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PURVIS Fire Station Alerting System™

The PURVIS Fire Station Alerting System (FSAS) is an award winning, IP-based alerting solution designed to enhance communications and decrease response times. Intended for use specifically as a fire station alerting system, the rich features and functionality proactively support the day-to-day operations and environmental health, comfort, and safety of first responders. Our lead system architect is a principal member of the NFPA committee responsible for the 1221 standards, and the system meets or exceeds all current NFPA requirements.

The PURVIS FSAS interfaces seamlessly with computer aided dispatch (CAD) systems to fully automate the entire alerting process from a dispatch center to fire stations and remote personnel. The system receives data signals from dispatch and provides simultaneous, automated dispatching to fire and EMS personnel over multiple channels. For example, a call may arrive at a dispatch center that relates to a serious fire emergency. Using the CAD console, the dispatcher enters the incident information into the CAD system and determines which stations and units should respond. The PURVIS FSAS then automatically generates an instantaneous communications flow, which may include the following innovations from PURVIS:

VOICE COMMUNICATIONS
Voice communication is broadcast to all appropriate stations and responding units. In a traditional system, the CAD operator must personally call all responding units and repeat alert information. With the PURVIS FSAS, voice communication does not require the CAD operator to speak. Instead, the incident information is automatically converted from text to speech and an automated sequence of alert tones and a text-to-speech announcement is simultaneously delivered to station loud speakers across all relevant fire stations. Audible announcements are also delivered via radio to responding units in the field.

DATA COMMUNICATIONS
Incident data is instantaneously delivered to a variety of station devices – including rip and run printers, as well as LCD or LED display panels that provide the details of who should respond to the emergency, and the location and nature of the incident. Adding data to the alert process improves clarity of the information and provides first responders, via the rip and run printer, a printed notification they can take with them.

DELIVERING IMMEDIATE ALERTS TO FIRE STATIONS AND FIRST RESPONDERS

BENEFITS

PERFORMANCE YOU CAN COUNT ON

- Improved response times through streamlined dispatch communications and reliable alert delivery
- Reduced stress on first responders through automated heart-friendly, zone-specific alerts
- Accurate incident alerting through a variety of devices
- High system reliability and availability through real-time monitoring and built-in redundancy
- Cost-effective investment by seamlessly integrating and leveraging existing systems and devices
- Highly configurable system tailored to meet unique current and future requirements of the department
- NFPA compliant to keep you within recommended guidelines

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STATION DEVICE CONTROL

The PURVIS FSAS can control a variety of station device types and quantities. In addition to generating audible announcements and displaying information in both print and on-screen formats, the PURVIS FSAS can control multi-colored incident lights and turnout timers - which can be stopped after a pre-configured timeframe, or via push buttons or motion sensors. Motion sensors automatically stop the turnout timer when an apparatus leaves the drive bay. Device control further helps station personnel manage the entire response process by illuminating egress lighting in sleeping quarters, opening garage bay doors, automatically shutting off kitchen stoves, controlling exterior lights and more.

PURVIS customers also have the option of installing a camera at the front door of the fire station along with 2-way audio communications. This provides a video and audio feed not only to the interior of the station, but also to the communications/dispatch center. Any visitor to the fire station can get immediate assistance, either from station personnel who can receive a "visual" on the caller before answering the door, or from the dispatch center if station personnel may be away or unavailable.

ZONE MANAGEMENT

Because the PURVIS Fire Station Alerting System is designed with input from firefighters, it is highly sensitive to the needs of firefighters and other fire responders. Ambient noise sensors automatically adjust incoming alerts to the optimal volume for comfort. Zoning options allow for alerting by unit, incident, or code type to ensure only those who need to be alerted are. And heart-friendly configurations, such as ramped audio and night-vision lighting capabilities protect sleeping fire personnel by reducing the starting effect of a full strength audio or visual alert.
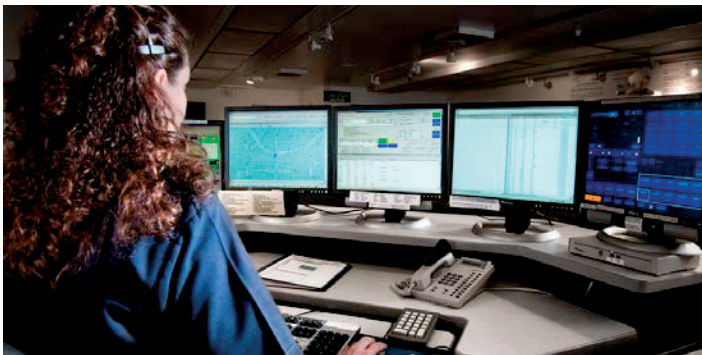
REMOTE PERSONNEL

