



Emergency Notification for First Responders and Citizen Populations

Going Beyond Yesterday's Technology to Improve Public Safety



SEMOTUS^{SOLUTIONS}

the wireless architects

Semotus Solutions - An AMEX Company

Your job: Preparing for the unpredictable.

Among other things, you need to have a system to alert first responders - and the citizenry - in emergencies that range from isolated house fires to statewide disasters in which millions of lives are at stake. You're responsible for instantaneous response to everything from terrorist attacks to forest fires to wind storms and to outbreaks of infectious diseases.

Yes, public safety organizations need to have plans in place to take responsibility for the health and safety of large numbers of people. And worst-case scenario planning requires establishing complex, hierarchically-structured paging groups of many different types of professionals that can be notified in a matter of minutes when needed. All the information concerning on-duty schedules, areas of specialization, etc. must be predefined within those groups to ensure an immediate, coordinated response.

But how well are you really equipped to notify the exact set of people within minutes of becoming aware of an emergency - large or small? In particular, how well has your organization deployed today's cutting-edge mobile communications technology to address this challenge? And how quickly can you alert large groups of endangered citizens?

HipLinkXS, with its easy to use desktop alerting features and embedded GIS application, enables you to execute your plans to:

- ⇒ Get people mobilized with as little delay and confusion as possible
- ⇒ Provide alerts and notifications under a single umbrella to the widest possible range of devices: phones, pagers, fax machines, email, PDAs, etc.
- ⇒ Deploy two-way messaging, ensuring that all alerts are received, confirmed and that first responders can effectively request more help if needed
- ⇒ Provide detailed logging and reporting
- ⇒ Automatically switch communication protocols or networks, in cases where a disaster knocks out a key piece of infrastructure
- ⇒ Generate immediate alerts for large groups of citizens in an affected geography, based on dispatcher defined parameters

Emergency Notification and Outdated Technology

-A Lethal Combination

Many local governments are relying on outdated technology, and suffer from issues that can severely compromise effectiveness.

Relying on radio - or computer-aided dispatch?

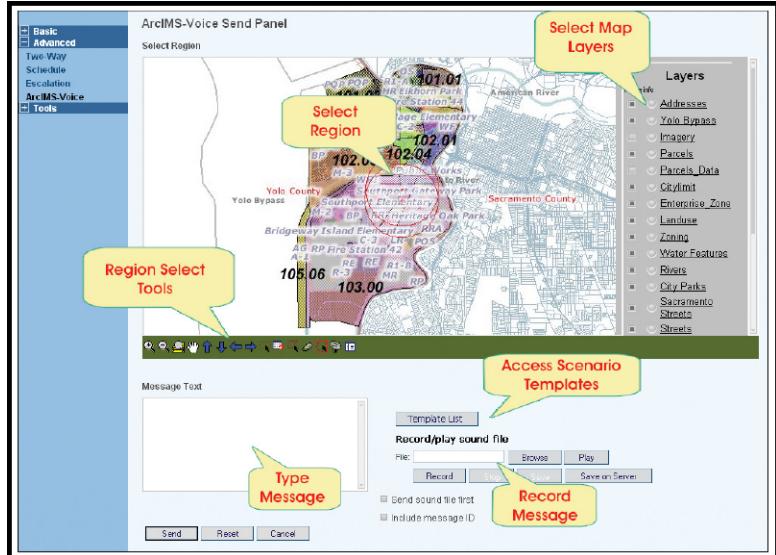
Then you've seen that:

- There is limited grouping, i.e., the capability to send an alert to the exact right set of on-duty personnel.
- Effective "delivery logging" is also very difficult - which messages were actually received?
- There is no "filtering." Responders receive messages that they have received again and again, and become desensitized or distracted by the messages.

Relying on email? Then you're probably concerned that:

- You never know how long a critical message can sit on a server before it's actually sent.
- Your email gateway or server maybe down or flooded.
- Feedback that messages have been received is often clumsy, and in many cases doesn't work at all.
- Most damaging, there is no two-way communication. For instance, the receiver of an SMTP alert to a pager cannot even acknowledge the notice, let alone request more help.

HipLinkXS for Citizen Mass Notification



HipLinkXS has been integrated with GIS applications that enable users to send notifications to citizens residing in a defined geographic region.

Users follow a simple, intuitive three-step process:

1

Pull up a detailed map and choose an area of interest, by:

- Drawing a free-form polygon
- Specifying a range of zip codes.
- Specifying a point such as an address.

The selection triggers HipLink to retrieve the relevant address list information from the GIS database, match the addresses to the proper phone numbers and pass it to the HipLinkXS voice module ready for delivery.

