Statement of Problem and Substantiation for Public Input

The scope of this Technical Committee and this specific document are too vague and too broad and can be construed to include all aspects of Public Safety Communications. This includes many services, functions, networks, and systems outside of the receipt and dispatching of fire alarms. There are several other ANSI accredited Standards Developers (ASD) with specific expertise in these other areas. For example, IEEE develops standards for power, grounding and cabling which are well established and have been universally adopted. Similarly both TIA and ATIS have current, and developing, standards regarding NG9-1-1, IMS networks, and both legacy and IP telephony. APCO has established standards for public safety telecommunicator, manager and technician training, qualifications and essential requirements and is currently developing standards to address additional data in NG9-1-1 networks and applications and technologies, as well as training, specific to emerging systems in public safety telecommunications. All of these organizations either have published, or are working on, standards specific to their areas of expertise with which any expansion of NFPA 1221 could conflict. APCO believes that the content areas that are currently covered within 1221 could be updated, but there should be no new text in new areas, equipment, systems, or technologies outside of those specific to the Fire Service.

Expansion into new areas will most likely duplicate or conflict with other works by other ASDs as previously noted. APCO also believes that this Technical Committee and NFPA should coordinate their efforts with other ASDs to identify the proper ASD to update or develop standards designed for the broader public safety communications practice and public safety practitioners. Many of these functions occur well outside the realm of the Fire Service.

Committee Statement

Resolution: See Committee Statement for Public Input 139 on section 1.1.1 in reference to scope.
1.1.1
This standard shall cover the installation, performance, operation, and maintenance of public emergency fire services communications systems and facilities equipment.

Statement of Problem and Substantiation for Public Input

The scope of this document is too broad and does not focus on the expertise of the NFPA. The current standard includes areas that are covered by several other ANSI accredited standards bodies. In order to ensure harmonization and not duplicate standards, the scope of NFPA 1221 should be, and remain, limited to fire services facilities and functions.

Submitter Information Verification

Submitter Full Name: FRANK KIERNAN
Organization: CITY OF MERIDEN CT
Affiliation: APCO International
Street Address:  
City:  
State:  
Zip:  
Submittal Date: Mon Jul 08 10:37:53 EDT 2013

Committee Statement

Resolution: Document scope changes must be authorized and approved by the Standards Council. The TC does not feel it is necessary to petition the Standards Council to change the scope of the document at this time since the last scope change still reflects the position of the Council and the Technical Committee.
Statement of Problem and Substantiation for Public Input

standards date update

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler
Organization: GBH International
Street Address:
City: 
State: 
Zip: 
Submittal Date: Sat Jul 06 13:57:47 EDT 2013

Committee Statement

Resolution: FR-18-NFPA 1221-2013
Statement: standards date update
**New Definition**

**Alarm Data.** Digital information related to an alarm that would contain at a minimum the following key data elements:

1. Physical Location of the alarm
2. Callback number of the reporting party/system
3. Detailed explanation of emergency to include sensor or alarm types

**Statement of Problem and Substantiation for Public Input**

This is filed on behalf of the CAD TG

**Submitter Information Verification**

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<th>Submitter Full Name:</th>
<th>Gordon Vanauken</th>
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<tr>
<td>Organization:</td>
<td>Mission Critical Partners</td>
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<tr>
<td>Affiliation:</td>
<td>This is filed on behalf of the CAD TG</td>
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<td>Submittal Date:</td>
<td>Fri Jul 05 12:29:55 EDT 2013</td>
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**Committee Statement**

**Resolution:** See FR-23 created with annex material.
TITLE OF NEW CONTENT

Supervising Station. A supervising station is a commercial or proprietary facility that receives alarm and supervisory signals where personnel are in attendance at all times to receive and process alarms and signals and notify the communications center or other appropriate entity.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
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Submittal Date: Fri Jul 05 12:36:51 EDT 2013

Committee Statement

Resolution: FR-27-NFPA 1221-2013
Statement: New definition after Stored Emergency Power Supply Systems and before Supervisor. This definition has been added because the term is used in the standard.
Public Input No. 7-NFPA 1221-2013 [ Section No. 3.3.1 ]

3.3.1 Alarm. A signal or message from a person or device indicating the existence of an emergency or other situation that requires action. One of several types of emergency calls that may be received at a PSAP that may require response by an emergency response agency.

Statement of Problem and Substantiation for Public Input

The term alarm is confusing in the context of calls received by the public safety answering point (PSAP). While the term alarm is understandable in reference to one type of emergency call that may be received by a PSAP, the term Emergency Call is more universal in this context. Reference the National Emergency Number Association (NENA) Master Glossary of 9-1-1 Terminology definition of Emergency Call. The NENA Master Glossary of 9-1-1 Terminology can be obtained here: http://www.nena.org/?page=Glossary

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
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Submittal Date: Mon Jul 01 09:29:18 EDT 2013

Committee Statement

Resolution: Proposed new definition of alarm is already covered with the current definition of alarm. The current definition reflects the intent of the TC.
Public Input No. 84-NFPA 1221-2013 [Section No. 3.3.2]

3.3.2 Alert Data Message (ADM).
An analog or digital signal containing instructions for how a public alerting system alerting appliance (PASAA) is to deliver and, if capable, to acknowledge a public alert.

ANNEX
Detailed information could include automatic crash detection information, wireless 9-1-1 carrier information, automatic location information (9-1-1), unit status information, notes entered by a Telecommunicator, Intelligent Transportation Systems, SMART Building Management Systems, pre-fire/pre-incident software systems, and so forth. Sensor or alarm types should be provided such as fire pull box or smoke alarm or door sensor or panic button.

Statement of Problem and Substantiation for Public Input
This is filed on behalf of the CAD TG

Submitter Information Verification
Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 13:47:46 EDT 2013

Committee Statement
Resolution: ADM is specific to IPAWS and not the annex material provided with the public input.
3.3.4. Alternate Communications Center.
A designated communications center capable of assuming the functions normally performed at the primary communications center.

A.3.3.4 An alternate communications center is usually remotely located and its operation does not depend on the continued functioning of equipment at the primary communications center.

Statement of Problem and Substantiation for Public Input

The second sentence in this definition is not really part of the definition but an explanation which should be annex material. If the committee believes that it is an instruction that needs to be enforced it needs to be moved from chapter 3 (which cannot be enforced) to some other part of the standard.

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler
Organization: GBH International
Street Address:
City:
State:
Zip:
Submittal Date: Sat Jul 06 14:04:40 EDT 2013

Committee Statement

Resolution: FR-14-NFPA 1221-2013
Statement: This material is covered in 4.1.5.4 under mandatory language.
Public Input No. 8-NFPA 1221-2013 [Section No. 3.3.6]

3.3.6 Band.
A range of frequencies between two definite limits.

Statement of Problem and Substantiation for Public Input

While the limits of a band are definite for a given system, band requirements may change as they relate to specific systems. The term definite gives the indication that bands are fixed limits of the radio frequency spectrum, while in practice, bands may be defined or redefined as needed or appropriate. “Defined” may be a better term in this instance.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jul 01 09:38:44 EDT 2013

Committee Statement

Resolution: FR-15-NFPA 1221-2013
Statement: While the limits of a band are definite for a given system, band requirements may change as they relate to specific systems. The term definite gives the indication that bands are fixed limits of the radio frequency spectrum, while in practice, bands may be defined or redefined as needed or appropriate. “Defined” may be a better term in this instance.
3.3.7 Base Station.
A stationary radio transceiver with an integral AC power supply or power supply module.

Statement of Problem and Substantiation for Public Input
Base station radios may be ordered for use with either AC or DC power capability. The decision to use AC or DC power can be based on one of several factors and is left to the system designer.

Submitter Information Verification
Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
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Zip:
Submittal Date: Mon Jul 01 09:56:44 EDT 2013

Committee Statement
Resolution: FR-16-NFPA 1221-2013
Statement: Base station radios may be ordered for use with either AC or DC power capability. The decision to use AC or DC power can be based on one of several factors and is left to the system designer.
3.3.13 Channel Access Time.
The time lapse from activation of a radio transmitter’s push-to-talk (PTT) switch to the receiving unit’s speaker emitting audio, an acknowledgement from the system and commencement of transmission.

Statement of Problem and Substantiation for Public Input

The current definition is more applicable to “transmission time”. The proposed change specifically defines the portion of "channel access time" as part of the overall transmission time.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
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Street Address: 
City: 
State: 
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Submittal Date: Mon Jul 01 10:14:06 EDT 2013

Committee Statement

Resolution: FR-17-NFPA 1221-2013
Statement: The current definition is more applicable to “transmission time”. The proposed change specifically defines the portion of "channel access time" as part of the overall transmission time.
Distributed Denial of Service (DDoS) Attack
An attack on a computer system or network from multiple sources with the objective of causing a loss of service to some or all users, by saturating the system or network with useless traffic, making it impossible for legitimate user of the system to use the facility. A DDoS attack is typically harder to detect and counter than a DoS attack.

Statement of Problem and Substantiation for Public Input
Recommending adding this definition to clarify and distinguish between a Denial of Service (DoS) attack and the distributed denial of service attack (DDoS).

Submitter Information Verification
Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jul 01 10:21:48 EDT 2013

Committee Statement
Resolution: This term does not currently appear anywhere in the document.
3.3.26 Denial of Service Attack.
An attack on a computer system or network from a single source, with the objective of causing a loss of service to some or all users, by saturating the system or network with useless traffic, making it impossible for legitimate users of the system to use the facility.

Statement of Problem and Substantiation for Public Input

Recommend that this definition be modified to differentiate between a DoS attack and a DDoS attack. The advent of distributed denial of service (DDoS) attacks drives the need to redefined a DoS attack from a single user and add a definition for a DDoS attack.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jul 01 10:18:35 EDT 2013

Committee Statement

Resolution: The current definition already includes this material in its current form.
Public Input No. 10-NFPA 1221-2013 [New Section after 3.3.35]

Emergency Call
A signal, alarm, text message, video message or verbal communications from a person or device indicating the existence of an emergency or situation that requires action by an emergency response agency.

Statement of Problem and Substantiation for Public Input

The term "Alarm" as used in this standard, is confusing in the context of calls received at the PSAP. The term "Emergency Call" is more encompassing in the context of calls, alarms, video information, text information, signals and alarms received at a PSAP. The term "Emergency Call" is more recognizable in context and in use by the PSAP community at large. The term "Emergency Call" is supported and recognized by the 9-1-1 industry. Reference the National Emergency Number Association (NENA) Master Glossary of 9-1-1 Terminology definition of "Emergency Call". The NENA Master Glossary of 9-1-1 Terminology can be obtained here: http://www.nena.org/?page=Glossary

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:  
City:  
State:  
Zip:  
Submittal Date: Mon Jul 01 10:05:24 EDT 2013

Committee Statement

Resolution: The current definition of alarm meets the intent of the committee and includes the items proposed in this new definition.
Engine Generator
A machine that consists of a generator driven by an internal combustion engine using a fuel source such as diesel or natural gas.

Statement of Problem and Substantiation for Public Input

Suggest that this definition be added or clarified. Paragraph 3.3.51 defines “motor-generator” however there is no definition for engine-generator in NFPA 1221 or NFPA 110. The addition of “engine-generator” may be helpful in clarifying the difference between the types of generators.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
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Submittal Date: Mon Jul 01 10:11:25 EDT 2013

Committee Statement

Resolution: The term "engine generator" does not exist in the standard.
Public Input No. 115-NFPA 1221-2013 [ New Section after 3.3.42 ]

Laptop
A portable, usually battery-powered microcomputer small enough to rest on the user’s lap.

Statement of Problem and Substantiation for Public Input

New Material

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Sun Jul 07 19:22:02 EDT 2013

Committee Statement

Resolution: The term laptop is not in the standard.
Machine-to-Machine (M2M)
Communications among devices without requiring human intervention (e.g.: telematics)

Statement of Problem and Substantiation for Public Input

The use of telematics (e.g. GPS, vehicle tracking, automated call from vehicle) for automated information transfer to a PSAP, the machine-to-machine interface must be included in the discussion of emergency calls being transmitted to a PSAP. This definition is added to provide a definition for M2M that may be added to certain sections of the document.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jul 01 10:52:47 EDT 2013

Committee Statement

Resolution: The proposed term does not appear in the standard.
3.3.71 Remote Communications Facility.
A normally unattended facility, remote from the communications center that is used to house equipment necessary for the functioning of a communications system. The remote communications facility may be: immediately adjacent to; separate from, but on the same property; or geographically remote from the building or campus housing the communications center.

Statement of Problem and Substantiation for Public Input

Recommend adding this definition to clarify the meaning of remote facility. Some may consider a remote facility only as geographically remote. The distinctions: 'immediately adjacent; separate from but on the same property; and remote from the building or campus' may help clarify that a remote facility can be local to the communications center.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jul 01 11:12:32 EDT 2013

Committee Statement

Resolution: The proposed language contradicts existing mandatory language in the standard.
**Smartphone**
A mobile phone built on a mobile operating system, with more advanced computing capability and connectivity than a feature phone.