A key, differentiating strength of the PURVIS FSAS is its ability to alert emergency personnel no matter where they may be located. In today's highly mobile society, firefighters and rescue personnel may be anywhere. The PURVIS FSAS system is uniquely sensitive to the communication needs of emergency personnel, taking into account their different roles, potential locations, time of day, and relevance to the incident. As a result, the FSAS can integrate individuals into the alerting process via multiple channels, including radio and pager, cell phone, and/or smartphone leveraging voice, text, and data.

SUPPORTS BOTH NEW AND EXISTING SYSTEMS

The PURVIS FSAS is a modern system that offers the above-referenced innovations delivered in a highly available, and easily managed format. And, consistent with PURVIS' general business model, it can be integrated in a modular fashion into legacy environments where specific, existing communications systems or legacy station devices need to be embraced as part of the final solution.

Operational Overview

DISPATCH

PURVIS provides a Central Server, typically be located at the Dispatch Center, which integrates into your community's CAD system and if desired, your radio system as well PURVIS also provides a management console for the FSAS which is used for configuration management, system monitoring, and can also be used as a backup fire-dispatch system should the need arise. Additionally, the management console can be used to send general announcement messages to fire stations and remote personnel.
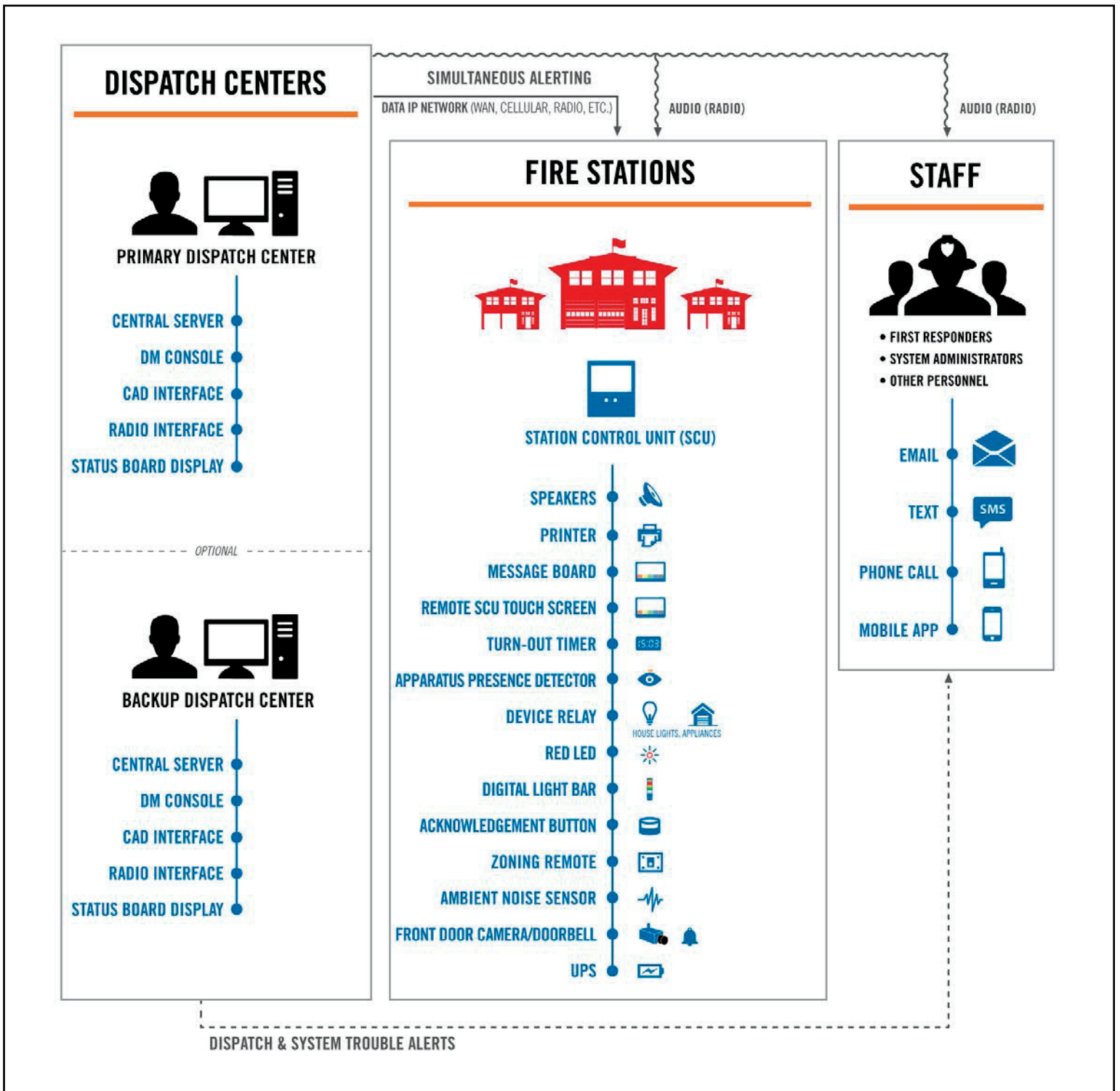
FIRE STATIONS

