problems with established dialing plans and be very difficult to implement.

The vast majority of multi-line business telephone systems require users to dial "9" to access an outside line. This access requirement performs two functions. First, it enables

⁴(...continued)
blocking scheme, as contemplated by the Commission's rules for interstate Caller ID, there would be no barrier to passing ANI and ALI on 911 calls. In contrast, under a per-line blocking scheme, ANI and ALI may be stripped off by the PBX for all outside calls.

⁵ Notice at ¶ 22.

businesses to minimize unauthorized usage by either blocking all outgoing calls (by intercepting 9+) or blocking long distance calls (by blocking 9+1+).⁶ Second, it informs the PBX that calls with an initial digit other than "9" will be internal and that routing can be based on a 4-digit extension number.

The alternatives for allowing users to reach 911 without first dialing 9 are not attractive. One option would be for the PBX to screen all the dialed digits before deciding whether to block the call. This would create significant post-dial delay, as the PBX waits to determine whether a call beginning with the digits 9-1 is a 911 emergency call (which would not be blocked), or a long distance call in the format 9-1-NPA-NXX-XXXX (which might be blocked). Doing so would require major modifications to PBX software, as well as substantial user education to assure that callers stay on the line while calls are being processed. A second alternative would be to change the outside line indicator from "9" to another digit, such as "8". However, the replacement of "9" as an outside line indicator on thousands of systems would engender significant software modification costs and compel a comprehensive user education program.

In light of these difficulties, TCA believes a better approach might be to educate users that 911 calls will be treated the same as all outside calls -- that is, that calls to 911 must be preceded by dialing 9. Nonetheless, TCA will carefully review the comments of PBX manufacturers to determine whether its initial assessment of the difficulties raised by the proposal is correct. After doing so, TCA may make a specific recommendation regarding this proposal in its reply comments.

⁶ PBXs can readily be programmed to block all 9+ calls except 9+911[?].

C. Attendant Notification

Proposed § 68.320(e) would require that PBX equipment be capable of notifying an attendant or on-premises personnel (if present) each time a 911 call is placed and providing the attendant with calling station information. Although TCA agrees that PBXs should be able to notify an on-premises attendant, it seeks clarification of the proposed rule in two respects.

First, TCA urges the Commission to state that users with their own internal emergency response organizations need not pass 9-1-1 calls to the LEC for delivery to an external PSAP. Many users, such as universities, large corporations, and hospitals, have internal security, fire, and health care resources that are specially equipped to meet their unique needs. Requiring these users to notify both internal and external emergency response entities could create confusion, impede the effectiveness of response efforts, and divert limited public E911 resources from responding to emergencies at locations without private emergency personnel.

Second, the Commission should state that users are free to determine the on-premises attendant to whom notification will be given. The use of the word "attendant" in the proposed regulation could be construed as a requirement that an "operator" receive the notification. Many business and institutional users, however, have dedicated health or security personnel who would be more effective in assisting the 911 caller than an operator.

D. Transmission of Updated Location Information to LECs

TCA agrees with the Commission that "timely and accurate database maintenance is an essential element of enhanced 911 service."⁷ In this regard, TCA supports the Commission's proposed requirement that PBX owners transmit updated location information to LECs on a timely basis. TCA agrees that a standard data link interface could help control PBX costs and assure nationwide compatibility.⁸ The Commission should recognize however, that users may wish to employ other means of transferring updated data, such as mainframe-to-mainframe communications. The ability to use these alternatives should be preserved.

E. Definition of "Emergency Response Location"

The proposed definition of "emergency response location" refers to a "specific site, corresponding to a calling station in a dispersed private telephone system."⁹ In addition, proposed § 68.106(f)(3) would require users to provide telephone companies with "[t]he number of, and identification of emergency response locations that will require number identification." TCA seeks clarification that the Commission is not requiring each telephone to be considered an emergency response location. Rather, all telephones that are in close enough proximity to permit effective emergency response if assigned the same location identifies should be considered to occupy the same emergency response location.

