

November 28, 2005

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Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington DC 20554

Re: Interconnected Voice Over Internet Protocol 911 Compliance Letter
WC Docket No. 05-196

Dear Ms. Dortch:

Time Warner Telecom, Inc. (“TWTC”) hereby submits this Compliance Letter in response to the Enforcement Bureau’s November 7, 2005 Public Notice¹ setting forth the information to be provided in the E911 report described in the Commission’s June 3, 2005 *VoIP E911 Order*.² As explained below, it is not clear whether and to what extent the rules adopted in the Commission’s *VoIP E911 Order* apply to the voice service TWTC offers using TCP/IP protocol. Nevertheless, out of an abundance of caution, TWTC has set forth below the manner in which it ensures the delivery of E911 for that service.

1. Telephone Service TWTC Offers Utilizing TCP/IP Protocol

The only telephone service TWTC currently offers using TCP/IP protocol is an IP trunk service offered to business customers that utilize PBX equipment. The service consists of a fixed trunk transmission facility that TWTC deploys to the customer location. TWTC transmits voice traffic to and from the location using TCP/IP protocol. Since most PBX equipment currently utilizes TDM technology, incoming traffic is converted from IP to TDM before it is handed off to the PBX and outgoing traffic is converted from TDM to IP before it is handed off from the PBX to the IP trunk. The gateway that performs this conversion function is sometimes owned by TWTC and sometimes owned by the customer, and it is

¹ Enforcement Bureau Outlines Requirements of November 28, 2005 Interconnected Voice Over Internet Protocol 911 Compliance Letters, WC Docket Nos. 04-36 and 05-196, DA 05-2495 (rel. Nov. 7, 2005).

² *IP-Enabled Services and E911 Requirements for IP-Enabled Service Provider*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245 (2005) (“*VOIP E911 Order*”).

generally located at or near the customer's premises. TWTC also plans soon to offer a service that enables customers to establish a "native" IP connection to PBXs that utilize TCP/IP protocol.

2. Application of the *VoIP E911 Order* to TWTC's IP PBX Trunk Service

The rules adopted in the *VoIP E911 Order* apply to "interconnected VoIP services," which are defined as services that (1) enable real-time, two-way voice communications; (2) require a broadband connection from the user's location; (3) require IP-compatible CPE; and (4) permit users to receive calls that originate on the PSTN and terminate calls to the PSTN. *VoIP E911 Order* ¶¶ 23-25. The IP trunk service offered by TWTC to PBX users might be viewed as meeting this definition because it offers customers full two-way voice capability, is generally offered over a DS1 broadband connection, requires (at least in some cases) the use of IP-compatible CPE,³ and offers full connectivity to the PSTN. Nevertheless, the *VoIP E911 Order* should not be read to apply to IP trunk service for at least three reasons.

First, in adopting the *VoIP E911 Order*, the Commission sought to fill a jurisdictional vacuum created by the *Vonage Order* that has no relevance to TWTC's IP trunk service. In the *Vonage Order*,⁴ the Commission broadly preempted state regulation of interconnected VoIP service. The states, of course, have traditionally taken primary responsibility for ensuring the delivery of 911 and E911 for landline telephone services. The broad preemption in the *Vonage Order* deprived the states of the ability to perform this function for interconnected VoIP services. The Commission adopted E911 requirements for the interconnected VoIP services in the *VoIP E911 Order* for the express purpose of filling the void created by the *Vonage Order*.⁵ TWTC, however, offers its IP trunk service pursuant to tariffs filed with the state regulatory commissions and subject to state jurisdiction. As such, TWTC's IP trunk service is subject to state 911 and E911 requirements, and TWTC has fully complied with those requirements. There is therefore no jurisdictional void to be filled for this service to ensure delivery of E911. Moreover, given that TWTC's IP trunk service is geographically fixed and virtually every (possibly every) 911 and E911 call traversing

³ Where TWTC owns and controls the IP-TDM gateway discussed above, it is not clear that it meets the requirement that the customer is utilizing IP-compatible CPE.

⁴ *Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, Memorandum Opinion and Order, 19 FCC Rcd 22404 (2004) ¶ 44 ("*Vonage Order*").

⁵ *VoIP E911 Order* ¶ 3 ("In [the *Vonage Order*] the Commission determined that Vonage's DigitalVoice service – an interconnected VoIP service – cannot be separated into interstate and intrastate communications and that this Commission has the responsibility and obligation to decide whether certain regulations apply to DigitalVoice and other IP-enabled services having similar capabilities. The *Vonage Order* also made clear that questions regarding what regulatory obligations apply to providers of such services would be addressed in the pending *IP-Enabled Services* proceeding. Today, in accord with that statement, we take critical steps to advance the goal of public safety by imposing E911 obligations on certain VoIP providers[...].").

TWTC's network originates and terminates within the same state, it is not clear how the FCC could preempt state E911 regulation for this type of service.