Fire stations can be integrated into the alerting system's network via multiple communications paths. Unlike other systems, the PURVIS FSAS does not distinguish between "primary" and "secondary" alerting paths. Instead, each and every alert is sent simultaneously over both paths. One of these paths could be your municipal or county WAN, if one already exists. Another path can be a data radio network, a cellular connection, or other private network that may be currently in place. Additionally, PURVIS can leverage you existing audio radio network for voice communications. Depending on your needs, PURVIS may install a Station Control Unit in each fire station to allow for the activation and operation of a wide variety of station alerting devices. These devices include speakers, turn-out timers, colored light towers, LCD/LED panels, a front-door video camera, and much more.

REMOTE PERSONNEL/STAFF

Recognizing that not everyone who needs to be alerted is always "in station," the PURVIS FSAS delivers incident notifications to remote personnel via radio and via mobile devices through 3G/4G cellular networks.

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SYSTEM OVERVIEW

DISPATCH CENTERS

SIMULTANEOUS ALERTING

DATA IP NETWORK (WAN, CELLULAR, RADIO, ETC.) AUDIO (RADIO) AUDIO (RADIO)

PRIMARY DISPATCH CENTER

CENTRAL SERVER
DM CONSOLE
CAD INTERFACE
RADIO INTERFACE
STATUS BOARD DISPLAY

OPTIONAL

BACKUP DISPATCH CENTER

CENTRAL SERVER
DM CONSOLE
CAD INTERFACE
RADIO INTERFACE
STATUS BOARD DISPLAY

FIRE STATIONS

STATION CONTROL UNIT (SCU)

SPEAKERS
PRINTER
MESSAGE BOARD
REMOTE SCU TOUCH SCREEN
TURN-OUT TIMER
APPARATUS PRESENCE DETECTOR
DEVICE RELAY — HOUSE LIGHTS, APPLIANCES
RED LED
DIGITAL LIGHT BAR
ACKNOWLEDGEMENT BUTTON
ZONING REMOTE
AMBIENT NOISE SENSOR
FRONT DOOR CAMERA/DOORBELL
UPS

STAFF

• FIRST RESPONDERS
• SYSTEM ADMINISTRATORS
• OTHER PERSONNEL

EMAIL
TEXT
PHONE CALL
MOBILE APP

DISPATCH & SYSTEM TROUBLE ALERTS

SYSTEM SCHEMATIC

The image above provides an overview of the PURVIS Fire Station Alerting System representing how it encompasses the Dispatch Center, Fire Stations and Personnel (Staff).