2

Create the message, by:

- Typing a text message to be electronically converted to voice, or
- Dynamically recording a sound file, or
- Selecting a pre-existing recording that's already saved

3

Send the message electronically to the call list and HipLink does the rest, automatically sending the message and generating a complete report of the received status of each call. HipLink can either use your own internal voice transmission facility or send the alert through a voice broadcast service.

HipLinkXS deployed by Stanislaus County, CA for Comprehensive Emergency Notification

The County is using HipLinkXS' core technology as a wireless messaging solution to coordinate first responders during or in advance of critical events. HipLinkXS can send messages to any wireless device by groups, and to entire departments or agencies across the County based on possible event scenarios, to establish real-time communication.

A further requirement from the County that was essential for HipLinkXS to meet was mass notification capabilities to the public using the ESRI GIS database already deployed in the county. Semotus Solutions has partnered with ESRI (www.esri.com) to integrate HipLinkXS with ESRI's

ArclMS software for this exact usage in the emergency response sector. By creating an interface with the ArclMS application and database of geographical information, such as plot maps, property lot numbers, and addresses, HipLinkXS is able to extract this data and match it with corresponding phone numbers and then use tools in its voice module to send messages to the public. Dispatchers can select from pre-recorded messages, text to speech technology, or do a live recording of a message to send to the public.

"Coordinated communication is the key to efficiently prepare for and respond to emergency events at all levels. HipLinkXS provides us with a very powerful tool for getting critical information out to effected portions of our communities in a timely fashion. This timely sharing of information can help us to mitigate the effects of a critical incident or disaster and potentially save lives."

noted Lt. Darrell Freitas of the Stanislaus County Office of Emergency Services.

"HipLinkXS is ideal for us because it's a two-fold solution. We can use it as a professional communication tool in all of the agencies that may be involved in response to a disaster, and we can use it to send mass notification to the public."

HipLinkXS for Notification of First Responders

HipLinkXS is the world's most advanced tool for providing emergency alerts to a complex hierarchy of internal personnel including managers, emergency operations departments, rescue teams, EMTs, firefighters, and law-enforcement personnel. Need to send an emergency message to ten people? One hundred? Ten thousand? HipLink supports virtually every carrier and device, and gives you the tools at your fingertips to create the fastest, most coordinated response to each emergency scenario.

HipLink lets your organization establish an unlimited number of groups that correspond to each of the different types of potential disasters that represent real threats: fires, infectious disease outbreaks, terrorist attacks, chemical spills, earthquakes, wind storms, etc. In fact, any scenario that you have already created a contingency plan for, you can create one or more groups in HipLink that correspond to that scenario.



When an incident that needs attention occurs, you can access HipLink from anywhere you have Internet connectivity. Click on a group, either type a message or select a template, and then press send.

HipLinkXS Features

As a platform, HipLinkXS provides a robust, secure, and highly scalable wireless communications software solution designed to meet the critical messaging needs of a major enterprise. HipLinkXS communicates with **any data or voice enabled wireless device** supporting numeric, alpha numeric or voice transmission of critical data and remote access to corporate systems.

Any solution needs to include the ability for both voice delivery of messages and **Interactive Voice Response (IVR)** functions. HipLink has advanced features for both built into its platform.

Benefits

- Easy to use web-based interface you can access anywhere
- It's easy to send messages to large groups of people all at once
- Assign unlimited levels of permission to users for increased security
- Supports all text and voice capable wireless devices and all major carriers
- People with more than one wireless device can receive messages on any one or all of their devices
- Easy to install and runs on numerous operating systems
- Flexibility to send messages to wireless devices with different carriers and protocols
- Administrators can accurately track all messages and monitor the effectiveness of their messaging system
- Robust message escalation capabilities ensures messages are never missed
- Administrators can quickly respond to system outages/application downtimes
- Employees may easily update their device specific information facilitating accurate delivery

Grouping



A major component of the HipLinkXS software is its grouping feature that ensures that the right messages or tasks are assigned to the right individuals all the time, at any time.

In some cases you may divide your organization by region, location, task or scenario and then assign specific individuals to the appropriate response. Once you have your group structure defined, you simply populate it with the individuals or groups you have for your everyday operation. You then can build a series of scenario templates using our message template feature and this enables very fast message creation and delivery with just a few drop downs or fields to fill in.

The types of groups include:

- ⇒ **Broadcast Groups** where everyone in the group gets the message.
- ⇒ **On-duty Groups** which allow you to schedule your resources and then send an alert to the one person on-call for proper distribution any time of the day or night.
- ⇒ **Rotate Groups** for even distribution.
- ⇒ **Escalation Groups** Escalation Groups for mission critical alerts that require confirmation. In the absence of confirmation, alerts can be automatically escalated to other team members.
- ⇒ **Subscription Groups** informational update group that allow for opt-in membership.
- ⇒ **Follow-Me Groups** allow multiple receivers to be set up for one individual and messages delivered by schedule or in order.