**Statement of Problem and Substantiation for Public Input**
New text

**Submitter Information Verification**
- **Submitter Full Name:** Charles Berdan
- **Organization:** Alameda County Regional Emerge
- **Affiliation:** NFPA 1221 Technical Committee Technology Task Group
- **Street Address:**
- **City:**
- **State:**
- **Zip:**
- **Submittal Date:** Sun Jul 07 19:17:17 EDT 2013

**Committee Statement**
- **Resolution:** The term is not referenced in the document.
Public Input No. 114-NFPA 1221-2013 [ New Section after 3.3.78 ]

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<th>Tablet</th>
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<td>A one-piece mobile computer.</td>
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</table>

Statement of Problem and Substantiation for Public Input

New material

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:19:49 EDT 2013

Committee Statement

Resolution: This term is not referenced in the current document.
Transmission Equipment
Telephone, data or radio wireless network system equipment for transmitting and receiving digital and analog signals as part of the Communications System.

Statement of Problem and Substantiation for Public Input
Recommend that this definition be added to clarify terms used but not defined. Paragraph 3.3.48 uses the term "transmission equipment" however there is no specific definition given.

Submitter Information Verification
Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jul 01 11:09:25 EDT 2013

Committee Statement
Resolution: The term is not used in the mandatory or annex language.
3.3.87 Two-Way Alphanumeric Devices.
Used as a part of a radio alerting system, paging transceivers that provide an audible alert and a text message to the user and that have the ability to acknowledge messages received back to the control point. They do not have the ability to provide voice messages.

Statement of Problem and Substantiation for Public Input
The second sentence in this definition is not really part of the definition but an explanation which should be annex material. If the committee believes that it is an instruction that needs to be enforced it needs to be moved from chapter 3 (which cannot be enforced) to some other part of the standard.

Submitter Information Verification
Submitter Full Name: Marcelo Hirschler
Organization: GBH International
Street Address:
City:
State:
Zip:
Submittal Date: Sat Jul 06 14:08:32 EDT 2013

Committee Statement
Resolution: FR-25-NFPA 1221-2013
Statement: The second sentence in this definition is not really part of the definition but an explanation which should be annex material. This statement will moved to become new annex material as “Two-way alphanumeric devices do not have the ability to provide voice messages.”
3.3.89 Voice Communication Channel.
A single path for communication by spoken word that is distinct from other parallel paths, other circuits for communications. The Voice Communications Channel may be physically switched as with wired circuits; wireless as in radio channels, or virtually switched as in circuits created for Voice Over IP (VoIP) network based circuits.

Statement of Problem and Substantiation for Public Input

Voice communications channel may take on a variety of configurations using current and future technologies. The term "path" and "parallel paths" used in the existing definition seems to limit itself to definition of older technologies.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
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Submittal Date: Mon Jul 01 11:15:28 EDT 2013

Committee Statement

Resolution: FR-26-NFPA 1221-2013
Statement: Voice communications channel may take on a variety of configurations using current and future technologies. The term "path" and "parallel paths" used in the existing definition seems to limit itself to definition of older technologies.
Public Input No. 19-NFPA 1221-2013 [ New Section after 4.1.5 ]

Redundant and Diverse Path Telecommunications Service Entrances.
Each Center shall be designed to accept communications circuits from two separate sources (providers) through two distinctly diverse pathways entering the facility. The current and future ability to connect the communications centers to redundant service providers and/or central offices across diverse communications circuits on diverse pathways shall be considered when selecting sites for emergency communications facilities.

Statement of Problem and Substantiation for Public Input

A recognized industry practice for emergency communications centers and PSAPs is to receive circuits through two separate feeds from the service provider and whenever possible, the facility should be located to receive circuits from two separate central offices or two different service providers. Provisions under this section should include raceways from opposite or adjacent sides of the building to different site property lines. Raceways should be coordinated with current, planned and projected service provider facilities.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jul 01 12:57:45 EDT 2013

Committee Statement

Resolution: This requirement is already covered in section 8.4.3.1.
Public Input No. 96-NFPA 1221-2013 [ Section No. 4.3.6 ]

4.3.6
The exposed surfaces of interior walls and ceilings shall have a flame spread rating index of 25 or less and a smoke development rating index of 50 or less when tested in accordance with ASTM E 84, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

Statement of Problem and Substantiation for Public Input

Editorial change, to use the correct terminology

Submitter Information Verification

<table>
<thead>
<tr>
<th>Submitter Full Name:</th>
<th>Marcelo Hirschler</th>
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Submittal Date: Sat Jul 06 13:59:34 EDT 2013

Committee Statement

Resolution: FR-2-NFPA 1221-2013

Statement: Editorial change, to use the correct terminology
Public Input No. 4-NFPA 1221-2013 [ Section No. 4.3.9 ]

4.3.9

The communications center, or that portion of a building to be utilized as a communications center, shall be protected against seismic damage in accordance with NFPA 5000, or the building code legally in effect, whichever is more restrictive.

Statement of Problem and Substantiation for Public Input

Technical Committee Discussion issues pertained to:
- What if a communications center is added to another facility after the fact
- What if the communications center constitutes only a portion of a larger, multi-use building
- If another building code/standard were more restrictive, suggested language would still be inclusive

Submitter Information Verification

Submitter Full Name: Christopher Lombard
Organization: Seattle Fire Department
Street Address:
City:
State:
Zip:
Submittal Date: Thu Jun 27 16:58:27 EDT 2013

Committee Statement

Resolution: Please see FR created on section 4.3.9 in reference to submitted public input.
Public Input No. 20-NFPA 1221-2013 [ Section No. 4.6.4 ]

4.6.4 Where a communications center has direct exterior windows, the requirements of 4.6.4.1 through 4.6.4.5 shall apply.

4.6.4.1 Windows sills on all direct exterior windows shall be a minimum of 4 ft (1.2 m) above floor level or 4 ft (1.2 m) above finished grade whichever is higher.

4.6.4.2 Direct exterior windows shall be rated for bullet resistance to Level 4 as defined in ANSI/UL 752.

4.6.4.3 Direct exterior windows that are not bullet resistant shall be permitted, provided that they face a secured area that cannot be accessed or viewed from outside the secured perimeter of the communications center.

4.6.4.4 Direct exterior windows that are required to be bullet resistant shall be configured so that they cannot be opened.

4.6.4.5 Exterior direct exterior windows shall be arranged so that it is not possible to view the interior of the communications center from outside the secured perimeter.

Statement of Problem and Substantiation for Public Input

The term “direct exterior windows” is defined (3.3.28) but does not appear to be used in the Standard. Recommend this revision to align the wording of the document with the definitions to increase clarity.

Regarding changes to 4.6.4.1, in an instance where a floor level is partially or fully below grade with a direct exterior window, the window sill must be raised to be 4 foot above finished grade in order to afford the security intended by the requirement for the window sill to be at 4 foot above finished floor.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jul 01 13:11:02 EDT 2013

Committee Statement

Resolution: PI is adopted as a FR. See FR on section 4.6.4.
4.7.7 * Isolated Single-Point Facility Grounding System.
Telecommunications equipment, two-way radio systems, computers, and other electronic equipment determined by the AHJ to be essential to the operation of the communications center shall be connected to an isolated grounding bonded to the facility single point technical ground system in accordance with NFPA 70 Article 647. and industry best practices.

Statement of Problem and Substantiation for Public Input

One source of industry best practices is the Motorola R-56 Standards and Guidelines for Communications Sites. PSAPs, Emergency Operations centers and other emergency communications centers are equipped with extensive technical grounding (earthing) systems to minimize potential between communications circuits, signaling circuits and the electrical systems that power them. The use of isolated ground electrical circuits can cause a difference of potential between the power ground and the technical ground system. The use of local power system ground reduces the possibility/probability of difference in potential between the power ground and technical ground at any point in the system, therefore reducing potential noise and current between the power and technical ground on communications equipment. The Motorola R-56 Standards and Guidelines for Communications Sites is one industry standard used throughout the emergency communications industry for proper grounding (earthing) of emergency communications sites. A copy of the Motorola R-56 Standard can be obtained from Motorola Solutions.

Reference Motorola R-56 paragraph 5.8.3.1 Equipotential Grounding (Earthing) of the Network Operator Position and Paragraph 6.2.10 Receptacles for recommendations against the use of isolated ground circuits for emergency communications telecommunicator positions and equipment.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jul 01 14:20:06 EDT 2013

Committee Statement

Resolution: See FR created by TC on section 4.7.7 in reference to this Public Input.
4.7.8.5

The UPS shall be a Level 1 or Level 2 shall meet the SEPSS requirement for Level 1, as defined by NFPA 111, as directed by the AHJ.

Statement of Problem and Substantiation for Public Input

Proposed language was based on Technical Committee discussion:
- Concerns were discussed regarding the difference between Level 1 and Level 2 systems, their reporting/alerting differences, their testing requirements, use in/with other building systems, etc.

Submitter Information Verification

Submitter Full Name: Christopher Lombard
Organization: Seattle Fire Department
Street Address:
City:
State:
Zip:
Submittal Date: Thu Jun 27 17:07:46 EDT 2013

Committee Statement

Resolution: FR-6-NFPA 1221-2013
Statement: Proposed language was based on Technical Committee discussion:

TC believes Level 1 is acceptable as a requirement, Level 2 does not address concerns on reporting/alerting, testing requirements, use in/with other building systems, etc.
Public Input No. 22-NFPA 1221-2013 [ New Section after 4.8 ]

Redundant Telecommunications Services

Communications Centers shall be provided with redundant communications circuits from diverse service providers and/or central offices across diverse paths whenever it is practicable to do so. When the installation of redundant communications circuits from diverse service providers and/or central offices is not practicable, the communications center shall coordinate with all local service providers to connect to redundant circuits on diverse paths as soon as it is practicable.

Statement of Problem and Substantiation for Public Input

A recognized industry practice for emergency communications centers and PSAPs is to receive circuits through two separate feeds from the service provider and whenever possible, the facility should be located to receive circuits from two separate central offices or two different service providers. Provisions under this section should include service provider’s service entrance cable installed from diverse paths, from different property lines, through opposite or adjacent sides of the building to the telephone demarcation point or points within hardened areas of the building. Circuits to serve communications centers within larger buildings; or where a communications center in an existing building that cannot be fully hardened should be terminated at different demarcation points and extended to the main equipment room through separate cables along diverse paths.

Circuits, cabling and connections should be coordinated with current, planned and projected service provider facilities. In rural communications and PSAPs, wireless communications systems (radio and microwave) may be suitable for a second source of service. Suburban and urban communications centers and PSAPs should be designed with redundant communications services provided over diverse paths, preferably over fiber optic cable from the service provider(s).

Related Public Inputs for This Document

<table>
<thead>
<tr>
<th>Related Input</th>
<th>Relationship</th>
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<tbody>
<tr>
<td>Public Input No. 19-NFPA 1221-2013 [New Section after 4.1.5]</td>
<td>Common requirements</td>
</tr>
</tbody>
</table>

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND  
Organization: MISSION CRITICAL PARTNERS  
Street Address:  
City:  
State:  
Zip:  
Submittal Date: Mon Jul 01 14:51:45 EDT 2013

Committee Statement

Resolution: Section requirement is already covered by section 8.4.3.1.
4.10.3.6*
The exposed surfaces of walls and ceilings inside a remote communications facility shall have a flame spread rating index of 25 or less and a smoke development rating index of 50 or less when tested in accordance with ASTM E 84.

Statement of Problem and Substantiation for Public Input
editorial change

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler
Organization: GBH International
Street Address:
City:
State:
Zip:
Submittal Date: Sat Jul 06 14:00:58 EDT 2013

Committee Statement

Resolution: FR-7-NFPA 1221-2013
Statement: Editorial change.
Public Input No. 23-NFPA 1221-2013 [Section No. 4.10.7.8]

4.10.7.8 * Isolated Single-Point Facility Grounding System

Telecommunications equipment, two-way radio systems, computers, and other electronic equipment determined by the AHJ to be essential to the operation of the remote communications facility shall be connected to an isolated grounding system in accordance with NFPA 70, Article 647, and best industry practices.

Statement of Problem and Substantiation for Public Input

One source of industry best practices is the Motorola R-56 Standards and Guidelines for Communications Sites. PSAPs, Emergency Operations centers and other emergency communications centers are equipped with extensive technical grounding (earthing) systems to minimize potential between communications circuits, signaling circuits and the electrical systems that power them. The use of isolated ground electrical circuits can cause a difference of potential between the power ground and the technical ground system. The use of local power system ground reduces the possibility/probability of difference in potential between the power ground and technical ground at any point in the system, therefore reducing potential noise and current between the power and technical ground on communications equipment. The Motorola R-56 Standards and Guidelines for Communications Sites is one industry standard used throughout the emergency communications industry for proper grounding (earthing) of emergency communications sites. A copy of the Motorola R-56 Standard can be obtained from Motorola Solutions.

Reference Motorola R-56 paragraph 5.8.3.1 Equipotential Grounding (Earthing) of the Network Operator Position and Paragraph 6.2.10 Receptacles for recommendations against the use of isolated ground circuits for emergency communications telecommunicator positions and equipment.

Related Public Inputs for This Document

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<td>Public Input No. 21-NFPA 1221-2013 [Section No. 4.7.7]</td>
<td>Common requirements</td>
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</tbody>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jul 01 14:57:07 EDT 2013

Committee Statement

Resolution: FR-8-NFPA 1221-2013
Statement: Reflect recent changes in the NEC.
4.10.8 Provision for Redundant and Diverse Telecommunications Services

Where a remote communications facility is deemed critical to continued operations of an emergency communications system, the remote communications facility shall be designed to accept communications circuits from two separate sources (providers) through two distinctly diverse pathways entering the facility. The current and future ability to connect the communications centers to redundant service providers and/or central offices across diverse communications circuits on diverse pathways shall be considered when selecting sites for remote communications facilities.