⁷ Notice at ¶ 24.

⁸ Id. at ¶ 27.

⁹ Id. at Appendix C, § 68.3.

In many office buildings, several employees work in the same area, with work spaces divided into cubicles or similar arrangements. Similarly, a standard floor on a building may have fifteen offices very close to each other. Under these circumstances, it would be wasteful to assign a separate emergency response location to each calling station. For example, each time an employee changed alcoves within the same work space, or changed offices on the same hall, the ALI data base would need to be revised. Doing so would significantly burden users and LECs while not providing additional useful information to the PSAP.

F. Performance of Verification Work

Proposed § 68.228 would require that users verify the proper transmission of the station identification number as part of the initial installation of their PBX system and after any subsequent changes in emergency response location data. TCA agrees that the verification requirement in proposed section 68.228 is necessary and appropriate. Nonetheless, the proposed rule unnecessarily restricts the scope of qualified verification personnel.

Under the proposed rule, the verification work must be supervised either by (1) a person who has at least 6 months experience in the installation of terminal equipment and training in the operation of E911 emergency service trunks and the performance of proper verification procedures, or (2) a licensed professional engineer. The proposed training requirement would impose substantial and unwarranted costs on PBX owners. PBX manufacturers routinely require their customers' employees to undergo a vendor-sponsored training program in order to be certified to maintain the switch. Accordingly, as an

alternative to the Commission's proposal, TCA suggests that E911 verification procedures be part of the vendor training program and that anyone who has completed that program, or who has six months experience performing installation and verification procedures under the guidance of a trained supervisor, should be permitted to perform and supervise E911 installation and verification functions.

G. P.01 Grade of Service

Under proposed § 68.320(d), users must have sufficient E911 trunks to "maintain an availability of P=0.01 based on the number of users served." This requirement is both unnecessary and prohibitively expensive. In order to achieve the proposed level of availability, using standard network sizing tables, a building that serves several hundred users would require dozens of dedicated E911 trunks, at an average charge of roughly 50 dollars per trunk per month. The standard sizing tables, however, are based on expected busy hour/busy day traffic loads generated by stations that use the network for a significant period each day. In the context of 911 calls, which are placed relatively infrequently, these sizing tables are wholly irrelevant. Far fewer trunks are needed to assure that users calling 911 will get a line to the LEC central offices. For example, U S West requires users in Oregon to maintain two PBX trunks, largely for redundancy purposes. The Commission should allow users reasonably to determine how many trunks to utilize.

H. Preemption of Inconsistent State Regulation

The Commission proposes to preempt state regulation of PBX/E911 compatibility.¹⁰ TCA strongly supports preemption. As the Commission properly explained, "federal rules

¹⁰ Notice at ¶ 59.

for achieving uniformity are appropriate . . . to avoid confusion among telephone users connected to PBXs and to ensure that PBX equipment operates on the public switched telephone network . . . at an optimal level for emergency purposes."¹¹ The imposition of uniform federal requirements will ensure the nationwide compatibility of enhanced 911 systems and help discharge the Commission's obligation to promote safety of life and property.¹²

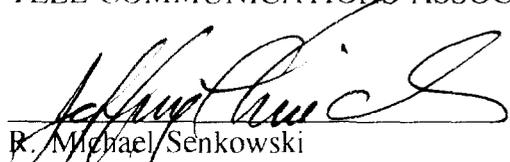
III. CONCLUSION

TCA supports reasonable efforts to require PBX systems to operate effectively with enhanced 911 systems. As a general matter, the proposed rules establish a workable framework for assuring compatibility. Nonetheless, the clarifications and modifications discussed above are needed to reduce uncertainty and eliminate unwarranted burdens.

Respectfully submitted,

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January 9, 1995

¹¹ Id. at ¶ 19.

¹² Id. at ¶ 59.