

Homeland Security

MOSCAD Fire Station Alerting Solutions

An Add-On to an Existing Communication System to Support Fire Station Alerting Requirements

As the Nation re-examines its Homeland Security practices, how we provide fire protection to public and private institutions will definitely be scrutinized. Motorola can be a partner in Fire Station alerting plans because of our distinct competence in two-way radio communications and expertise in data transport over two-way radio systems.

Competence

Motorola has been involved with signaling over two-way radio for more than thirty years. The sophistication of signaling methodology has continuously evolved with advances in technology and with increased expectations within the marketplace.

- ◆ *Motorola continues today to demonstrate its high expertise in the advanced use of communications technology.*

Reliability & Redundancy

A Motorola Fire Station Alerting (FSA) system communicates over a Motorola Trunked two-way radio system. Motorola FSA also operates over IP networks, DataTAC, Conventional RF systems and leased lines. MOSCAD provides a high degree of reliability regardless of the medium utilized.

- ◆ *Trunking provides automatic repeater redundancy in the event of a failure.*
- ◆ *The MOSCAD system supports redundant communications interfaces to the CAD or Manual Alerting computer. (Radio/Radio, Radio/IP, etc)*

Alerting Speed

A speedy response to new incident is paramount. The time required to notify the fire stations of a new incident must be minimal.

- ◆ *Alerting commands are transmitted to all the fire stations using broadcast messaging. Only those stations selected for the incident by CAD or the Dispatcher will respond.*
- ◆ *The notification procedure is simple so as to minimize delays associated with incorrect operator actions.*

Non-Invasive

The MOSCAD Fire Station Alerting system uses two Trunked radio “talkgroups” to notify the fire stations of a new incident. The data signaling will utilize one talkgroup and the follow-on Dispatcher voice message will use a second talkgroup.

- ◆ *Separate talkgroups insure that voice communications will not disrupt the data signaling.*
- ◆ *Separate talkgroups insure that voice users will not hear the data signaling.*

Alert Tone

A ramped heart saver pre-alert tone will be heard within the involved fire stations at the beginning of a notification.

- ◆ *The alert tone is sounded through the PA system to gain the firefighter’s attention for the voice message that follows.*
- ◆ *Separate alert tones may be used to inform the firefighters of the type of alert.*

Automatic Actions

The notification message consists of the data component followed by a voice component. The data component specifies which fire station(s) are to participate in the incident. The data component will also activate the in-building PA system.

- ◆ *The firefighters in the involved fire stations hear the voice dispatch message so they learn the details of the incident.*
- ◆ *Fire Station Audio Zoning (5 switched, 1 common) is supported through the use of the Audio Control & Tone (ACT) module.*



Ancillary Actions

The data component of the notification message can also automatically control additional functions. These may include turning on lights within the building, opening the bay doors associated with the affected apparatus, controlling the traffic control signal in the street outside the fire station, activating the building's alarm system, and even turning off the stove in the kitchen.

- ◆ *Automation frees the firefighters from routine tasks so they may focus on the new incident.*

Dispatch Center

Fire Station Alerting software may be added to existing Motorola Gold Elite voice dispatch consoles. Standalone PC-computer FSA workstations may be included within the dispatch center.

- ◆ *FSA and voice dispatch activities may be integrated into a common workstation. Actions executed within the FSA segment are visible to all other operators and logged within a single log file.*
- ◆ *FSA and voice dispatch may be kept separate whenever appropriate.*

CAD Interface

Many Fire Station Alerting system utilize Computer Aided Dispatch (CAD). Motorola has available an API that specifies all available MOSCAD FSA functions for the CAD integrator. The FSA system manages the remote data messaging and the RF communications on behalf of the CAD system.

- ◆ *The reliability and redundancy of the FSA communication system becomes available to the CAD system.*

NFPA 1221

The NFPA 1221 specification defines the equipment and operation requirements for fire station alerting systems. Included are the definitions of redundant dispatch, switch-over, supervision, dual power sources, and more. The Motorola Fire Station Alerting system conforms to the requirements of NFPA 1221.

- ◆ *The increased reliability and lower insurance rates commonly available when conforming to NFPA 1221 are available to users of Motorola FSA.*

Specifications

Fire Stations:

Up to 127 Fire Stations.

Consoles:

Up to 15. Each Alerting Console views the stations selected by all other console positions.

Fire Station Interfaces:

Control and Monitoring of station doors, control and monitoring of security system, monitoring of fire panel, control and zoning of station lights, control of electrical appliances, control of colored indicator lights.

ACT (Audio Control & Tone) Module:

RS232 Controlled by the MOSCAD RTU. Supports the recording of up to 6 audio files including tone & voice from a laptop. Supports zoning of audio for up to 5 zones within the Fire Station.

Fire Station Hardware:

MOSCAD or MOSCAD-L with a two-way radio or other communication device that is compatible with the communication infrastructure.

Communications:

MOSCAD and MOSCAD-L support two-way conventional and trunked radio in the VHF, UHF, and 800 MHz bands. Both products also support Ethernet (IP) connectivity on the user's Intranet Wide Area Network.

Dispatch Location:

Hardware: PC-type computer with 400 MHz clock, 512k cache, 128 Mbyte RAM, 1 Gbyte hard drive, 2 serial and 1 parallel ports, CD-ROM drive, printer, and MS 2000 OS.

Software: InTouch, Development Version.

Alarm Paging:

The management hardware/software may support alarm paging. Key alarms may be forward to an off-duty or roaming operator. A connection between the management computer and the paging service provider is required.



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