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E9-1-1 SOLUTIONS OVERVIEW

Enabling Superior Management of 9-1-1 Calls

ENABLING SUPERIOR MANAGEMENT OF 9-1-1 CALLS

SAFETY IS YOUR RESPONSIBILITY. ENHANCED 9-1-1 IS OUR BUSINESS.

Providing a safe and secure environment at your facility is one of your most important responsibilities. A very high-profile aspect of that responsibility is the way your organization responds to and manages emergencies. When an emergency occurs, a complex process involving many internal and external resources is set in motion to identify the source and severity of the situation, protect people and property from danger, help 9-1-1 callers quickly—and finally, understand the cause and measures your organization could take to prevent future incidents and the liability they cause.

The first step in this process is usually the simple "9-1-1" call made directly to a local public safety answering point (PSAP) center, where agents can quickly assess the situation and send appropriate resources to the scene. That call may seem simple, but the information available to the agents is crucial. Home telephone systems automatically provide the exact location of the phone being used, but if you have a private branch exchange (PBX) system, your best efforts to prepare could be nullified by the system's inability to provide the same information.

That's because when an individual dials 9-1-1 through a PBX switch, the information passed along to a 9-1-1 answering point usually contains only the billing address of the facility and NOT the exact location (e.g., building 222, room 416) of where the call originated. Depending on how your system is configured, that could send emergency responders to the wrong address, or at least to a location with many offices, floors and unidentified telephone locations. The time wasted as responders locate the source of the emergency can increase danger to people and property, and cause irreparable harm to your organization's reputation.

Fortunately, advances in software and telephone technology put solutions to this problem within reach of any organization.

SPOK HAS MORE THAN 400 CUSTOMERS IN THE U.S. PROTECTING THEIR EMPLOYEES, STUDENTS, AND VISITORS WITH ENHANCED 9-1-1.

THE RIGHT SOLUTION

Spok® Enhanced 9-1-1 (E9-1-1) solutions give you the tools you need to protect your most valuable asset: your people. The solutions pinpoint a 9-1-1 caller's location and pass it along to the PSAP. This kind of reliable, automatic transfer of information will help you provide vital, lifesaving information to the 9-1-1 public safety network and notify the appropriate onsite personnel that an emergency call is in progress. Ultimately, this speeds response for the 9-1-1 caller.

SPOK'S ENHANCED 9-1-1 SOLUTIONS

VoIP Phone/Wireless Phone Tracking Gateway

ALI Alert	Virtual E9-1-1	Enterprise Alert

FROM THE RIGHT COMPANY

Spok has been helping organizations like yours automate, centralize and standardize mission-critical communications for decades. With thousands of enterprise-level installations currently in place, Spok's proven technology platform, applications and expert services support many of the most vital communication systems and processes in the world.

> ❯ "Having a phone system that's reliable is a key way for us to make sure our students, staff, and visitors are as safe as possible."
>
> Clay Cottles
> Technical Services Manager
> Mesquite Independent School District
> Dallas

SPOK'S E9-1-1 SOLUTIONS: THE RIGHT WAY TO HANDLE 9-1-1 CALLS

PINPOINT A CALLER'S EXACT LOCATION

Spok's E9-1-1 solutions make sure the exact location of the 9-1-1 call—not just the billing address—is passed to a 9-1-1 answering point. In case the caller cannot provide this information, you know the software has taken care of it, allowing the first responders to quickly reach the emergency and avoid confusion about where to go.

NOTIFY ONSITE STAFF IN REAL TIME

Spok's E9-1-1 software provides real time, onsite notification when 9-1-1 is dialed. With this feature, onsite personnel get a quick snapshot of what's happening and provide valuable first responder assistance—instead of just waiting for the 9-1-1 team to arrive. This kind of alert may mean the difference between life and death.

Spok's solutions allow you to notify many different locations about the 9-1-1 call. Easily alert staff at a security desk, guard shack, PBX attendant location, or any other desired location in the enterprise. Spok also provides flexibility in how you notify people because it supports phones, pagers, wireless devices or screen pops to computers.

Screen pops not only alert onsite staff, but they also provide specific information about a caller or location, such as a critical medical condition or the presence of hazardous materials. This extra information allows onsite personnel to better assist when emergency responders arrive.

UPDATE THE ALI DATABASE

Locating a 9-1-1 caller is based on having accurate information in the public location database, known as the automatic location identifier database (ALI). When you place a 9-1-1 call, your location is passed to the emergency call-takers. Many organizations don't realize that maintaining accurate information in this ALI database is their responsibility. Spok takes care of this by tracking and maintaining your organization's moves, adds, and changes and automatically updating the ALI database accordingly.

TRACK VOIP CALLS THROUGHOUT YOUR ORGANIZATION

Today, many organizations are using voice over Internet protocol (VoIP) telephony. This technology gives rise to the unique challenge of tracking wired and wireless IP phones, which are designed to be easily mobile throughout an organization. Spok's E9-1-1 solutions track these phones and where they are used, allowing individuals to change the location of their phone but still be identified. Within a VoIP environment the system is notified of any changes in caller location. It then ensures that the caller ID sent to the PSAP represents the most current caller location based on the ALI database record accessed.