4.10.8.1 Redundant Telecommunications Services

Where a remote communications facility is deemed critical to the continued operation of an emergency communications system, the remote communications facility shall be provided with redundant communications circuits from diverse service providers and/or central offices across diverse paths shall be provided whenever it is practicable to do so. When it is not practicable, the communications center shall coordinate with all local service providers to connect to redundant circuits on diverse paths as soon as it is practicable.

Statement of Problem and Substantiation for Public Input

4.10.8 A recognized industry practice for emergency communications centers and PSAPs is to receive circuits through two separate feeds from the service provider and whenever possible, the facility should be sited to receive circuits from two separate central offices or two different service providers. Provisions under this section should include raceways from opposite or adjacent sides of the building to different site property lines. Raceways should be coordinated with current, planned and projected service provider facilities.

4.10.8.1 Provisions under this section should include service provider’s service entrance cable installed from diverse paths, from different property lines, through opposite or adjacent sides of the building to the telephone demarcation point. Circuits, cabling and connections should be coordinated with current, planned and projected service provider facilities. Remote communications facilities should be designed with redundant communications services provided over diverse paths, preferably over fiber optic cable from the service provider(s).

Related Public Inputs for This Document

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<tr>
<th>Related Input</th>
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<tr>
<td>Public Input No. 22-NFPA 1221-2013 [New Section after 4.8]</td>
<td>Common Requirements</td>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jul 01 15:02:29 EDT 2013

Committee Statement

Resolution: Redundancy is already covered as part of section 8.4.3.1.
5.1.3.1
Alternate communications centers shall comply with the requirements of Chapter 4.

Statement of Problem and Substantiation for Public Input

This requirement appears to be stand alone and not subordinate to 5.1.3 as numbered. Revising number to 5.1.4, allowing the requirement to stand alone seems to make more sense in context.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 08:10:15 EDT 2013

Committee Statement

Resolution: The technical committee believes this section does not need to become a standalone section.
5.1.9 Redundant Telecommunications Services

Redundant telecommunications services shall be delivered by the service provider, through separate and diversely routed underground conduits to the building entrance points. At least one of the underground conduits shall enter the building within the hardened area of the facility. Where the communications circuits must be extended from the building entrance to the demarcation point through a non-hardened area of the building, the cables shall be installed through rigid metal conduit.

5.1.9.1 Provide redundant communications circuits along diverse paths from the building entrance point to the point of demarcation within the equipment room. The communications service provider demarcation point shall be wall mounted or rack mounted within the equipment room unless otherwise directed by the AHJ. Where the communications demarcation point and equipment is not installed in the equipment room due to security or space limitations, the service provider's demarcation point and equipment shall be located in a room immediately adjacent to the equipment room.

5.1.9.2 The service provider’s demarcation point shall be contained in a secured area and terminated in such a manner as to protect the connections from intentional or incidental disconnection. The service provider's demarcation point shall be labeled as “Emergency Communications Circuits”.

Statement of Problem and Substantiation for Public Input

A recognized industry practice for emergency communications centers and PSAPs is to receive circuits through two separate feeds from the service provider and whenever possible, the facility should be sited to receive circuits from two separate central offices or two different service providers. Provisions under this section should include raceways from opposite or adjacent sides of the building to different site property lines. Raceways should be coordinated with current, planned and projected service provider facilities.

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<tbody>
<tr>
<td>Public Input No. 22-NFPA 1221-2013 [New Section after 4.8]</td>
<td>Common requirements</td>
</tr>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: City:
State:
Zip: Submittal Date: Tue Jul 02 08:12:56 EDT 2013

Committee Statement

Resolution: Redundancy is already covered under section 8.4.3.1.
5.3.6 Cable joints. Cable splices shall be made to provide and maintain conductivity, optical continuity for fiber-optic cable insulation, and protection that is at least equal to low-loss continuity in copper pairs and low-loss/low-reflectance optical continuity in fiber optic strands. Cable splices shall be housed in splice cases/enclosures providing protection that is equal to or greater than that afforded by the cable insulation of the cables that are joined.

Statement of Problem and Substantiation for Public Input

Revise "joints" to "splices" in keeping with other paragraphs in this section and with industry terminology. The original text “optical continuity for fiber-optic cable insulation,” does not make sense technically or in context. Recommend revising the text to clarify the intent of the requirement.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 08:19:49 EDT 2013

Committee Statement

Resolution: The TC feels this goes beyond the requirements of a minimum standard and sets overly specific requirements.
5.3.7

Cable ends. End caps of all splice enclosures shall be sealed against moisture. Provide reenterable encapsulant in all underground splice cases. Cable ends for future splicing or termination shall be sealed against moisture.

Statement of Problem and Substantiation for Public Input

Cable ends in splice applications when properly installed shall always be secured and protected from moisture through the entrance to the splice cases. Cables coiled and stored for future splicing or termination shall be sealed against moisture with an end cap and sealant. Not certain of the original intent of this sentence.

Related Public Inputs for This Document

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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 08:24:26 EDT 2013

Committee Statement

Resolution: The TC feels this goes beyond the requirements for a minimum standard and is overly specific.
5.3.8.2

Such cables shall be buried at least 24 in. (609 mm) deep, and where crossing streets or other areas likely to be opened for other underground construction, such cables shall be in duct installed through solid wall duct or conduit. A detectable warning tape shall be buried at 12 in. (304 mm) deep above all direct buried cables.

Statement of Problem and Substantiation for Public Input

Recommend that the current sentence be modified for clarity and adding the requirement for detectable warning tape. Detectable warning tape installed during backfill over a direct buried fiber cable is an important factor minimizing the potential for damage to underground utilities. These additions better align the requirement with best industry practices.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 09:53:12 EDT 2013

Committee Statement

Resolution: FR-34-NFPA 1221-2013
Statement: The current section has been modified for clarity and to better align the requirement with the manual of style. Adding the requirement for detectable warning tape is an important factor minimizing the potential for damage to underground utilities.
5.4.8 Leads down. Aerial cables extending down poles shall comply with 5.4.8.1 through 5.4.8.4.

5.4.8.1 Leads down. Aerial cables extending down poles shall be protected against mechanical damage.

5.4.8.2 Any metallic protective covering of the leads shall the aerial cables extending down pole(s) shall form a continuous conducting path to earth ground.

5.4.8.3 The installation shall prevent water from entering the conduit.

5.4.8.4 Leads shall. Aerial cables extending down poles shall have 600-volt insulation that is approved for wet locations, as defined in NFPA 70.

Statement of Problem and Substantiation for Public Input

Recommend that the text be changed to clarify and to agree with similar wording used in this section. "Leads" is not defined or otherwise used in this section.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
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Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 10:12:55 EDT 2013

Committee Statement

Resolution: FR-35-NFPA 1221-2013
Statement: The text has been changed to clarify and to agree with similar wording used in this section. "Leads" is not defined or otherwise used in this section.
5.5.3
Wire, conductors, and metallic and fiber-optic cables shall have an approved insulation that is flame retardant and moisture resistant in accordance with NFPA 70, National Electrical Code.

Statement of Problem and Substantiation for Public Input

Recommend that this sentence be modified to align with existing requirements in the NFPA 70 requirements. The specific requirements for wire, conductors and cables are covered in the NFPA 70. A reference to NFPA 70 and general and if needed, Articles 708, 760, 770 and 800 specifically seems more appropriate than "fire retardant and moisture resistant". Also, the term "moisture resistant" is not defined in the documents and may be open to interpretation.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 10:18:08 EDT 2013

Committee Statement

Resolution: FR-36-NFPA 1221-2013
Statement: This section has been modified to align with existing requirements in the NFPA 70 requirements. The specific requirements for wire, conductors and cables are covered in the NFPA 70. The term "moisture resistant" is not defined in the documents and may be open to interpretation.
Public Input No. 32-NFPA 1221-2013 [Section No. 5.5.4]

5.5.4

The insulation or other outer covering, cable sheath or jacket for wire, conductors, and fiber-optic cables shall have an approved insulation that is fire retardant and moisture resistant in accordance with NFPA 70.

Statement of Problem and Substantiation for Public Input

Recommend that this sentence be modified to align with the requirements of the NFPA 70. The specific requirements for wire, conductors and cables are covered in the NFPA 70. A reference to NFPA 70 and general and if needed, Articles 708, 760, 770 and 800 specifically seems more appropriate than “fire retardant and moisture resistant”. Also, the term “moisture resistant” is not defined in the documents and may be open to interpretation. The terms cable sheath and jacket have replaced “outer covering” to be in agreement with the wording of Articles 770 and 800 of NFPA 70.

Related Public Inputs for This Document

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</table>

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 10:21:21 EDT 2013

Committee Statement

Resolution: FR-37-NFPA 1221-2013
Statement: This section has been modified to align with the requirements of the NFPA 70. The specific requirements for wire, conductors and cables are covered in the NFPA 70. The term “moisture resistant” is not defined in the documents and may be open to interpretation. The terms cable sheath and jacket have replaced “outer covering” to be in agreement with the wording of Articles 770 and 800 of NFPA 70.
5.5.6 Conductors that are bunched together in a vertical run and cables that are installed in a vertical riser that connects two or more floors shall have a flame-retardant covering to prevent the spread of fire from floor to floor meet or exceed the requirements of Riser rated cable and installation in accordance with NFPA 70.

Statement of Problem and Substantiation for Public Input

The specific requirements for wire, conductors and cables are covered in the NFPA 70. A reference to NFPA 70 and general and if needed, Articles 770 and 800 specifically seems more appropriate than “fire retardant covering”. The terms "bunched together" and "vertical run" have been modified in keeping with the language in NFPA 70 and other telecommunications industry standards.

Related Public Inputs for This Document

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<td>Public Input No. 32-NFPA 1221-2013 [Section No. 5.5.4]</td>
<td>Common requirements</td>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 10:23:35 EDT 2013

Committee Statement

Resolution: FR-38-NFPA 1221-2013
Statement: The specific requirements for wire, conductors and cables are covered in the NFPA 70. The terms "bunched together" and "vertical run" have been modified in keeping with the language in NFPA 70.
5.5.7 – The requirement of 5.5.6 shall not apply if the conductors are in metallic conduit or are located in a fire-resistive shaft with firestops at each floor.

Statement of Problem and Substantiation for Public Input

Recommend deleting this sentence. Some jurisdictions may require fire retardant cable in risers even when the cables are in conduit; the shafts are fire resistive and fire stops are installed. By modifying the text of 5.5.3, 5.5.4, 5.5.6, et al, to incorporate the requirements of NFPA 70 by reference, this sentence is not required.

Related Public Inputs for This Document

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<tr>
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<td>Common requirements</td>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 10:27:24 EDT 2013

Committee Statement

Resolution: FR-1-NFPA 1221-2013
Statement: Recommend deleting this sentence. Some jurisdictions may require fire retardant cable in risers even when the cables are in conduit; the shafts are fire resistive and fire stops are installed. By modifying the text of 5.5.3, 5.5.4, 5.5.6, et al, to incorporate the requirements of NFPA 70 by reference, this sentence is not required.
5.5.8 Metallic and fiber-optic cable terminals and cross-connecting facilities serving the equipment room and operations room shall be located either in or the equipment room adjacent to the operations room. Metallic and fiber-optic terminals and cross connect facilities for areas other than the equipment room and operations room may originate in other telecommunications spaces.

Statement of Problem and Substantiation for Public Input

Building size and arrangement may require cables serving administrative or non-essential areas of the Communications Center to originate from telecommunications spaces other than the equipment room in order to keep cables below the maximum length required by the ANSI/TIA-568 Standards documents.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
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Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 10:32:57 EDT 2013

Committee Statement

Resolution: The existing requirement satisfactorily addresses the problem statement in the public input.
5.5.9 –
At the communications center, metallic and fiber-optic cable terminals and cross-connecting facilities shall be located either in or adjacent to the operations room.

Statement of Problem and Substantiation for Public Input

The statements made in 5.5.8, made without the modifier “At the communications center” are inclusive of all wiring inside buildings. The recommended modification to 5.5.8, if accepted, render this sentence redundant.

Related Public Inputs for This Document

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<tr>
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<tr>
<td>Public Input No. 35-NFPA 1221-2013 [Section No. 5.5.8]</td>
<td>Accepting Section No. 5.5.8 negates the need for this Section.</td>
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</table>

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 10:35:15 EDT 2013

Committee Statement

Resolution: This action was not taken based on the action of the committee taken on Public Input 35 for the previous section. This section is to remain as is.
### Public Input No. 37-NFPA 1221-2013 [Section No. 5.6.1.1]

#### 5.6.1.1

All surge arresters shall be connected to earth ground, the single point facility ground, in accordance with NFPA 70 and best industry practices.

### Statement of Problem and Substantiation for Public Input

Emergency communications facilities require a more stringent requirement for grounding systems than the electrical safety ground produced by following the requirements of the NFPA 70. A minimum earth reference requirement of 10 ohms (with preference for 5 ohms) is required to adequately protect sensitive emergency communications equipment and the people that work with the equipment.

One source of industry best practices is the Motorola R-56 Standards and Guidelines for Communications Sites. The facility single point ground system shall be designed and installed in accordance with the applicable sections of the Motorola R-56, providing a maximum 10 ohm earth reference, and as otherwise coordinated with and required by the AHJ.

A copy of the Motorola R-56 Standard can be obtained from Motorola Solutions.

The Motorola R-56 provides an accepted industry standard for the stringent grounding (earthing) required to protect the equipment and those that operate it. The combined requirements of NFPA 70 and the Motorola R-56 grounding requirements/recommendations provide a strong foundation for the electrical power and equipment safety for an emergency communications facility.

