

Automated Emergency Notification Will Speed Disaster Recovery

Roberta J. Witty, Kristen Noakes-Fry

Manually dialed telephone call trees are no longer acceptable for emergency notification. Effective incident management requires automation to ensure business continuity.

WHAT YOU NEED TO KNOW

A crisis incident is not the time to start planning your recovery. Plans and procedures must be in place and tested prior to an event that makes your business services unavailable. The initiation of recovery and the management of the incident are dependent on having your recovery teams in place. Therefore, notification of the recovery team members is the trigger to a timely and stable response. Companies should implement automated emergency notification products or services to ensure that personnel respond quickly and safely to an incident.

STRATEGIC PLANNING ASSUMPTION(S)

By year-end 2007, 75 percent of the Global 2000 will have emergency notification systems in place for employee communications in the event of a crisis (0.7 probability).

ANALYSIS

In a crisis, prompt notification of an organization's personnel, customers and suppliers is critical. Manual dialing from a telephone "call tree" is no longer sufficient because it is slow, often uses inaccurate or incomplete information, and is generally unsuitable for dialing even a few hundred users in a short time frame. On the receiving side, it is too easy for a message to be missed, mangled, misunderstood or undelivered.

The goal of emergency notification is rapid, consistent notification to anyone, anywhere, anytime on any device. As a result, many companies are turning to automated emergency notification tools or services to do the job.

Automated notification systems offer several advantages over traditional manual call trees:

- Key personnel can be notified in minutes, rather than hours, reducing the risk of employees taking the incorrect action or even being placed in danger due to a lack of instructions.
- A big gap in business continuity management (BCM) and associated plans is that they can be very internally focused. Therefore, communicating with clients and to the marketplace with preprogrammed public relations messages is as important as internal communications. Emergency notification tools can be used for this part of the stakeholder set as well.
- The same message is delivered to each person — eliminating the misinformation and rumors that so often accompany a crisis.
- Multiple messages can be sent over time, especially if conditions or instructions change.
- Multiple forms of communication can be included — land and cellular phone, pager, e-mail, fax, instant messaging, PDA (inbound and outbound) — until the person has been reached. In a large event, cellular phones may not work, while land line phones or e-mail-pagers do. The corporate network might crash, but employees can still manage e-mail from home offices and remote facilities.
- Receipt of the message can be confirmed, which is important for the management of recovery team formation.

- A documented notification audit log can be provided for real-time and post-event management.

Emergency notification is one component of the growing BCM software market. The other three components of this market are: business impact assessment (BIA) tools, business continuity plan development tools and incident management tools.

These tools offer many efficiency and effectiveness improvements to the management of the business continuity program, but the company cannot relinquish its responsibility for: 1) managing the business continuity program internally; 2) ensuring that IT and business units review and update their respective business continuity and disaster recovery plans, often housed in the BCM software products; and 3) requiring that IT and business units test their respective plans on a regular basis — quarterly or semiannually — for mission-critical applications, with each major IT infrastructure change.

Who's Buying

There are several touchpoints within the company who are the buyers of automated emergency notification products. The traditional buyer is the corporate business continuity manager or the chief information security officer, who sometimes has responsibility for the BCM program. However, enterprise efforts for personnel notification also are making the CIO or corporate communication director buyers as well. These new buyers are especially important when the buying decision is tied to a broader notification program that includes traditional IT incidents (such as server or network failures, and security breaches) or a corporate communications vehicle for personnel notification for business operational events such as a new business deal opportunity or an external event needing immediate attention in the market (for example, a change in the capital markets, or an emergency on the part of a major supplier).

What to Look For in an Emergency Notification Technology Provider

As with any BCM software technology provider, when looking for an emergency notification provider, look for one that:

- Has expertise in your industry (this is particularly important for regulated industries)
- Offers tools that are easy for the planning and recovery teams to learn and use
- Supplies training, technical support and consulting services
- Can export data into and out of its product suite and enterprise applications, such as HR applications, so that administration of the tool is faster and less prone to error
- Offers a family of products that enable the tool to be upgraded easily as the plan grows

What to Look For in an Emergency Notification Product

When looking for an emergency notification product, these features should be available:

Application Integration

- To ease the data management problem of ensuring contact and other personnel information is up-to-date for every incident, and to avoid creating another system of record for personnel information, an emergency notification product should integrate with business applications such as HR, corporate directories, e-mail, customer

relationship management, contingent workforce management and business continuity plan development software.

- For message delivery and ongoing management of the incident, emergency notification products should integrate with e-mail systems, telephony systems, emergency/incident management systems, help desk systems, other messaging and event-management systems, personnel skill databases (if separate from the HR application), external emergency notification systems such as the police and fire departments, geographical information systems, computer-aided dispatch (911 CAD), and Supervisory Control And Data Acquisition (SCADA) systems, and industry-specific emergency notification systems such as the "nurse call" system in healthcare.