PURVIS SYSTEMS

System Highlights

Dispatch
- Seamless, automated integration with CAD systems
- Instantaneous delivery of incident notifications
- Clear text-to-speech technology eliminates need for CAD operator to make calls
- Integration with existing analog and/or digital radio networks
- Built-in system management and monitoring
- High-availability design and implementation

FSAS communications travel simultaneously over multiple paths, including radio, to fire stations and to remote personnel. Redundant network connections ensure high-availability of the alerting system.

Stations
- A wide variety of station devices can be integrated for activation and operation
- Can utilize and/or modernize existing devices and systems
- Zone control ensures only those who need to be alerted are alerted
- Ramped audio and night-vision lighting reduce the startle-effect on sleeping first responders
- Station can acknowledge alert back to Dispatch

Remote Personnel
- Contact remote personnel via radio or pager
- Contact remote personnel via text, email, and voice over 3G/4G cellular networks

Monitoring/Management
- Easily manage and monitor the system via PURVIS management console
- Securely and easily integrates with a variety of devices and off-the-shelf software to allow for both ease of support and expansion
- Comprehensive self-monitoring of system health
- System trouble alerts delivered automatically to key personnel when problems arise
- High-availability design, along with self-monitoring, ensures uptime
- Advanced reporting provides access to an array of reports for auditing and matrix purposes

The PURVIS configuration and management screens have a touch-screen design, and automatically reflect the data that resides in the CAD system, due to a tight level of integration. System health monitoring is an important component of ensuring 24×7 uptime for your mission-critical operations, which the PURVIS system provides. For example, if a network link is down, an audible and visual alert is automatically sent to the dispatch center and to the affected fire station(s). At the same time, an alert is sent to designated personnel via e-mail. The system can also send alerts via SMS text messages and phone calls.

NFPA Compliant
The PURVIS Fire Station Alerting System is fully NFPA compliant.

Services and Support
- Industry leader in relevant experience
- Platinum level service and support
- Fully equipped maintenance facilities supporting 24×7 operations
- Proven methodology for planning, implementation, testing and customer training
- Non-proprietary devices and replacement parts

PURVIS is a service leader in the industry.

PURVIS takes client relationships very seriously. Our experience in servicing the communication needs of busy fire departments started 39 years ago in the City of New York. Today, the FDNY is the largest municipal fire department in the United States. The fact that they continue to rely on PURVIS for systems design, implementation, and service is a testament to our passion for supporting our partnerships.

The first-hand experience of the PURVIS team can't be matched. Our ability to maximize the utilization of existing equipment, and our best practices approach to design and implementation, will ensure the on time delivery of a solution that is tailored to fit your budget. And our comprehensive post-implementation service and support is designed to protect your investment over the extended life of your system.

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EQUIPMENT OVERVIEW

While PURVIS is uniquely effective at adapting its software-based system to your existing systems and devices, below is a bit more information on some of the standard components and devices that are commonly part of an FSAS solution.

Components and Devices

DISPATCH/MANAGEMENT CONSOLE
The PURVIS FSAS management console is a touch screen application providing a simple, user friendly, graphical interface designed to allow for efficient public safety communications. It provides an interface for system monitoring, configuration and reporting. Additionally, manual alerts and general announcement messages can be sent to station and remote personnel via the Management Console.

CENTRAL SERVER
The Central Server maintains a central repository of all configuration and connection information and is responsible for maintaining connectivity to fire stations, the CAD interface and the Dispatch/Management Console. During operation, the PURVIS FSAS Central Server processes CAD data transmitted by the CAD Interface and provides dispatch data to the fire stations and remote personnel involved in the incident.

RADIO INTERFACE UNIT
The PURVIS Radio Interface Unit is a rack-mountable device that connects the PURVIS FSAS Central Server into your existing radio broadcast system, so incident notices, converted to audio via our text-to-speech technology, are automatically delivered over existing radio channels.

STATION CONTROL UNIT
The FSAS Station Control Unit (SCU) is installed in each fire station and any other location which might require alerting. It is connected to the Central Server and operates all of the communications devices and appliances, including speakers, lights, cameras, zone controls, and more. It can be installed as a "black box" or with an integrated or remote touch screen.