VIRTUAL E9-1-1 INTEGRATION

Within large enterprise networks that use multiple PBXs and/or remote shelves, a main PBX is usually designated as the primary interface with the PSTN. The remaining PBXs and/or remote shelves route net calls to the designated primary PBX. These enterprise networks can become very large and result in the physical locations of PBXs/remote shelves residing in different PSAP jurisdictions, or even in different 9-1-1 networks, than that of the main PBX. The advent of Voice over Internet Protocol (VoIP) has further increased the geographical networking capabilities, and remote IP phones may be deployed great distances from the main PBX. An IP phone's access to the main PBX may be over the enterprise's intranet or over the public Internet via a VPN (or a combination of the two).

The result of this geographical spread is that 9-1-1 calls that are routed through the main PBX may not be routable or transferrable to the correct PSAP, making automatic identification of the 9-1-1 caller's location impossible.

> "We got everything that we asked for from [Spok]. We went with them because nobody else could meet our needs. They've done that and more."
>
> Bill Shostak
> Senior Engineer of
> Telecom Engineering
> Foxwoods Resort Casino

SPOK'S VIRTUAL E9-1-1 INTEGRATION FEATURE PROVIDES A SOLUTION FOR THESE REMOTE SITES. THIS SOLUTION ALSO EXTENDS THE AVAILABILITY OF THE FULL SET OF SPOK'S E9-1-1 FEATURES TO THE REMOTE SITES.

DATABASE INTEGRATION

Spok's E9-1-1 is programmed to access a database behind the private switch/switch network with every customer/station. Location information is critical to this application, specifically for when the PSAP dispatches emergency response units. The Database Integration Module is a passive link from the existing database system to Spok's E9-1-1 system that provides up-to-date number and location information for the 9-1-1 call-takers.

CALL RECORDING

With the Remember Disk Digital Voice Recording feature, Spok's E9-1-1 solution automatically activates the voice-recording module when a 9-1-1 call arrives at the alert engine. The alert system is default configured for a storage capacity of 10 hours of voice recordings in standard WAVE (.wav) file format at a rate of 11.025 Kb/s (although the system is not limited to this 10-hour storage constraint).

Each recorded session is marked with the time, date, and identification of the calling party. The recorded files are stored locally for easy access and playback needs. Spok's E9-1-1 programming allows this data to be played on any PC utilizing Microsoft® Windows® with media-playback capabilities. By using the standard WAVE (.wav) file format, blocks of recorded sessions can be downloaded to a CD or other types of media for storage or playback purposes.

PASSIVE MONITORING

Providing onsite notification of a 9-1-1 caller's number and location information helps ensure E9-1-1 system integrity for business telephone systems and provides the same E9-1-1 functionality available to residences. Spok's solution translates and transmits this critical information to the E9-1-1 network and to on-premise dispatch systems.

An additional level of 9-1-1 caller intervention can supply the nature of the call (e.g., medical, fire, HAZMAT, or prank) by monitoring the voice segment of the call. Spok's E9-1-1 solution includes the capability to supervise a 9-1-1 call in "monitor only mode." Security or other appropriate personnel can listen to the voice segment of the call without "blocking" or interfering with the flow of the 9-1-1 call.

SPEED ONSITE RESPONSE WITH PASSIVE MONITORING

Passive monitoring allows security officers to listen to a 9-1-1 call in progress, thereby enabling them to assess the situation and respond accordingly. By understanding the situation, they can provide immediate help like providing first aid, handling crowd control or directing emergency first responders. In the case of a sick or injured individual, both organization officials and emergency personnel need to rush toward the situation. In a situation that threatens employee safety, staff and visitors must be rushed away from the scene.

MEET AND EXCEED E9-1-1 COMPLIANCE LEGISLATION

It is important to understand how compliance legislation fits into the E9-1-1 picture. Within the U.S., there is increasing legislation in many states that requires E9-1-1 for organizations. Spok has extensive experience in helping customers comply with both state and federal regulations. Spok's E9-1-1 solutions meet and exceed E9-1-1 compliance legislation for TDM as well as VoIP static and dynamic end points, end point tracking and discovery, nomadic VoIP users, and ANI and ALI updates.

ADVANTAGES OF SPOK'S E9-1-1 SOLUTIONS

- Links to call recording module
- Supports mixed PBX environment
- Monitors dedicated 9-1-1 trunks for proper operation
- Generates emergency call activity and hardware alarm reports

ABOUT SPOK, INC.

Spok, Inc., a wholly owned subsidiary of Spok Holdings, Inc. (NASDAQ: SPOK), headquartered in Springfield, Va., is proud to be a leader in critical communications for healthcare, government, public safety, and other industries. We deliver smart, reliable solutions to help protect the health, well-being, and safety of people around the globe. More than 125,000 organizations worldwide rely on Spok for workflow improvement, secure texting, paging services, contact center optimization, and public safety response. When communications matter, Spok delivers.

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