



Tentative Interim Amendment

NFPA 72[®]

National Fire Alarm and Signaling Code

2010 Edition

Reference: Chapter 3 and 29.7.8.1.5

TIA 10-3

(SC 09-8-18/TIA Log #961)

Note: Text of the TIA issued and incorporated into the text of Chapter 3 and 29.7.8.1.5 therefore no separate publication is necessary.

1. Revise 3.3.141 to read as follows:

3.3.141* Managed Facilities-based Voice Network (MFVN). A physical facilities-based network capable of transmitting real time signals with formats unchanged that is managed, operated, and maintained by the service provider to ensure service quality and reliability from the subscriber location to public switched telephone network (PSTN) interconnection points or other MFVN peer networks.

2. Add A.3.3.141 to read as follows:

A.3.3.141 Managed Facilities-based Voice Network (MFVN). Managed Facilities-based Voice Network service is functionally equivalent to traditional PSTN-based services provided by authorized common carriers (public utility telephone companies) with respect to dialing, dial plan, call completion, carriage of signals and protocols, and loop voltage treatment and provides all of the following features:

- (1) A loop start telephone circuit service interface
- (2) Pathway reliability that is assured by proactive management, operation, and maintenance by the MFVN provider
- (3) 8 hours of standby power supply capacity for MFVN communications equipment either located at the protected premises or field deployed. Industry standards followed by the authorized common carriers (public utility telephone companies), and the other communications service providers that operate MFVNs, specifically engineer the selection of the size of the batteries, or other permanently located standby power source, in order to provide 8 hours of standby power with a reasonable degree of accuracy. Of course, over time, abnormal ambient conditions and battery aging can always have a potentially adverse effect on battery capacity. The MFVN field-deployed equipment typically monitors the condition of the standby battery and signals potential battery failure to permit the communications service provider to take appropriate action.
- (4) 24 hours of standby power supply capacity for MFVN communications equipment located at the communication service provider's central office.
- (5) Installation of network equipment at the protected premises with safeguards to prevent unauthorized access to the equipment and its connections

When providing telephone service to a new customer, MFVN providers give notice to the telephone service subscriber of the need to have any connected alarm system tested by authorized fire alarm service personnel in accordance with Chapter 14 to make certain that all signal transmission features have remained operational. These features include the proper functioning of line seizure and the successful transmission of signals to the supervising station. In this way, the MFVN providers assist their new customers in complying with a testing procedure similar to that outlined in 26.2.3 for changes to providers of supervising station service.

The evolution of the deployment of telephone service has moved beyond the sole use of metallic conductors connecting a telephone subscriber's premises with the nearest telephone service provider's control and routing point (Wire Center). In the last 25 years, telephone service providers have introduced a variety of technologies to transport multiple, simultaneous telephone calls over shared communication's pathways. In order to facilitate the further development of the modernization of the telephone network, the authorized common carriers (public utility telephone companies) have transitioned their equipment into a Managed Facilities-based Voice Network (MFVN) capable of providing a variety of communications services in addition to the provision of traditional telephone service.

Similarly, the evolution of digital communications technology has permitted entities other than the authorized common carriers (public utility telephone companies) to deploy robust communications networks and offer a variety of communications services, including telephone service.

These alternate service providers fall into two broad categories. The first category includes those entities which have emulated the Managed Facilities-based Voice Network (MFVN) provided by the authorized common carriers. The second category includes those entities that offer telephone service using means that do not offer the rigorous quality assurance, operational stability, and consistent features provided by a Managed Facilities-based Voice Network.

The Code intends to only recognize the use of the telephone network transmission of alarm, supervisory, trouble, and other emergency signals by means of Managed Facilities-based Voice Networks.

For example, the Code intends to permit an MFVN to provide facilities-based telephone (voice) service that interfaces with the premises fire alarm or emergency signal control unit through a digital alarm communicator transmitter (DACT) using a loop start telephone circuit and signaling protocols fully compatible with and equivalent to those used in public switched telephone networks. The loop start telephone circuit and associated signaling can be provided through traditional copper wire telephone service (POTS—"plain old telephone service") or by means of equipment that emulates the loop start telephone circuit and associated signaling and then transmits the signals over a pathway using packet switched (IP) networks or other communications methods that are part of a Managed Facilities-based Voice Network.

Providers of Managed Facilities-based Voice Networks have disaster recovery plans to address both individual customer outages and wide spread events such as tornados, ice storms or other natural disasters, which include specific network power restoration procedures equivalent to those of traditional landline telephone services.

3. Delete the definition in 3.3.273 (but not the term) as follows:

~~**3.3.273 Switched Telephone Network.** An assembly of communications facilities and central office equipment operated jointly by authorized service providers that provides the general public with the ability to establish transmission channels via discrete dialing. (SIG-SSS)~~

4. Add a new 3.3.273.1 to read as follows:

3.3.273.1 Loop Start Telephone Circuit. A loop start telephone circuit is an analog telephone circuit that supports Loop Start Signaling as specified in either Telcordia *GR-506-CORE, LATA Switching Systems Generic*

Requirements: Signaling for Analog Interface or in Telcordia GR-909-CORE, Fiber in the Loop Systems Generic Requirements.

5. *Renumber and revise existing 3.3.273.1 to read as follows:*

3.3.273.2 Public Switched Telephone Network (PSTN). An assembly of communications equipment and telephone service providers that utilize Managed Facilities-based Voice Networks (MFVN) to provide the general public with the ability to establish communications channels via discrete dialing codes. (SIG-SSS)

6. *Contingent upon acceptance of Items 1. through 5. above, delete 29.7.8.1.5 as follows:*

~~**29.7.8.1.5** A managed facilities voice network (MFVN) shall be permitted to be connected to a DACT when the following conditions are met:~~

~~(1)*The DACT shall be connected and perform as required in 26.6.3.2.1.3.~~

~~(2) The power supply battery backup of all MFVN equipment shall be provided with 8 hours of secondary power supply capacity.~~

~~(3) The DACT test signal shall be transmitted at least monthly.~~

~~(4) The managed facilities voice network shall meet the following conditions:~~

~~(a) Manage and maintain their network to ensure end-to-end service quality and reliability.~~

~~(b) Provide a service that is functionally equivalent to PSTN-based services with respect to dialing, dial plan, call completion, carriage of alarm signals and protocols, and loop voltage treatment.~~

~~(c) Provide real time transmission of voice signals and deliver alarm formats unchanged.~~

~~(d) Preserve primary line seizure for alarm signals transmission.~~

~~(e) Have disaster recovery plans to address both individual customer outages and wide spread events such as tornados, ice storms or other natural disasters, which include specific network power restoration procedures equivalent to those of traditional landline telephone services.~~

Issue Date: August 6, 2009

Effective Date: August 26, 2009

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/codelist)