### Related Public Inputs for This Document

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### Submitter Information Verification

<table>
<thead>
<tr>
<th>Submitter Full Name: DAVID HAMMOND</th>
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<tbody>
<tr>
<td>Organization: MISSION CRITICAL PARTNERS</td>
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<td>Street Address:</td>
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<td>Submittal Date: Tue Jul 02 10:37:51 EDT 2013</td>
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### Committee Statement

<table>
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<tr>
<th>Resolution: FR-39-NFPA 1221-2013</th>
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<tbody>
<tr>
<td>Statement: Section has been changed to comply with changes in NFPA 70.</td>
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</table>
Public Input No. 38-NFPA 1221-2013 [Section No. 5.8.1]

5.8.1 *

Sensitive electronic equipment determined by the AHJ to be essential to the operation of telecommunications and dispatching systems shall be grounded and bonded to a single point facility ground in accordance with NFPA 70, Article 647, and best industry practices.

Statement of Problem and Substantiation for Public Input

Emergency communications facilities require a more stringent requirement for grounding systems than the electrical safety ground produced by following the requirements of the NFPA 70. A minimum earth reference requirement of 10 ohms (with preference for 5 ohms) is required to adequately protect sensitive emergency communications equipment and the people that work with the equipment.

One source of industry best practices is the Motorola R-56 Standards and Guidelines for Communications Sites. The facility single point ground system shall be designed and installed in accordance with the applicable sections of the Motorola R-56, providing a maximum 10 ohm earth reference, and as otherwise coordinated with and required by the AHJ.

A copy of the Motorola R-56 Standard can be obtained from Motorola Solutions.

The Motorola R-56 provides an accepted industry standard for the stringent grounding (earthing) required to protect the equipment and those that operate it. The combined requirements of NFPA 70 and the Motorola R-56 grounding requirements/recommendations provide a strong foundation for the electrical power and equipment safety for an emergency communications facility.

Reference Motorola R-56 paragraph 5.8.3.1 Equipotential Grounding (Earthing) of the Network Operator Position and Paragraph 6.2.10 Receptacles for recommendations against the use of isolated ground circuits for emergency communications telecommunicator positions and equipment.

Reference Motorola R-56 paragraph 5.8.3.1 Equipotential Grounding (Earthing) of the Network Operator Position and Paragraph 6.2.10 Receptacles for recommendations against the use of isolated ground circuits for emergency communications telecommunicator positions and equipment.

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<td>Public Input No. 37-NFPA 1221-2013 [Section No. 5.6.1.1]</td>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 10:42:07 EDT 2013

Committee Statement
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<th>Resolution:</th>
<th>FR-40-NFPA 1221-2013</th>
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<tbody>
<tr>
<td>Statement:</td>
<td>This change has been made to comply with the current requirements of NFPA 70.</td>
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</table>
5.8.2
Listed isolated ground receptacles in accordance with NFPA 70 shall be provided for all cord-and-plug-connected essential and sensitive electronic equipment.

Statement of Problem and Substantiation for Public Input

Recommend that this requirement be removed from the Standard. This requirement conflicts with best industry practices for PSAPs and communications centers. Emergency communications facilities require a more stringent requirement for grounding systems than the electrical safety ground produced by following the requirements of the NFPA 70. A minimum earth reference requirement of 10 ohms (with preference for 5 ohms) is required to adequately protect sensitive emergency communications equipment and the people that work with the equipment. The Motorola R-56 provides an accepted industry standard for the stringent grounding (earthing) required to protect the equipment and those that operate it. The combined requirements of NFPA 70 and the Motorola R-56 grounding requirements/recommendations provide a strong foundation for the electrical power and equipment safety for an emergency communications facility.

One source of industry best practices is the Motorola R-56 Standards and Guidelines for Communications Sites. The facility single point ground system shall be designed and installed in accordance with the applicable sections of the Motorola R-56, providing a maximum 10 ohm earth reference, and as otherwise coordinated with and required by the AHJ.

A copy of the Motorola R-56 Standard can be obtained from Motorola Solutions.

Reference Motorola R-56 paragraph 5.8.3.1 Equipotential Grounding (Earthing) of the Network Operator Position and Paragraph 6.2.10 Receptacles for recommendations against the use of isolated ground circuits for emergency communications telecommunicator positions and equipment.

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<td>Public Input No. 37-NFPA 1221-2013 [Section No. 5.6.1.1]</td>
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<td>Common requirements</td>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 12:43:28 EDT 2013

Committee Statement

Resolution: Current NEC requirement satisfies the need of the committee for this section.
5.8.3 Unused wire or cable pairs shall be grounded where permitted by the AHJ.

Statement of Problem and Substantiation for Public Input

Recommend that this requirement be removed from the standard. It is unclear what the benefit of grounding unused conductors will do for the system. If the overall infrastructure is properly bonded to ground (earth) then the additional grounding of wire and cable pairs does not appear to provide any benefit and can cause problems and confusion when attempting to make these wires and cable pairs active in the future. If this requirement is to remain, please provide a clarification of the purpose of grounding unused pairs in Appendix A.

Related Public Inputs for This Document

<table>
<thead>
<tr>
<th>Related Input</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Input No. 21-NFPA 1221-2013 [Section No. 4.7.7]</td>
<td></td>
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<tr>
<td>Public Input No. 23-NFPA 1221-2013 [Section No. 4.10.7.8]</td>
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<tr>
<td>Public Input No. 37-NFPA 1221-2013 [Section No. 5.6.1.1]</td>
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<tr>
<td>Public Input No. 38-NFPA 1221-2013 [Section No. 5.8.1]</td>
<td></td>
</tr>
<tr>
<td>Public Input No. 39-NFPA 1221-2013 [Section No. 5.8.2]</td>
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</table>

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 12:56:59 EDT 2013

Committee Statement

Resolution: FR-9-NFPA 1221-2013
Statement: This change clarifies the requirement.
5.8.4
Ground connection for surge suppressors shall be made to the isolated grounding single point facility ground system required by 4.7.7.

Statement of Problem and Substantiation for Public Input

This requirement conflicts with best industry practices for PSAPs and communications centers. Emergency communications facilities require a more stringent requirement for grounding systems than the electrical safety ground produced by following the requirements of the NFPA 70. A minimum earth reference requirement of 10 ohms (with preference for 5 ohms) is required to adequately protect sensitive emergency communications equipment and the people that work with the equipment. The Motorola R-56 provides an accepted industry standard for the stringent grounding (earthing) required to protect the equipment and those that operate it. The combined requirements of NFPA 70 and the Motorola R-56 grounding requirements/recommendations provide a strong foundation for the electrical power and equipment safety for an emergency communications facility.

A copy of the Motorola R-56 Standard can be obtained from Motorola Solutions.

Related Public Inputs for This Document

<table>
<thead>
<tr>
<th>Related Input</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Input No. 21-NFPA 1221-2013 [Section No. 4.7.7]</td>
<td>Common requirements</td>
</tr>
<tr>
<td>Public Input No. 23-NFPA 1221-2013 [Section No. 4.10.7.8]</td>
<td>Common requirements</td>
</tr>
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<td>Public Input No. 37-NFPA 1221-2013 [Section No. 5.6.1.1]</td>
<td>Common requirements</td>
</tr>
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<td>Public Input No. 38-NFPA 1221-2013 [Section No. 5.8.1]</td>
<td>Common requirements</td>
</tr>
<tr>
<td>Public Input No. 39-NFPA 1221-2013 [Section No. 5.8.2]</td>
<td>Common requirements</td>
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<td>Public Input No. 40-NFPA 1221-2013 [Section No. 5.8.3]</td>
<td>Common requirements</td>
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</table>

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 12:59:50 EDT 2013

Committee Statement

Resolution: FR-41-NFPA 1221-2013
Statement: Section has been changed to comply with the most recent requirements of NFPA 70.
All systems, system operations, shall be under the control of a responsible employee, manager, director or supervisor, of the jurisdiction served by the system.

Statement of Problem and Substantiation for Public Input

Systems should be clearly defined as well as a responsible employee.

Submitter Information Verification

Submitter Full Name: Albert Dornseif
Organization: Priority Dispatch Corporation
Affiliation: 1221 Chapter 7 Committee
Street Address:
City:
State:
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Submittal Date: Mon Jul 08 11:26:02 EDT 2013

Committee Statement

Resolution: FR-13-NFPA 1221-2013
Statement: Systems should be clearly defined as well as a responsible employee.
7.1.1.2
All maintenance records shall be maintained by the responsible person of the organization in accordance with the records retentions policy of the organization.

Statement of Problem and Substantiation for Public Input

New material

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:  
City:  
State:  
Zip:  
Submittal Date: Sun Jul 07 19:24:58 EDT 2013

Committee Statement

Resolution: FR-42-NFPA 1221-2013
Statement: New section. This section has been added to clarify the requirements.
7.1.3** Move this section under 7.3 Staffing and revise section 7.3 to incorporate these requirements.

Direct supervision shall be provided when more than two telecommunicators are on duty.

7.1.3.1
The supervision shall be provided by personnel located within the communications center who are familiar with the operations and procedures of the communications center.

7.1.3.2
The supervisor shall be allowed to provide short-term relief coverage for telecommunicators, provided that the telecommunicator does not leave the communications center and is available for immediate recall.

Statement of Problem and Substantiation for Public Input

This section should be located under the staffing heading and not management.

Submitter Information Verification

Submitter Full Name: Albert Domseif
Organization: Priority Dispatch Corporation
Affiliation: 1221 Chapter 7 Committee
Street Address: 1221 Chapter 7 Committee
City: 1221 Chapter 7 Committee
State: 1221 Chapter 7 Committee
Zip: 1221 Chapter 7 Committee
Submittal Date: Mon Jul 08 10:22:09 EDT 2013

Committee Statement

Resolution: FR-49-NFPA 1221-2013
Statement: These sections, the next text added and their associated annex material are to be relocated after 7.3.4. This section should be located under the staffing heading and not management as they are staffing requirements. The additional text was added to clarify the requirements.
7.1.3.2 The supervisor shall be allowed to provide short-term relief coverage for telecommunicators, provided that the telecommunicator does not leave the communications center and is available for immediate recall as defined in the policies and procedures of the AHJ.

Statement of Problem and Substantiation for Public Input

Clarification

Submitter Information Verification

Submitter Full Name: Charles Berdan  
Organization: Alameda County Regional Emerge  
Affiliation: NFPA 1221 Technical Committee Technology Task Group  
Street Address:  
City:  
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Submittal Date: Sun Jul 07 19:27:12 EDT 2013

Committee Statement

Resolution: FR-49-NFPA 1221-2013  
Statement: These sections, the next text added and their associated annex material are to be relocated after 7.3.4. This section should be located under the staffing heading and not management as they are staffing requirements. The additional text was added to clarify the requirements.
Public Input No. 118-NFPA 1221-2013 [ Section No. 7.2.4 ]

7.2.4 Telecommunicators shall have knowledge of the function of all communications equipment, systems, and networks, in the communications center.

Statement of Problem and Substantiation for Public Input

Adding new text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Sun Jul 07 19:29:24 EDT 2013

Committee Statement

Resolution: FR-43-NFPA 1221-2013
Statement: Added text to clarify this section about the type of knowledge that telecommunicators shall have.
7.2.6 -
The telecommunicators assigned at the communications center shall be capable of operating and testing the communications equipment they are assigned to operate.

Statement of Problem and Substantiation for Public Input

Redundant

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Sun Jul 07 19:32:32 EDT 2013

Committee Statement

Resolution: FR-44-NFPA 1221-2013
Statement: Section is redundant and already covered within 7.2.
The AHJ shall ensure that there are sufficient telecommunicators available to effect the prompt receipt and processing of alarms needed to meet the requirements of Section 7.4. The AHJ shall have a minimum of two telecommunicators on duty at all times.

Statement of Problem and Substantiation for Public Input

Telecommunicators should have available staff on duty to allow for breaks, meal time, and to process calls that may involve answering multiple lines.

Submitter Information Verification

Submitter Full Name: Albert Domseif
Organization: Priority Dispatch Corporation
Affiliation: 1221 Chapter 7 Committee
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jul 08 09:56:46 EDT 2013

Committee Statement

Resolution: FR-45-NFPA 1221-2013
Statement: This text was added due to the deletion of section 7.3.2. Existing 7.3.1 and its associated annex material shall become a subsection under the new 7.3.1.
Public Input No. 120-NFPA 1221-2013 [ Section No. 7.3.2 ]

7.3.2 *

*Communications centers that provide pre-arrival instructions to callers shall have two telecommunicators on duty and present in the operations room at all times.*

Statement of Problem and Substantiation for Public Input

Two telecommunicators are required

Submitter Information Verification

Submitter Full Name: Charles Berdan
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Street Address: 
City: 
State: 
Zip: 
Submittal Date: Sun Jul 07 19:34:33 EDT 2013

Committee Statement

Resolution: See the changes made in 7.3.1.
Public Input No. 121-NFPA 1221-2013 [ Section No. 7.3.3 ]

7.3.3 *
When requested by the incident commander, a telecommunicator shall be dedicated to communicating on the incident tactical channel and relieved of other duties within the communications center if two or more telecommunicators are available.

Statement of Problem and Substantiation for Public Input

Clarification

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:36:43 EDT 2013

Committee Statement

Resolution: FR-47-NFPA 1221-2013
Statement: Added new text to clarify section to represent the committee's intent.
With the exception of the call types identified in 7.4.2.2, 90 percent of emergency alarm processing shall be completed within 60-64 seconds, and 95 percent of alarm processing shall be completed within 106 seconds. (For documentation requirements, see 12.5.2.)