One of the unique features of HipLink is that any group can be nested inside another. This gives the organization powerful tools for building the response groups easily from the existing organization.

Creating Maximum Reliability – System, Device and Protocol Redundancy

In addition to supporting multiple wireless protocols, HipLink has **built in failover functionality** at the carrier and the receiver level that assures message delivery even if the primary delivery method should fail.

Departments



applications. HipLinkXS also offers a tight integration with the Siemens Fire System.

Even the most powerful solution can be inadequate if the administration and upkeep is dependent on one unit of the organization. HipLinkXS' Department feature allows for unlimited degrees of permissions to be assigned so that the distribution of administration and the user hierarchy functions can be delegated down, while preserving control. Smaller parts of the organization can support their own users, update schedules, and give permissions so that your wireless platform is always maintained and current with little, if any, impact on the organization as a whole.

With its powerful integration tools, HipLink has successfully integrated into hundreds of software applications, including dispatch, network tools, or Help Desk

Template Sending

Allows you to create templates to rapidly respond to scenarios that happen frequently where only unique parameters change. Rather than typing a new detailed message you can access a predefined message template and select specific parameters through drop-down menus and information entry fields.

Advanced Send Features

The Advanced Send features further enhance the send screen feature above by allowing you to set up automated response actions, schedules when messages will be automatically sent, automatic escalations associated with the particular message, and messages designed for fax and voice.

Template Wizard

Step 1: Select a template to use

Bomb Threat
Disaster Coordination
Flood
Inflight Emergency
Meeting Changed
Patient Missing
Security Breach
Severity
Shut Down
Trauma

Step 2: Complete the template wizard form:

Name: Bird Flu Outbreak

Description: Pandemic Template: Bird Flu

Form Wizard:

Warning: Possible Bird Flu outbreak has occurred at:

Please dispatch key personnel. Initiate quarantine:
 Level 1 Level 1
 Level 2 Level 2
 Level 3 Level 3

Signed - OES Director

Message Logging and Response

Every event and message is logged in HipLink. Using this information and **the reporting capabilities** of HipLink, a detailed picture that includes a statistical analysis of message activity and carrier performance can be seen for monitoring the effectiveness of a deployed wireless strategy. If you can measure it, you can improve it.

Two-way Remote Access The built-in two-way capabilities of HipLinkXS allow mobile employees with PDAs to access back-end data or execute actions remotely and securely. HipLink's **custom 2-way Application Builder** gives our clients a compelling tool to create specific applications with the commands and functions that are important to its users.

HipLinkXS in the Real World

Semotus Solutions, the developers of HipLinkXS, are proven experts in the wireless communications industry. In fact, we're pioneers of the "mobile revolution," empowering hundreds of organizations to send and receive critical notifications. The following are a sampling of HipLink at work.

County of Kern, California

Kern County is the third largest county in California. HipLink is deployed to serve approximately 5000 wireless devices starting in the Sheriff's Department. The Sheriff supplies police services to communities spread throughout the county. In addition to providing police services to the unincorporated portions of the county, the Sheriff has the responsibility for the jail system, providing bailiff and prisoner transportation service to the courts, search and rescue, coroner services, and civil process (serving lawsuit papers). HipLink has seamlessly integrated with their CAD (computer-aided dispatch) application to send messages to emergency and non-emergency personnel and is the conduit for traditional police dispatch, including broadcasting of messages to large groups.

How Are You Notifying Large Groups of People in Case of an Emergency?

- Are the messages received every time?
- By the exact right set of people?
- On the device that's best for them?
- Can they acknowledge and respond to the message?
- Is there an audit trail?

Government of Alberta

The Government of Alberta (GoA) is comprised of multiple committees, agencies and offices. HipLink is an integral part of the government's communication and network monitoring/ alert notification system. Seamlessly integrating with several in-house systems including Building Security and Building Control Systems, HipLink allows GoA employees to stay connected to their network and security infrastructure from anywhere, at any time, and instantly informs them of events and situations that require immediate attention. Also, the automatic failover capabilities of HipLink ensure that critical messages are delivered should the primary communication method fail.

Messages are automatically routed to a secondary, or backup, carrier or wireless protocol, drastically reducing communication delays and ensuring delivery of all messages. Another key benefit of HipLink realized by GoA employees is the ability to consolidate communications among the various government ministries and departments within Alberta.

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