Second, in 2003, the Commission determined in the *E911 Scope Order*⁶ that it was inappropriate to adopt federal E911 requirements for multi-line telephone systems ("MLTS"), including PBXs, because the "unique needs and circumstances of various residential and business MLTS users" could be better served by state oversight of E911 for such services. *See E911 Scope Order* ¶ 55. The Commission expressly included IP-based MLTS services among the services subject to this ruling. *See id.* ¶ 62. The Commission did not even mention this ruling in the *VoIP E911 Order* let alone explain why it was reasonable to adopt a change of course. The most reasonable inference is that the Commission never intended that the rules adopted in the *VoIP E911 Order* would apply to IP trunk services serving customers with PBXs such as those at issue here.

Third, even if the Commission meant to apply the requirements of the *VoIP E911 Order* to IP trunk services offered to customers using PBX equipment, it has made it all but impossible for trunk providers to fully comply with those requirements. As the Commission has found, E911 can only be provided to users of telephone stations served by PBX equipment if the PBX equipment manufacturer, the PBX administrator (*i.e.*, the customer) and the transmission provider perform separate functions.⁷ Even if the provider of transmission does everything in its power to support E911, users of telephone stations served by PBX equipment will not receive full E911 service if the equipment is not designed by the manufacturer to support E911 or if the administrator fails to utilize that capability by ensuring that the

⁶ *Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems, et al.*, Report & Order and Second Further Notice of Rulemaking, 18 FCC Rcd 25360 (2003) ("*E911 Scope Order*").

⁷ As the Commission explained in the *E911 Scope Order*,

[E]ach party along the 911 path is responsible for providing a service or technical function beyond that required for non-MLTS E911 provision. First, manufacturers must provide PBXs with direct inward dialing (DID) to support MLTS signaling through such systems as Centralized Automatic Message Accounting (CAMA) or Integrated Services Digital Network (ISDN) interfaces in order to deliver the calling number identification that makes MLTS E911 possible...Assuming a MLTS operator has a MLTS-compatible PBX, any carrier involved must provide trunking and interfaces capable of transferring location information received from the MLTS. However, the MLTS operators must transmit this location data, and also must populate (and update) the ALI database to provide specific geographic cross-references to the transmitted data for the PSAP to receive. Finally, PSAPs must have the capability to receive this information."

E911 Scope Order ¶ 61.

automatic numbering information (“ANI”) transmitted by the equipment and the registered location information (for telephone stations served by the PBX) in the selective router database are accurate. But in the *VoIP E911 Order*, the Commission stated that the “rules we adopt today apply to interconnected VoIP services rather than the sale or use of IP-compatible CPE, such as an IP-PBX, that itself uses other telecommunications services or VoIP services to terminate traffic to and receive traffic from the PSTN.” *VoIP E911 Order*. n.78. By exempting those engaged in the “sale” and “use” of IP-PBXs and similar equipment, the Commission seems to have exempted PBX manufacturers and administrators from the requirements of the order. Even though providers of IP trunks are not explicitly exempted in this passage, the Commission cannot have meant to hold such transmission providers responsible for delivering E911 where the *VoIP E911 Order* itself makes it impossible as a practical matter for transmission providers to meet this obligation.

In light of these considerations, it appears that the Commission did not intend the *VoIP E911 Order* to apply to the IP trunk services TWTC offers to PBX users. Nevertheless, the issue is not entirely free from doubt. Accordingly, out of an abundance of caution, TWTC has provided below the information requested by the Enforcement Bureau in its November 7, 2005 Public Notice.

3. Information Requested by the Enforcement Bureau

911 Solution. As discussed above, and as the Commission has recognized, a provider of IP trunk services to PBX users cannot by itself ensure that telephone stations served by PBX equipment properly transmit E911 information. Nevertheless, TWTC is capable of ensuring the delivery to the appropriate public safety answering point or other appropriate 911 call recipient of the location and number information for the geographically fixed trunk it provides to the customer. This is because, when TWTC provisions IP trunk service, it assigns a billing telephone number to the trunk, and it populates all databases relevant to E911 with the geographic information associated with that telephone number. Indeed, for 100 percent of its IP trunks, TWTC’s transmits all 911 calls originating on its IP trunks to (1) the public safety answering point (“PSAP”), designated statewide default answering point, or appropriate local emergency authority that serves the trunk’s registered location; and (2) the trunk lines between the selective router and the PSAP and other transmission facilities of the wireline E911 network needed to deliver calls to the PSAP or other appropriate call recipient. TWTC is interconnected either directly or indirectly (through ILEC transmission facilities) with all selective routers serving the areas in which it offers IP trunk service as of November 28, 2005. In transmitting E911 calls, TWTC transmits the ANI and registered location for the customer locations to which its trunks interconnect with customer PBX equipment to the extent that the PSAP, designated statewide default answering point or appropriate emergency authority is capable of receiving and processing such information.

Obtaining Initial Registered Location Information. Since it first began offering its IP trunk service to PBX users, TWTC has obtained the registered location information for the customer location served by the trunk as part of the ordering and provisioning process. TWTC has obtained this information for 100 percent of the IP trunks it has sold.