Statement of Problem and Substantiation for Public Input

The committee should revisit the study done on call processing and seek additional data from centers on call processing. Should call processing be divided by size of center, time of day, or address verification from wireless callers.

Submitter Information Verification

Submitter Full Name: Albert Domseif  
Organization: Priority Dispatch Corporation  
Street Address:  
City:  
State:  
Zip:  
Submittal Date: Mon Jul 08 11:45:22 EDT 2013

Committee Statement

Resolution: FR-48-NFPA 1221-2013  
Statement: This change has been made to reflect the study done on call processing. 90% is used as a benchmark within the standard and the committee is seeking additional data and comments for this section going forward.
### Public Input No. 122-NFPA 1221-2013 [ Section No. 7.4.2.2 ]

<table>
<thead>
<tr>
<th>7.4.2.2</th>
<th></th>
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<tbody>
<tr>
<td>Emergency alarm processing for the following call types shall be completed within 90 seconds 90 percent of the time and within 120 seconds 99 percent of the time:</td>
<td></td>
</tr>
<tr>
<td>(1) Calls requiring emergency medical dispatch questioning and pre-arrival medical instructions</td>
<td></td>
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<tr>
<td>(2) Calls requiring language translation</td>
<td></td>
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<tr>
<td>(3) Calls requiring the use of a TTY/TDD device or audio/video relay services</td>
<td></td>
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<tr>
<td>(4) Calls of criminal activity that require information vital to emergency responder safety prior to dispatching units</td>
<td></td>
</tr>
<tr>
<td>(5) Hazardous material incidents</td>
<td></td>
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<tr>
<td>(6) Technical rescue</td>
<td></td>
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<tr>
<td>(7) Calls requiring the location of the caller due to the lack of or inaccurate location data.</td>
<td></td>
</tr>
</tbody>
</table>

### Statement of Problem and Substantiation for Public Input

New text

### Submitter Information Verification

**Submitter Full Name:** Charles Berdan  
**Organization:** Alameda County Regional Emerge  
**Affiliation:** NFPA 1221 Technical Committee Technology Task Group  
**Street Address:**  
**City:**  
**State:**  
**Zip:**  
**Submittal Date:** Sun Jul 07 19:38:49 EDT 2013

### Committee Statement

**Resolution:** FR-50-NFPA 1221-2013  
**Statement:** With more centers adding 9-1-1 calls received via text message a call processing time should be addressed for these types of calls. Calls processed via text message may take even longer than the 90 seconds required under this section. The committee is conducting further research into processing times of a text message.
7.4.2.2
Emergency alarm processing for the following call types shall be completed within 90 seconds 90 percent of the time and within 120 seconds 99 percent of the time:

1. Calls requiring emergency medical dispatch questioning and pre-arrival medical instructions
2. Calls requiring language translation
3. Calls requiring the use of a TTY/TDD device or audio/video relay services
4. Calls of criminal activity that require information vital to emergency responder safety prior to dispatching units
5. Hazardous material incidents
6. Technical rescue
7. Calls received by text message

Statement of Problem and Substantiation for Public Input

With more centers adding 9-1-1 calls received via text message a call processing time should be addressed for these types of calls. Calls processed via text message may take even longer than the 90 seconds required under this section. Committee should collect data from centers that have actually processed calls using text message for call processing times.

Submitter Information Verification

Submitter Full Name: Albert Domseif
Organization: Priority Dispatch Corporation
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jul 08 10:41:54 EDT 2013

Committee Statement

Resolution: FR-50-NFPA 1221-2013
Statement: With more centers adding 9-1-1 calls received via text message a call processing time should be addressed for these types of calls. Calls processed via text message may take even longer than the 90 seconds required under this section. The committee is conducting further research into processing times of a text message.
7.4.6
An appropriate indication of the status of all emergency response units shall be available to telecommunicators at all times.

Statement of Problem and Substantiation for Public Input

Clarifying text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address: 
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:40:41 EDT 2013

Committee Statement

Resolution: FR-51-NFPA 1221-2013
Statement: New text added in order to clarify the requirement.
7.4.6
An indication of the status of all emergency response units shall be available to telecommunicators, who have dispatching responsibility, at all times.

Statement of Problem and Substantiation for Public Input

Clarifying text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:42:39 EDT 2013

Committee Statement

Resolution: FR-51-NFPA 1221-2013
Statement: New text added in order to clarify the requirement.
Public Input No. 125-NFPA 1221-2013 [ Section No. 7.4.7 ]

7.4.7 *  
Records of the dispatch of emergency response units to alarms shall be maintained in accordance with the records retention policy of the AHJ, and shall identify the following:

1. Unit designation for each emergency response unit (ERU) dispatched
2. Time of dispatch acknowledgment by each ERU responding
3. Enroute time of each ERU
4. Time of arrival of each ERU at the scene
5. Time of patient contact, if applicable
6. Time each ERU is returned to service

Statement of Problem and Substantiation for Public Input

Clarifying Text

Submitter Information Verification

Submitter Full Name: Charles Berdan  
Organization: Alameda County Regional Emerge  
Affiliation: NFPA 1221 Technical Committee Technology Task Group  
Street Address:  
City:  
State:  
Zip:  
Submittal Date: Sun Jul 07 19:43:59 EDT 2013

Committee Statement

Resolution: FR-52-NFPA 1221-2013  
Statement: Added text to clarify requirements of this section and require that records shall be maintained as per the records retention policy of the AHJ.
All emergency response agencies that interact shall use common terminology and integrated incident communications.

Statement of Problem and Substantiation for Public Input

Clarifying Text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:46:26 EDT 2013

Committee Statement

Resolution: FR-53-NFPA 1221-2013
Statement: New text added to clarify this requirement.
Public Input No. 128-NFPA 1221-2013 [ Section No. 7.4.13 ]

<table>
<thead>
<tr>
<th>7.4.13</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the device monitoring the system for integrity indicates that trouble has occurred, the telecommunicator shall act as follows: Take appropriate steps to repair the fault, isolate the fault, and notify the official responsible for maintenance if repair is not possible.</td>
</tr>
</tbody>
</table>

Statement of Problem and Substantiation for Public Input

Clarifying Text

Submitter Information Verification

Submitter Full Name: Charles Berdan  
Organization: Alameda County Regional Emerge  
Affiliation: NFPA 1221 Technical Committee Technology Task Group

Committee Statement

Resolution: FR-54-NFPA 1221-2013  
Statement: Added text to clarify the requirements for this section and allow the AHJ policies to dictate actions.
7.4.14
Standard operating procedures shall be developed, made available and communicated to all affected personnel and shall include but not be limited to the following:

1. All standardized procedures that the telecommunicator is expected to perform without direct supervision

2. Implementation plan that meets the requirements of 4.1.5.3

3. Procedures related to the CEMP

4. Emergency response personnel emergencies

5. Activation of an emergency distress function

6. Assignment of incident radio communications plan matrix

7. Time limit for acknowledgment by units that have been dispatched

8. Methods for call trace

9. Methods for caller location determination

Statement of Problem and Substantiation for Public Input

Committee Statement

Resolution: FR-55-NFPA 1221-2013
Statement: These additional items are typically found in standard operating procedures and should be made a requirement.
A distinctive alert tone signal shall precede the transmission of emergency message traffic. This applies to audible and visual alarm transmissions.

Statement of Problem and Substantiation for Public Input

Clarifying text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:55:04 EDT 2013

Committee Statement

Resolution: The current language already applies to these items without the added text to this section.
7.4.17
In the event that an ERU(s) has not acknowledged its dispatch/response within the time limits established, the telecommunicator shall perform one or more of the following:

1. Attempt to contact the ERU(s) by radio
2. Redispatch the ERU(s) using the primary dispatch system
3. Dispatch the ERU(s) using the secondary dispatch system
4. Initiate two-way communication with the ERU's supervisor
5. If the SOP time for dispatch has elapsed, initiate dispatch of back up ERU

Statement of Problem and Substantiation for Public Input

Clarifying Text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerg
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Sun Jul 07 19:58:54 EDT 2013

Committee Statement

Resolution: FR-56-NFPA 1221-2013
Statement: This text was added to include SOP dispatch time frames for dispatching a back up or ERU.
7.5.1*
The clock for the main recordkeeping device shall be networked with all clocks in the communications center and be synchronized weekly to coordinated universal time (UTC).

Statement of Problem and Substantiation for Public Input
Clear up how all clocks should be synchronized within the comm center.

Submitter Information Verification
Submitter Full Name: Albert Domseif
Organization: Priority Dispatch Corporation
Affiliation: 1221 Chapter 7 Committee
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jul 08 11:36:57 EDT 2013

Committee Statement
Resolution: FR-60-NFPA 1221-2013
Statement: New text. Section added to reflect changes with time keeping and master time source.
7.6 Recording.

7.6.1 Communications centers shall have a logging voice recorder with one channel for each of the following:

(1) Each transmitted or received radio channel or talkgroup
(2) Each voice dispatch alarm circuit
(3) Each telecommunicator telephone

7.6.2 Each telecommunicator position shall have the ability to instantly recall telephone and radio recordings from that position.

7.6.3 Alarms that are transmitted over the required dispatch circuit(s) shall be automatically recorded, including the dates and times of transmission.

7.6.4 The recording devise shall be networked with the main time keeping devise.

Statement of Problem and Substantiation for Public Input

Update this section to ensure that the recording device has the same time as the record keeping device.

Submitter Information Verification

Submitter Full Name: Albert Domseif
Organization: Priority Dispatch Corporation
Affiliation: 1221 Chapter 7 Committee
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jul 08 11:32:50 EDT 2013

Committee Statement

Resolution: FR-60-NFPA 1221-2013
Statement: New text. Section added to reflect changes with time keeping and master time source.
7.6.2.1
All logging recording equipment shall have the ability to associate the date, time, and channel designation with each transmission.

Statement of Problem and Substantiation for Public Input

Clarifying Text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 20:01:07 EDT 2013

Committee Statement

Resolution: FR-58-NFPA 1221-2013
Statement: NEW MATERIAL. Text added to set requirement for logging voice equipment to have the ability to associate date, time and channel designation with each transmission for recording purposes.
7.6.2.2
All logging recording equipment connected to a Next Generation 9-1-1 ESInet shall have the ability to record logging events data

Statement of Problem and Substantiation for Public Input

New text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 20:02:26 EDT 2013

Committee Statement

Resolution: FR-58-NFPA 1221-2013
Statement: NEW MATERIAL. Text added to set requirement for logging voice equipment to have the ability to associate date, time and channel designation with each transmission for recording purposes.
7.6.3
All recordings, including transmissions or data shall be maintained in accordance with the records retention policies of the AHJ.*
8.1 Telephone Receiving Equipment.

The provisions of Chapter 8 shall apply to facilities and equipment that are needed to receive alarms that are transmitted by public use of commercial telephone systems, cellular or personal communications services (PCS) systems, and voice over Internet protocol (VoIP) emergency calls. Emergency calls include, but are not limited to, voice calls (land-based, wireless, etc.) TTD/TTY calls, video calls, text calls and machine-to-machine (M2M) calls.

Statement of Problem and Substantiation for Public Input

The current wording is voice-centric and does not embrace the technological challenges that PSAPs are facing today. By accepting this recommendation, PSAPs can position themselves for Next Generation 9-1-1 (NG 9-1-1) systems that can deal with these evolving technologies and therefore avoid being restricted by outdated technology.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
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Submittal Date: Tue Jul 02 13:03:16 EDT 2013

Committee Statement

Resolution: FR-61-NFPA 1221-2013
Statement: The removed text in this section limited equipment to voice-centric devices.
8.2.1.1 states “Where 9-1-1 service is provided,…..”
Therefore, 8.2.1.1 is not subordinate to 8.2.1 and should be promoted to 8.2.2.

Submitter Information Verification
Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 13:07:24 EDT 2013

Committee Statement
Resolution: FR-62-NFPA 1221-2013
Statement: 8.2.1.1 is not subordinate to 8.2.1 and should be move to be a subsection to 8.2.
8.3.2.2
The transfer procedure shall not rely on the PSAP personnel relaying the information to the responsible communications center include all of the call information (ANI, ALI, GIS, TDD/TTY, notes, text, images, video, telematics, etc.) being automatically transmitted to the responsible communications center.

Statement of Problem and Substantiation for Public Input

Recommend that this section be updated to reflect systems requirements supporting current and future PSAP operations. As currently written, the communications center personnel receiving the transferred call would need to repeat the same questions to the original caller. Not only does this upset the caller, it also requires additional time that could jeopardize first responders’ effectiveness.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 13:12:44 EDT 2013

Committee Statement

Resolution: The technology is not available to require this in a minimum standard.
8.4.2.1
The universal emergency number service equipment shall be designed so that no equipment failure cannot prevent calls from being answered.

Statement of Problem and Substantiation for Public Input

Recommend revising this section to align the requirement with other industry standard requirements. Adding this qualifier brings the statement in line with NENA quality and reliability recommendations as defined in NENA-04-001 Recommended Generic Standards for E9-1-1 PSAP Equipment.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 13:16:03 EDT 2013

Committee Statement

Resolution: FR-63-NFPA 1221-2013
Statement: Adding this text brings the aligns this section with NENA quality and reliability recommendations as defined in NENA-04-001 Recommended Generic Standards for E9-1-1 PSAP Equipment.
The communications center shall be equipped for radio communications with ERUs and emergency response personnel using portable subscriber radios.