SCU TOUCH SCREEN
Customers have the option of implementing the PURVIS Station Control Unit (SCU) Touch Screen display as a remote access/control device or as a display panel that is physically integrated with the SCU. It can provide a read-out of the incident report, a map of the incident location, consolidated incident reports, color-coded alerts, and an interface for zoning control and acknowledging alerts back to dispatch.

RED LED
The Red Night Vision Light is a low intensity LED light that illuminates pathways, doors, and stairs to provide safe egress at night. These lights reduce the startling effect of night time alerts and don't have a negative impact on the night vision of station personnel.

SINGLE COLOR TRIP LIGHTS
The Single Color Trip Lights allow the station staff to easily see when an alert is received. These lights are available in stationary, rotating or flashing form factors.

DIGITAL LIGHT BARS
The Digital Light Bar is a multi-colored tower light with up to five (5) individual color segments. Available colors are white, blue, green, amber, and red. Colors can be used to indicate responding units.

SPEAKERS
The PURVIS FSAS is able to interface with many existing sound, intercom, and public announcement (paging) systems. If new speakers are installed, PURVIS recommends self-amplified speakers in each audio zone, which provide a more redundant and highly available solution. PURVIS can supply various self-amplified speaker types to meet the installation requirements. Speaker types include: outdoor/high noise (drive bay); wall/ceiling. Speakers can also be installed with integrated unit lighting.

AMBIENT NOISE SENSOR
Ambient Noise Level Sensors detect the ambient background noise and amplify the audio being played to the associated speakers. In areas of the fire station where noise levels can be high, such as the drive bays, the PURVIS FSAS uses these sensors to ensure that critical audio alerts are audible over the background noise.

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Components and Devices (cont.)

FLAT PANEL DISPLAY
The PURVIS FSAS Flat Panel Display is available in various sizes from 13 inches to more than 46 inches and can be placed on walls throughout the fire station. These can show the fire station staff important incident information such as address, cross street, responding units, incident type and turn-out time.

LED READER BOARD DISPLAY
The PURVIS FSAS Reader Board Display provides incident information on high contrast and bright LED devices. The LED displays are easily readable at great distances making them ideally suited for installation in drive bays or other large spaces where high visibility is required. These displays will typically show the fire station staff the incident address, cross street, common name, responding units, incident type and turn-out time.

TURN-OUT TIMERS
The PURVIS FSAS provides a highly visible wall mounted Turn-Out Timer. The Turn-Out Timer begins counting upward in one second increments when the incident is received at the fire station. The timer continues to count upward each second until the responding apparatus has indicated that they are leaving the station. The system can also be customized so that the timer will stop when user-defined criteria has been met. Timer data is logged in the database, and can be accessed to perform Turn-Out Time data analysis.

APPARATUS PRESENCE DETECTOR
The Apparatus Presence Detector provides detection of apparatus in drive bay locations. This information is used to automatically record turn-out time on a unit by unit basis.

ZONING REMOTE
The PURVIS FSAS offers a Zoning Remote for fire stations that share a common dorm or bunk area with multiple apparatus units, officers, chiefs, or other general offices. The Zoning Remote is a wall mountable device that allows the user to select the alerting preference. The alerting preference is based on the specific apparatus type – or the user may select all apparatus.

FRONT DOOR CAMERA/DOORBELL
PURVIS can install a camera at the front-door of the fire station, along with 2-way audio communications. This provides a video feed into the station and also back to the dispatch center. Any visitor to the fire station can get immediate assistance, either from station personnel who can get a "visual" on the visitor, or from the dispatch center if station personnel may be away or unavailable.

MANUAL ACTIVATION SWITCH
The Manual Activation Switch provides the ability to manually activate the system if connectivity with dispatch is lost or if an incident occurs at the fire station requiring immediate response. In a manual activation scenario, all devices at the station will be activated.

PRINTER
The PURVIS FSAS Rip and Run printer is a thermal style printer. This printer type decreases the likelihood of failures associated with ribbons, toner, ink cartridges, and paper. Incidents received at the fire station are printed immediately to the printer. The information printed typically includes the incident type, the address, the apparatus dispatched, and other comments and can be configured to your specific needs.

Contact us to arrange a Live FSAS Demo!

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