Statement of Problem and Substantiation for Public Input

Recommend that this section be modified to include both portable and mobile radios. The term 'portable radios' is an explicit term implying a handheld subscriber device. Recommend using the general term 'subscriber' to include portable radios, mobile radios and radio control stations.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 13:20:16 EDT 2013

Committee Statement

Resolution: FR-84-NFPA 1221-2013
Statement: This section has been modified to include both portable and mobile radios. The term 'portable radios' is too specific implying a handheld subscriber device.
9.3.1.2.1

Radio communication systems shall be designed to provide no less than 95 percent coverage of the jurisdictional area 95 percent of the time, with a 95 percent confidence factor coverage in accordance with the latest release of TIA's Technical Service Bulletin TSB-88, Wireless Communications Systems - Performance in Noise and Interference - Limited Situations - Recommended Methods for Technology - Independent Modeling, Simulation, and Verifications.

Statement of Problem and Substantiation for Public Input

Recommend modifying this section to reference to the current release of the TIA TSB-88 to maintain performance requirement continuity between industry standards.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 13:22:09 EDT 2013

Committee Statement

Resolution: FR-10-NFPA 1221-2013
Statement: TSB-88 does not stipulate the amount of coverage requisite for a particular radio system. It is a guideline design based on whatever the criteria is for the system (e.g. # of sites, antennas, transmit power, frequency, etc.).
9.3.1.2.2.1

Outside, a minimum of –107 dBm to and from a portable radio worn on the hip shall be required. Coverage will be sufficient as to provide a Delivered Audio Quality (DAQ) of 3.0 for analog communications and a Bit Error Rate (BER) of 2.6% for digital communications.

Statement of Problem and Substantiation for Public Input

Recommend modifying this section using metrics such as DAQ and BER to measure the delivered 'payload'. Specifying a dBm level does not guarantee clear audio or reliable data delivery.

Related Public Inputs for This Document

<table>
<thead>
<tr>
<th>Related Input</th>
<th>Relationship</th>
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<tr>
<td>Public Input No. 48-NFPA 1221-2013 [Section No. 9.3.1.2.1]</td>
<td>Common requirements</td>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 13:32:23 EDT 2013

Committee Statement

Resolution: FR-85-NFPA 1221-2013
Statement: See attached for new annex material. Section has been modified using DAQ to guarantee a level of sound quality, specifying a dBm level does not guarantee clear audio or reliable data delivery.
9.3.3.4
Mobile and portable units shall be equipped with a timer circuit that automatically shuts off the transmitter and signals the operator with a distinctive tone after a predetermined transmission time.

Statement of Problem and Substantiation for Public Input

Recommend adding this section to coordinate requirements for conventional radio systems and trunked radio systems. The requirement specified for the trunked two-way radio requirements applies to conventional radio systems as well and should be included in this section.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 13:56:15 EDT 2013

Committee Statement

Resolution: FR-89-NFPA 1221-2013
Statement: This change has been done in reference to the deletion made to 9.3.4.1.6 to include the signal tone requirement where it is appropriate.
9.3.3.5 Mobile and portable units shall be capable of scanning trunked talkgroups and conventional channels with a user-selectable priority.

Statement of Problem and Substantiation for Public Input

This requirement specified for the trunked two-way radio requirements applies to conventional radio systems, as well. The ability to scan trunked talkgroups applies to neighboring systems that a unit may interoperate with on a regular basis.

Related Public Inputs for This Document

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<thead>
<tr>
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<tr>
<td>Public Input No. 53-NFPA 1221-2013 [Section No. 9.3.4.2.1]</td>
<td>Similar requirements</td>
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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 14:05:57 EDT 2013

Committee Statement

Resolution: The requirement to scan from conventional to a trunked system would require a conventional radio to be trunking capable.
Public Input No. 52-NFPA 1221-2013 [ Section No. 9.3.4.1.8 ]

9.3.4.1.8
Channel access time in single-site systems, assuming a channel is available, shall be less than \( \frac{1}{2} \) second. A Grade-Of-Service(GOS) of less than 1% shall be required for channel access.

Statement of Problem and Substantiation for Public Input

The use of “single site” unnecessarily limits the channel access time requirement to a subset of communications systems. The 1/2 second requirement is reasonable across all systems.

A 1% GOS is an industry standard for public safety trunked radio communications systems.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 14:08:06 EDT 2013

Committee Statement

Resolution: Technical information on this change was not available to be considered to make this change.
Public Input No. 53-NFPA 1221-2013 [ Section No. 9.3.4.2.1 ]

9.3.4.2.1  At 700 MHz, digital trunked system user radios must use the of trunking or conventional P25 air interface when operating on the 24 narrowband national interoperability channels. The remaining 8 national interoperability channels can utilize P25 trunking. must conform to the operational guidelines as required by the Federal Code of Regulations, Title 47, Part 90, Subpart R, §90.531(b)(1)(iii) and §90.537(b).

Statement of Problem and Substantiation for Public Input

Title 47, Part 90, Subpart R, §90.531(b)(1)(iii) states, “Narrowband trunking Interoperability channels. The following Interoperability channel pairs may be combined with the appropriate adjacent secondary trunking channel pairs and used in trunked mode on a secondary basis to conventional Interoperability operations: 23/983, 24/984, 103/1063, 104/1064, 183/1143, 184/1144, 263/1223, 264/1224, 657/1617, 658/1618, 737/1697, 738/1698, 817/1777, 818/1778, 897/1857, 898/1858. For every ten general use channels trunked at a station, entities may obtain a license to operate in the trunked mode on two of the above contiguous Interoperability channel pairs. The maximum number of Interoperability channel pairs that can be trunked at any one location is eight.”

Title 47, Part 90, Subpart R, §90.537(b) states, “Interoperability channels. Trunking is permitted only on Interoperability channels specified in § 90.531(b)(1)(iii). Trunked use must be strictly on a secondary, non-interference basis to conventional operations. The licensee must monitor and immediately release these channels when they are needed for interoperability purposes.”

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 14:14:32 EDT 2013

Committee Statement

Resolution: The specifics of the trunked radio system is already covered by section 9.3.1.1.
9.3.5.5
Mobile radios shall be capable of multiple-channel operation to enable on-scene radio communications that are independent of dispatch channels.

Statement of Problem and Substantiation for Public Input

Recommend adding the word 'simplex' to match requirements for portable unit in Section 9.3.6.5. This capability and requirement is the same for both mobile and portable units.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 14:17:18 EDT 2013

Committee Statement

Resolution: FR-92-NFPA 1221-2013
Statement: Recommend adding the word 'simplex' to match requirements for portable unit in Section 9.3.6.5. This capability and requirement is the same for both mobile and portable units.
### 9.3.8.1 General Requirements.

Microwave radio systems shall meet the following minimum requirements:

1. The microwave radio shall be suitable for two-frequency, full-duplex operation.
2. The microwave radio shall be suitable for operating in network configurations offering ring or star protection.
3. The microwave radio shall include a transmitter, a receiver, a modem, a power supply, an automatic switching device, a multiplexer, service channels/orderwire, and all associated interconnections.
4. The microwave radio shall allow full access to all modules for normal system maintenance.
5. All replaceable/plug-in modules shall be accessible.
6. Each microwave hop shall be designed to meet or exceed a one way end-to-end annual reliability (BER = 10^-3) of 99.9995 percent at the required capacity.
7. Each microwave hop shall be designed to meet or exceed a one way end-to-end annual quality performance (BER = 10^-6) of 99.999 percent at the required capacity.

### Statement of Problem and Substantiation for Public Input

Recommend modifying this section to add reliability and quality-performance criteria. These requirements establish a baseline for performance and assure the appropriate uptime for microwave links is achieved.

### Submitter Information Verification

**Submitter Full Name:** DAVID HAMMOND  
**Organization:** MISSION CRITICAL PARTNERS  
**Street Address:**  
**City:**  
**State:**  
**Zip:**  
**Submittal Date:** Tue Jul 02 14:19:25 EDT 2013

### Committee Statement

**Resolution:** Not enough technical data provided to include these proposed changes in a minimum standard.
9.3.6 IP Enabled Devices

When adopted by the AHJ, IP enabled devices (Smartphones, tablets, laptops), shall comply with the rules and regulations governing wireless communications in the country of operation.

Statement of Problem and Substantiation for Public Input

Adding new text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Sun Jul 07 18:58:51 EDT 2013

Committee Statement

Resolution: FR-94-NFPA 1221-2013
Statement: New text added to provide minimum standards on IP devices.
9.6.1
The communications center shall be equipped for IP enabled two way communication with the ERU’s and emergency response personnel using IP enabled devices or as determined by the AHJ.

Statement of Problem and Substantiation for Public Input

New text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group

Committee Statement

Resolution: FR-94-NFPA 1221-2013
Statement: New text added to provide minimum standards on IP devices.
9.7 Security

IP enabled devices that are equipped with wifi capabilities shall have a means to be disabled to prevent inadvertent use.

Statement of Problem and Substantiation for Public Input

New Text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Sun Jul 07 19:06:11 EDT 2013

Committee Statement

Resolution: Chapter 13 addresses security issues with IP devices.
9.7.1
IP enabled devices shall meet the requirements of 9.3.4.1.1

Statement of Problem and Substantiation for Public Input

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:07:42 EDT 2013

Committee Statement

Resolution: The referenced section does not apply to this requirement.
9.7.2
IP enabled devices shall be capable of fully charging the battery while in use.

Statement of Problem and Substantiation for Public Input

New Text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:09:24 EDT 2013

Committee Statement

Resolution: FR-94-NFPA 1221-2013
Statement: New text added to provide minimum standards on IP devices.
Public Input No. 110-NFPA 1221-2013 [ New Section after 9.5.4.2 ]

9.7.3
IP enabled devices shall not interfere with the primary means of communication as determined by the AHJ.

Statement of Problem and Substantiation for Public Input

New Text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:11:12 EDT 2013

Committee Statement

Resolution: Insufficient justification for the additional text.
9.7.4
IP enabled devices shall have a unique address identifier regardless of whether the device is operating on wifi, 3g or 4g mode.

Statement of Problem and Substantiation for Public Input

New Text

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:13:07 EDT 2013

Committee Statement

Resolution: Insufficient justification for the additional text to be added to standard.
9.7.5
IP enabled devices that are used to alert a specific ERF(s) shall meet the requirements of 9.3.2

Statement of Problem and Substantiation for Public Input

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 19:15:02 EDT 2013

Committee Statement

Resolution: This requirement is already covered in 9.3.2.3.
TITLE OF NEW CONTENT
When a CAD is used as an entry point for alarms, the system shall have redundant interconnections to the source system and redundant processors and storage.

ANNEX
CAD systems that are interconnected to third party systems (such as commercial alarm monitoring centers, or telematics Centers) to receive alarms directly into the CAD by-passing the telephone system shall be provisioned to be resilient. This may result in the need for servers with redundant processors and fault tolerant storage.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG
Where a system is used for alarm receipt the CAD should be resilient like the telephone system.

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Fri Jul 05 12:38:41 EDT 2013

Committee Statement

Resolution: This topic is already covered in 10.8.
Public Input No. 76-NFPA 1221-2013 [ New Section after 10.1 ]

TITLE OF NEW CONTENT
CAD systems that are interconnected to third party systems (such as commercial alarm monitoring centers, or telematics Centers) to receive alarms directly into the CAD by-passing the telephone system shall have an alternate method of receiving these alarms

ANNEX
An alternate method of receiving alarms is needed in the event the system fails. This can be resorting to telephone, MOU with another PSAP, or even duplicate systems within the PSAP.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 12:47:53 EDT 2013

Committee Statement

Resolution: FR-70-NFPA 1221-2013
Statement: New section after 10.8.1.5 with new annex material attached. New language added to require an alternative method of receiving alarms in the event of a failure within the system.
TITLE OF NEW CONTENT

CAD systems that are interconnected to third party systems to receive alarms directly into the CAD by-passing the telephone system shall have agreements in place with the third party providers to constantly monitor the interconnection.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: City: State: Zip:

Submittal Date: Fri Jul 05 12:44:34 EDT 2013

Committee Statement

Resolution: FR-69-NFPA 1221-2013
Statement: New subsection to 10.4.4. Section added to require agreements between third party providers and CAD systems that receive alarms directly.
TITLE OF NEW CONTENT
The CAD system to include hardware, software, and network shall be included in the AHJ security plan,
change and configuration management, and security audits.

ANNEX
The AHJ should include the hardware and software into the information technology plans such as security
plans and have change and configuration management process to plan, test and document any changes to
the systems or settings. Regular audit of the system shall be conducted as a part of the regular security
reviews t include periodic review of user accounts.

Statement of Problem and Substantiation for Public Input
This is filed on behalf of the CAD TG

Submitter Information Verification
Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Fri Jul 05 12:52:10 EDT 2013

Committee Statement
Resolution: See changes created by FR in Chapter 13 for the topics addressed in submitted PI.
Public Input No. 79-NFPA 1221-2013 [ New Section after 10.3 ]

TITLE OF NEW CONTENT
CAD systems that have physical or logical connections to other systems shall have hardware and/or software between the systems to monitor and manage the connection to prevent unauthorized access or malicious data from the system.

ANNEX
The placement of security devices such as a network firewall between systems to prevent unauthorized access is a good practice. These interconnections should be monitored so that the system administrators can be notified of unauthorized activity as it occurs, not well after the fact.

Statement of Problem and Substantiation for Public Input
This is filed on behalf of the CAD TG

Submitter Information Verification
Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliations: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 12:55:07 EDT 2013

Committee Statement
Resolution: Section material is already contained with in section 13.1.7.
Public Input No. 77-NFPA 1221-2013 [ Section No. 10.3.4 ]

10.3.4
Operation of the CAD system software shall be limited to authorized personnel by log-on/password control, workstation limitations, or other means, and audited quarterly as required by the AHJ.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

<table>
<thead>
<tr>
<th>Submitter Full Name:</th>
<th>Gordon Vanauken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization:</td>
<td>Mission Critical Partners</td>
</tr>
<tr>
<td>Affiliation:</td>
<td>This is filed on behalf of the CAD TG</td>
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<td>Street Address:</td>
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<tr>
<td>Submittal Date:</td>
<td>Fri Jul 05 12:49:36 EDT 2013</td>
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Committee Statement

Resolution: FR-71-NFPA 1221-2013
Statement: Added requirement to audit these controls as determined by the AHJ.
10.3.5. CAD systems shall provide network isolation necessary to preserve bandwidth for the efficient operation of the system and processing of alarms.

10.3.5.1. The CAD system shall provide measures to prevent denial-of-service attacks and any undesired access to the CAD portion of the network.

10.3.5.2. CAD systems shall employ antivirus software where necessary to protect the system from infection.

Statement of Problem and Substantiation for Public Input

Recommend that this section be revised to add a necessary layer of security to the system. Network isolation adds an element of security by limiting access to the devices and data on the isolated network. Recommend adding the phrase "improve security and" to further develop the intent of this requirement.

The word "other" does not add any value in this sentence. Recommend "other" be removed for clarity.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 14:24:21 EDT 2013

Committee Statement

Resolution: This is already covered by material in 13.1.7.
10.4.1 The CAD system shall have the capability to allow alarm data exchange between the CAD system and other:
(1) other CAD systems.
(2) Supervising Stations
(3) 9-1-1 databases
(4) Other systems as required and approved by the AHJ

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Fri Jul 05 13:02:37 EDT 2013

Committee Statement

Resolution: The material is already covered in 10.4.3.
The CAD system shall have the capability to allow alarm data exchange between the CAD system and supervising stations. Alarm data exchange can be one-way or two-way, depending on the requirements of the AHJ.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: This is filed on behalf of the CAD TG
City: 
State:  
Zip: 
Submittal Date: Fri Jul 05 13:14:49 EDT 2013

Committee Statement

Resolution: See FR on section 10.4.3. to reflect the changes requested in this public input.
### TITLE OF NEW CONTENT

10.4.3.1 Alarm data elements for alarm processing will contain the following items from the sending CAD system:

1. Street Address or Intersection of event
2. Latitude/Longitude of event
3. Reporting Party Name
4. Reporting Party Address
5. Reporting Party Callback Number
6. Event Type
7. Any remarks entered to that point

10.4.3.2 This new alarm information would show up as a pending event in the receiving CAD system.

10.4.3.3 The receiving CAD system would automatically send a confirmation message to the sending CAD system that it received the call. It would be up to the AHJ to decide whether or not to use or display this information.

10.4.3.4 The sending CAD would continue to send updates related to the event as needed until the event is terminated by either agency.

10.4.3.5 The sending dispatchers would be able to send and receive administrative (not tied to an incident) messages to the receiving dispatchers.

10.4.3.6 The sending CAD would send status changes on all units that the sending CAD has jointly identified to the receiving CAD without dispatcher intervention.

10.4.3.7 All the above requirements would also apply conversely to the receiving CAD.

10.4.3.8 Each CAD system shall be set up with conversion tables that can translate event types from one system to the other.

### Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

### Submitter Information Verification

Submitter Full Name: Gordon Vanauken  
Organization: Mission Critical Partners  
Affiliation: This is filed on behalf of the CAD TG

Street Address:  
City:  
State:  
Zip:  
Submittal Date: Fri Jul 05 13:30:00 EDT 2013

### Committee Statement

Resolution: FR-72-NFPA 1221-2013  
Statement: New material attached in word document to be added as subsections to existing 10.4.1. This material has been added to provide more requirements on a CAD to CAD interface, the Technical Committee is also further reviewing CAD to CAD interface requirements.
10.4.3
The CAD system shall have the capability to allow alarm data exchange between the CAD system and 9-1-1 databases. Two PSAPs shall comply with the elements contained in Sections 10.4.3.1 through 10.4.3.5.

ANNEX
Other data elements that could be used, based on the functionality needed by the AHJ:

1. Units responding from sending agency
2. Response area code
3. Status changes from units (ongoing)

Statement of Problem and Substantiation for Public Input
This is filed on behalf of the CAD TG

Submitter Information Verification
Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Fri Jul 05 13:16:06 EDT 2013

Committee Statement
Resolution: FR-72-NFPA 1221-2013
Statement: New material attached in word document to be added as subsections to existing 10.4.1. This material has been added to provide more requirements on a CAD to CAD interface, the Technical Committee is also further reviewing CAD to CAD interface requirements.
10.5.4

All characters shall and screen components shall be visible in a lighted room without being affected by the glare of ambient lighting, to include be readable to users with vision impairments such as color blindness.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Fri Jul 05 14:27:29 EDT 2013

Committee Statement

Resolution: This is beyond the scope of the standard as reasonable accommodations.
Public Input No. 87-NFPA 1221-2013 [Sections 10.6.1, 10.6.2, 10.6.3]

Sections 10.6.1, 10.6.2, 10.6.3

10.6.1
The system shall be sized (memory storage, Random Access Memory (RAM), network throughput, etc) so as to accommodate the call volume, call types, and other sizing parameters that are required by the AHJ.

10.6.2
The system shall recommend units for assignment to calls based on pre-designated run assignments or on GPS location.

10.6.2.1
The system shall ensure that the optimum response units are selected.

10.6.2.2
The system shall allow the telecommunicator to override the CAD recommendation for unit assignment, with the system automatically documenting in the call that the unit was manually overridden.

10.6.2.3
The CAD system shall have the ability to prioritize all system processes so that emergency operations take precedence.

10.6.3
The system shall detect faults and failures and shall log and report faults and failures to a terminal that is staffed.

10.6.3.1
The system shall automatically perform all required reconfiguration as a result of the faults or failures.

10.6.3.2
The system shall queue a notification message to the supervisor and any designated telecommunicator positions.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 13:54:04 EDT 2013

Committee Statement

Resolution: Some recommendations have been added as annex material to the existing 10.6.1 and a first revision...
was created on 10.6.2.2 to reflect request in public input.
The system shall be available and fully functional 99.95 percent of the time, excluding planned maintenance.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 14:00:38 EDT 2013

Committee Statement

Resolution: The TC feels that this should include planned maintenance as part of the requirement.
10.6.7
The CAD system shall have the ability to communicate between components of the system using Internet Protocol IP.

Statement of Problem and Substantiation for Public Input

Recommend that this section be added to support current system capabilities and migration to future capabilities. The use of Internet Protocol (IP) is foundational to the incorporation of Next Gen 9-1-1 technologies and ESINet communications.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Jul 02 14:29:07 EDT 2013

Committee Statement

Resolution: IP is not the only means to communicate between components in system.
10.6.6 "
The CAD system shall include automatic power-fail recovery capability.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 14:24:57 EDT 2013

Committee Statement

Resolution: This is located in the CAD section and pertains to CAD already.
10.7 * Backup.
The system shall include a data backup system, utilizing either removable media or independent disk storage arrays dedicated to the backup task. Incorporating both backup methods is preferred, augmented by off-site storage of backup files.

Statement of Problem and Substantiation for Public Input

Recommend this section be modified to include off-site back-up of data. Best industry practices recommend multiple methods of storing and retaining backup data. Backup data should be stored off-site to preclude a single event destroying both the on-line and backup copies.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Wed Jul 03 13:04:01 EDT 2013

Committee Statement

Resolution: FR-76-NFPA 1221-2013
Statement: Added based on public input to change mandatory language. This line was added to reflect best industry practices and recommend multiple methods of storing and retaining backup data. Backup data should be stored off-site to preclude a single event destroying both the online and backup copies.
10.8.1.4 Systems that utilize server and workstation configuration shall accomplish automatic switchover by having a duplicate server available with access to all the data necessary, and required are required to restart at the point where the primary server stopped, without requiring a restart of the CAD system or reentry of the calls in the system at the time of switchover.

Statement of Problem and Substantiation for Public Input

Recommend that this section be revised to improve the reliability of the system. Long delays between a shutdown of one system and startup of the backup system can be counterproductive. Emergency dispatch information can become non-essential quickly. The ability for a CAD station to remain on-line with accurate information is critical to proper processing of calls through a system switchover.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 15:07:13 EDT 2013

Committee Statement

Resolution: FR-12-NFPA 1221-2013
Statement: This section is revised to improve the reliability of the system. The ability for a CAD station to remain on-line with accurate information is critical to proper processing of calls through a system switchover.
The system shall provide a hard-copy log of and an electronic, file-based log of system messages and transactions.

Statement of Problem and Substantiation for Public Input

Recommend that this section be revised to support current usage and future system capabilities. Searchable electronic logs are critical for timely operations of the PSAP. A hard copy log alone will hinder the ability for the PSAP to provide critical information when required. Searchable electronic files also require less space and are simpler to access from archives.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 15:12:17 EDT 2013

Committee Statement

Resolution: FR-77-NFPA 1221-2013
Statement: Searchable electronic logs are critical for timely operations of the PSAP. A hard copy log alone will hinder the ability for the PSAP to provide critical information when required. Searchable electronic files also require less space and are simpler to access from archives.
10.8.3 *

The system shall provide a hard-copy, legally defensible log of system messages and transactions.

ANNEX

The AHJ should determine the data required to be logged for use by the operations room. The AHJ should determine what format will be legally defensible for the AHJ, but this will usually be a fixed record that captures all activities and prevents erasure of data.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: City:
State: Zip:
Submittal Date: Fri Jul 05 14:29:38 EDT 2013

Committee Statement

Resolution: FR-78-NFPA 1221-2013
Statement: This is a new subsection to be placed after the above section, existing 10.8.3. This is to provide a requirement keeping the records from being changed during a time frame set by the AHJ.
10.9.2
Storage Capacity shall be provided for the storage of a minimum of 100 days of history log data as determined by the AHJ.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG. Open records and record retention rule vary from AHJ to AHJ. Force a minimum amount may not be in line with AHJ requirements.

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 14:31:53 EDT 2013

Committee Statement

Resolution: The 100 day requirement is a minimum and a guide for the AHJ.
10.10.2

Wireless data communications systems that connect ERFs and administrative sites with the system shall communicate at a minimum rate of 9600 bits per second 56 kbps, with the ability to switch to a lower rate when needed.

Statement of Problem and Substantiation for Public Input

Recommend updating this requirement to 56 kbps to reflect the systems in current use. 56 kbps is the General Packet Radio Service (GPRS) data rate. GPRS is outmoded but still has wide use.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 02 15:19:20 EDT 2013

Committee Statement

Resolution: FR-79-NFPA 1221-2013
Statement: Updating this requirement to 56 kbps to reflect the systems in current use.
10.10.3
Mobile units shall communicate with the CAD system at a minimum rate of 9600 bits per second or 56 kbps, with the ability to switch to a lower rate when needed.

Statement of Problem and Substantiation for Public Input

Recommend updating this requirement to 56 kbps to reflect the systems in current use. 56 kbps is the General Packet Radio Service (GPRS) data rate. GPRS is outmoded but still has wide use.

Related Public Inputs for This Document

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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submital Date: Tue Jul 02 15:24:16 EDT 2013

Committee Statement

Resolution: In some areas mobile units may not be able to achieve this speed.
10.11.5.1
The MDC shall not require external power to maintain programmed functions.

ANNEX
The purpose of this requirements is to ensure that the MDC does not lose functionality when the power is lost. The functions of the device include the ability to use hot keys and key combination, not to function as a unit without power.

Statement of Problem and Substantiation for Public Input
This is filed on behalf of the CAD TG

Submitter Information Verification
Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 14:34:18 EDT 2013

Committee Statement
Resolution: FR-80-NFPA 1221-2013
Statement: Added the word external to clarify this section.
10.11.5.4
The MDCs shall provide the following functionality:

1. The ability to power on and off
2. A visual indication that the unit is energized
3. The ability to adjust display intensity
4. An emergency alert button that transmits a distress signal to the operations room
5. The ability to download updates for the MDC operating system and applications using wireless data communications.

Statement of Problem and Substantiation for Public Input

Recommend adding this section to support current and future system capabilities. The ability to update software using WiFi or a mobile hot spot and not having to send a technician to spend time with each mobile computer is a significant time saver for the system owners and operators.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
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City: 
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Submittal Date: Tue Jul 02 15:27:24 EDT 2013

Committee Statement

Resolution: FR-81-NFPA 1221-2013
Statement: New annex material. Added this text to annex to support current and future system capabilities. The ability to update software using WiFi or a mobile hot spot and not having to send a technician to spend time with each mobile computer is a significant time saver for the system owners and operators.
TITLE OF NEW CONTENT
The keyboard shall be visible in low and no light conditions as determined by the user.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address: 
City: 
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Submittal Date: Fri Jul 05 14:36:26 EDT 2013

Committee Statement

Resolution: FR-82-NFPA 1221-2013
Statement: Added text to create an illumination requirement.
10.12 Integrated Mapping Interface

10.12.1 The CAD system shall have the ability to interface with a Map Display system.

10.12.2 The Map Display system interface shall have the ability to accept spatial positioning data for calls for service and units from CAD, and position an indicator on the map based on that information, if the spatial location is available.

Statement of Problem and Substantiation for Public Input

Recommend that this section be added to support current and future system capabilities. The ability to locate an event or caller on a map is a critical component in emergency resource allocation. The public expects the PSAP to have the ability to locate a caller in need of service whether communicating from a land line or wireless connection.

Submitter Information Verification

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City: 
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Submittal Date: Tue Jul 02 15:34:14 EDT 2013

Committee Statement

Resolution: FR-83-NFPA 1221-2013
Statement: Added new section to support current and future system capabilities. The ability to locate an event or caller on a map is a critical component in emergency resource allocation.
Public Input No. 64-NFPA 1221-2013 [ New Section after 10.11.5.9 ]

10.13 Customer Premise Equipment (CPE) Interface
10.13.1 The CAD system shall have the ability to interface with the AHJ CPE.
10.13.2 The CPE interface shall accept a transfer of 9-1-1 emergency call data from the CPE to the CAD system.
10.13.3 The CAD system shall populate a call for service data entry form with the 9-1-1 data provided by the CPE.

Statement of Problem and Substantiation for Public Input

Recommend that this section be added to support current and future system capabilities. The ability for the CAD system to transfer call data from the 9-1-1 communications network via CPE to the CAD system data entry form saves time and preserves the accuracy of the 9-1-1 system data.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
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Submittal Date: Tue Jul 02 15:40:48 EDT 2013

Committee Statement

Resolution: FR-73-NFPA 1221-2013
Statement: These changes have been made to accommodate the inclusion of the new term of customer premise equipment elsewhere in the document.
10.14  Text Based Emergency Call Data

10.14.1 The CAD system shall have the ability to accept text based emergency call data.

10.14.2 When provided, the CAD system shall incorporate the text based emergency call data into the CAD call for service record.

Statement of Problem and Substantiation for Public Input

 Recommend this section be added to support current and future system capabilities. As the technology of handheld communications, messaging services and PSAP operations improves, the expectations of the public require PSAPs to have the ability to accept and act on text based requests for service. CAD systems have to be prepared to incorporate text based emergency calls for service into the CAD data entry function.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
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Submittal Date: Tue Jul 02 15:44:14 EDT 2013

Committee Statement

Resolution: FR-73-NFPA 1221-2013
Statement: These changes have been made to accommodate the inclusion of the new term of customer premise equipment elsewhere in the document.
10.15 Master Time Source Synchronization

10.15.1 The CAD system shall have the ability to interface with a master time source and synchronize the time clocks of all CAD workstations, servers and data entries with the master time source.

10.15.2 The CAD system shall have the ability to automatically update the time clocks of the CAD system without intervention of the AHJ.

10.15.3 The CAD system shall have the ability to automatically update the time clocks of the CAD system to adjust from standard time to daylight savings time (DST) and from DST to standard time.

Statement of Problem and Substantiation for Public Input

Recommend that this section be added to support current and future operational requirements. PSAPs are often requested to recreate an event in response to a complaint or legal action. Time clocks that are synchronized among CAD data entries, CAD workstations, CPE, radio and logging recorder is critical to the reconstruction of the history of an event.

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:
City:
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Submittal Date: Tue Jul 02 15:59:13 EDT 2013

Committee Statement

Resolution: See the FR changes made in 7.5.1 by the TC.
### Public Input No. 101-NFPA 1221-2013 [ New Section after 11.3.5 ]

| 11.3.5.1 | Analog telephone circuits shall be tested daily. |

**Statement of Problem and Substantiation for Public Input**

Clarification of the differences between analog and IP circuits.

**Submitter Information Verification**

- **Submitter Full Name:** Charles Berdan
- **Organization:** Alameda County Regional Emerge
- **Affiliation:** NFPA 1221 Technical Committee Technology Task Group
- **Street Address:**
- **City:**
- **State:**
- **Zip:**
- **Submittal Date:** Sun Jul 07 18:31:19 EDT 2013

**Committee Statement**

- **Resolution:** FR-65-NFPA 1221-2013
- **Statement:** Specify the language in the section to all emergency phone lines.
11.3.5.2
Public Safety Answering Point (PSAP) IP routes shall tested daily for incoming and outgoing transmissions.

Statement of Problem and Substantiation for Public Input

Incorporating IP routes will enable agencies to prepare for next generation technology. Testing should be conducted daily to ensure all communications paths are available and functioning properly.

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 18:39:39 EDT 2013

Committee Statement

Resolution: The technology is not available for such requirements in a minimum standard.
11.3.5.3
Policy Based Routing shall be monitored for integrity and tested on a yearly basis.

Statement of Problem and Substantiation for Public Input

The AHJ should develop a policy to test PBR. Recommend this be every yearly, or upon determination of a fault, quarterly. Monitoring for integrity would ensure the pre-determined PBR is functioning as required by the AHJ.

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Sun Jul 07 18:53:36 EDT 2013

Committee Statement

Resolution: The technology is not available for such requirements in a minimum standard.
11.3.5.5
Location Based Routing shall be monitored for integrity and tested on a yearly basis.

Statement of Problem and Substantiation for Public Input

The AHJ should develop a policy to test LBR. Recommend this be every yearly, or upon determination of a fault, quarterly. Monitoring for integrity would ensure the pre-determined LBR is functioning as required by the AHJ.

Submitter Information Verification

Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Technical Committee Technology Task Group

Committee Statement

Resolution: The technology is not available for such requirements in a minimum standard.
11.3.5 Public Safety Answering Point (PSAP) Telephone Testing.
Each incoming circuit of a PSAP shall telephone shall be tested daily.

Statement of Problem and Substantiation for Public Input
Clarification of differences between analog and IP circuits

Submitter Information Verification
Submitter Full Name: Charles Berdan
Organization: Alameda County Regional Emerge
Affiliation: NFPA 1221 Tachnical Committee, Technology Task Group
Street Address:
City:
State:
Zip:
Submittal Date: Sun Jul 07 18:29:23 EDT 2013

Committee Statement
Resolution: FR-65-NFPA 1221-2013
Statement: Specify the language in the section to all emergency phone lines.
Public Input No. 3-NFPA 1221-2013 [ Section No. 11.4.1 ]

11.4.1
Emergency and standby power systems shall be tested in accordance with NFPA 110.
11.4.1.1
Emergency power sources other than batteries shall be operated to supply the system continuously for 1 hour weekly.
11.4.1.2
The test for emergency standby power systems shall require simulated failure of the primary power source.

Additional Proposed Changes

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<th>File Name</th>
<th>Description</th>
<th>Approved</th>
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<tr>
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Statement of Problem and Substantiation for Public Input

I am confused. Why is there 11.4.1 and 11.4.1.1? I would like more explanation for these two standards. Currently (in Louisiana) we are rated by PIAL and not ISO. PIAL uses 11.4.1.1 as the standard to test the generators in our Communications Center. Neither the generator manufacturer nor our technicians recommend killing power and going through the switch weekly. It is causing unnecessary wear and tear but if we don’t we don’t get the rating. I was hoping that more explanation in these standards would clearly define how our emergency power systems shall be tested in the communications center and the fire stations.

Submitter Information Verification

Submitter Full Name: Kathy Rushworth
Organization: Shreveport Fire Dept.
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Mon Jun 17 12:59:19 EDT 2013

Committee Statement

Resolution: FR-66-NFPA 1221-2013
Statement: Sections are being removed from the text based on public input from users and manufacturer recommendations that running emergency power sources once a week is causing unnecessary wear on equipment.
### 14.4 Permitted Systems.
The following types of systems shall be permitted:

1. Automated telecommunications dial-out systems delivering recorded voice messages
2. Automated telecommunications dial-out systems with signals transmitted to a PASAA
3. Radio broadcast systems and tone alert systems using a PASAA
4. Wireless systems with a PASAA
5. Paging systems with a PASAA
6. Siren systems with loudspeakers
7. Integrated Public Alert and Warning System (IPAWS)

### Statement of Problem and Substantiation for Public Input
Recommend adding this section to support current and future system capabilities. IPAWS is a new system that takes advantage of the EAS, NWS Radio and new Wireless Emergency Alerts to deliver alerts to the public without the need for additional PASAA.

### Submitter Information Verification
- **Submitter Full Name:** DAVID HAMMOND
- **Organization:** MISSION CRITICAL PARTNERS
- **Street Address:**
- **City:**
- **State:**
- **Zip:**
- **Submittal Date:** Tue Jul 02 16:04:53 EDT 2013

### Committee Statement
- **Resolution:** FR-67-NFPA 1221-2013
- **Statement:** Adding this section to support current and future system capabilities. IPAWS is a new system that takes advantage of the EAS, NWS Radio and new Wireless Emergency Alerts to deliver alerts to the public without the need for additional PASAA.
Public Input No. 68-NFPA 1221-2013 [Section No. 14.5]

14.5 **Public Alerting System Alerting Appliances (PASAAs).**

PASAAs shall be capable of the following:

1. Receiving an alert data message (ADM) from a PAS.
2. Providing an audible alert in response to an ADM that meets the audible characteristics of an alarm as defined in **NFPA 72**.
3. Providing a visual alert signal in response to an ADM that meets the following requirements:
   - The signal shall be a flashing light that is red, orange, white, amber or blue in color.
   - The signal shall be used only for an ADM.
4. Providing a local trouble signal in response to a low-battery condition that meets the following conditions:
   - The trouble signal shall not use lights of the same color used for other purposes.
   - The trouble signal shall have a battery source of power that can serve as either the primary or secondary power supply.
5. Providing a local visual and/or audible trouble alert that is distinctly different from that used with an ADM, if the PASAA is capable of detecting loss of service or functions.

Statement of Problem and Substantiation for Public Input

Recommend that white (clear) and amber lenses/lights be included along with red and blue lights as a visual alert signal. The white/clear lens/light is used for fire alarm systems and amber is recommended/suggested for mass notification visual indicators in the NFPA 72, National Fire Alarm and Signaling Code. The ability to use existing code compliant visual indicators will make the deployment of the Public Alerting System more cost effective.

Submitter Information Verification

**Submitter Full Name:** DAVID HAMMOND  
**Organization:** MISSION CRITICAL PARTNERS  
**Street Address:**  
**City:**  
**State:**  
**Zip:**  
**Submittal Date:** Tue Jul 02 16:14:59 EDT 2013

Committee Statement

**Resolution:** FR-68-NFPA 1221-2013  
**Statement:** Clear and amber lenses/lights are included along with red and blue lights as a visual alert signal. The white/clear lens/light is used for fire alarm systems and amber is recommended/suggested for mass notification visual indicators in the NFPA 72, National Fire Alarm and Signaling Code.
Public Input No. 86-NFPA 1221-2013 [Sections A.10.4.2, A.10.4.4]

Sections A.10.4.2, A.10.4.4

A.10.4.2 --
A supervising station is a commercial or proprietary facility that receives alarm and supervisory signals where personnel are in attendance at all times to receive and process alarms and signals and notify the communications center or other appropriate entity. (See NFPA 72 for more information.)

A.10.4.4 --
Other systems could include Intelligent Transportation Systems, SMART Building Management Systems, pre-fire/pre-incident software systems, and so forth.

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 13:52:04 EDT 2013

Committee Statement

Resolution: FR-19-NFPA 1221-2013
Statement: A definition has been created for supervising station in Chapter 3 as a result of PI-73. No reason submitted to remove the annex for 10.4.4 the committee believes this language should remain in the document.
Public Input No. 85-NFPA 1221-2013 [ Section No. E.1.2.1 ]

Statement of Problem and Substantiation for Public Input

This is filed on behalf of the CAD TG

Submitter Information Verification

Submitter Full Name: Gordon Vanauken
Organization: Mission Critical Partners
Affiliation: This is filed on behalf of the CAD TG
Street Address:
City:
State:
Zip:
Submittal Date: Fri Jul 05 13:50:02 EDT 2013

Committee Statement

Resolution: FR-20-NFPA 1221-2013
Statement: Adding additional references to relevant APCO publications.
Public Input No. 70-NFPA 1221-2013 [New Section after E.2.2.3]

E.2.2.4 OASIS (Organization for the Advancement of Structured Information Standards)
Common Alerting Protocol v1.2
Common Alerting Protocol, v1.2 USA Integrated Public Alert and Warning System Profile Version 1.0

Statement of Problem and Substantiation for Public Input

Added reference material regarding Internet Protocol Public Alert Warning System (IPAWS)

Related Public Inputs for This Document

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Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address:  
City:  
State:  
Zip:  
Submittal Date: Wed Jul 03 09:18:13 EDT 2013

Committee Statement

Resolution: FR-21-NFPA 1221-2013
Statement: Title 47, Part 11 updated entry to include the full reference to the Document. There is no reference to Part 10 in the document. Also added reference material regarding Internet Protocol Public Alert Warning Systems (IPAWS).
E.2.2.3 U.S. Government Publications.

Statement of Problem and Substantiation for Public Input

Title 47, Part 10 added for reference to Commercial Mobile Alert (Wireless Emergency Alert) system requirements
Title 47, Part 11 updated entry to include the full reference to the Document

Submitter Information Verification

Submitter Full Name: DAVID HAMMOND
Organization: MISSION CRITICAL PARTNERS
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Wed Jul 03 09:11:51 EDT 2013

Committee Statement

Resolution: FR-21-NFPA 1221-2013
Statement: Title 47, Part 11 updated entry to include the full reference to the Document. There is no reference to Part 10 in the document. Also added reference material regarding Internet Protocol Public Alert Warning Systems (IPAWS).