Message Formation, Delivery and Cancellation

Support for custom, multiple messages that are preprogrammed and those that need to be developed on-the-fly:

- Use of text-to-speech to convert messages in text form to speech prior to message transmission, and to ease the administration of message creation due to the growing number of messages generated during an incident
- Use of TDD/TTY as an option to deliver messages to hearing-impaired employees
- Expansion of two-way communications on wireless devices (some of these devices are limited to a defined number of characters and some messages are too long)
- Multiple forms of notification — land phone, cell phone, e-mail, pager, PDA, wireless, fax, instant messaging, Short Message Service and satellite phone
- Automatic rollover to another device, and all within a specific time frame
- Grouping of notification receipts into teams, groups or other management strategy
- Canceling an event — going back to those already called and notifying them in the case of a false alarm

Incident Management

- Call bridging and conference call support; this is especially important for incident management command center personnel who may not be in easy commuting distance of the physical command center location. A delay of more than a few minutes in converging at least the virtual recovery team is typically not acceptable. You can use the technology provider's telephony infrastructure or your own to help manage costs.
- Two-way communication, sometimes referred to as roll call, context-based calling or "find me/follow me" capability that provides information back to the company from contacted individuals on conditions such as health status, location and availability so that the formation of recovery teams can be monitored during the incident.
- Rule-based processing for the escalation of certain events such as "no response" from a recovery team member within a certain time frame.

System Activation and Management

- Multiple forms of system activation — phone, direct access to the system or via the Internet
- The use of templates to group like notification scenarios, messages and conditions to speed up the efforts of the emergency notification system administrator during a crisis
- Scalable by users and the number of dials within a certain time frame that meet the needs of your company. The product must be able to support the company's telecommunication needs based on the number of calls needed to be made in a certain time frame
- Grouping of personnel into categories such as teams, departments or facilities to make emergency notification and management of the incident more manageable and intuitive
- A Web-based interface for ease of system administration
- Product security, given the confidentiality of the information stored in emergency notification systems, authentication and authorization controls in the product itself must be ironclad; encryption might be required for secure storage of the information within the system's database
- Attachment support for organization charts, other contact information and special instructions
- Easy and flexible reporting capability
- A secure audit log of all call activity, including tests and the management of real incidents
- A private personal identification number (PIN) for certain personnel (such as executive management) to access the system and to receive confidential information sent to them

Outsourced vs. On-site Systems

Because of the cost of maintaining the number of dial-out lines needed for timely notification of personnel in an emergency, the trend has been toward hosted, or outsourced, emergency notification services. If you have strict secrecy or privacy requirements over a large portion of the contact information of your personnel (for example, identities must be masked for personnel safety reasons), then you will be inclined to house the emergency notification system on-site within the company. Government agencies tend to be in this category of implementation.

For an outsourced emergency notification service provider, look for one that:

- Has multiple, hardened facilities that ensure continued operations in the event of a failure within its own production environment
- Has telecommunication throughput capability large enough to meet your emergency notification needs (for example, 5,000 calls within 10 minutes)
- Has around-the-clock, everyday service and support
- Can demonstrate compliance with your company's information security policies, especially for sensitive information

For companies with strict secrecy or privacy requirements, look for a service that uses strong encryption of the information in the databases as well as a secure channel between you and the service provider.

Pricing Models

Pricing for emergency notification products and services depends on the implementation model — outsourced or on-site.

For an outsourced service, pricing is based on four factors:

- A basic service fee for the number of message recipients documented in the system
- The number of calls that need to be supported — including test and actual incident projections. Simple Mail Transfer Protocol and e-mail-based notifications are often free of charge; additional charges will be incurred for geographic differences in the calling population
- The size (which translates to length) of the message also plays a factor in the pricing (for example, the charge for 24 calls at one minute each in length is the same as 48 calls at 30 seconds each in length)
- Conference call capability is extra (for example, on a per-minute charge)

For an on-site implementation, total pricing is based on four factors:

- A hardware cost if the emergency notification system is housed on separate hardware
- A software license fee based on the number of message recipients documented in the system or the number of telecommunication lines supported by the system (based on the number of calls needed by the company)
- Production telecommunication capability based on the number of calls to be supported and the contact time frame (companies typically buy telecommunication support based on the number of guaranteed calls that need to be made at the time of an incident, so determining the number of personnel that absolutely need to be contacted within a certain time frame is critical to ensuring telecommunication capability)
- Recovery hardware and telecommunication capability must be built into the total cost of the implementation if the company determines that the emergency notification system must be recoverable (an alternative is to house the emergency notification system at your recovery site or service provider)

Table 1 shows some emergency notification technology providers and their products.

Table 1. Emergency Notification Technology Provider Marketplace

Technology Provider	Product Name/Description
Advanced Continuity	Floodgate Global Notification System
Amcom Software	eNotify
Amtelco	R.E.D. (Response to Emergency Deployment) Alert
Database Systems	911Broadcast
Dialogic Communications	Communicator!NXT

Emergin	Emergin Notification System
Enera	RapidReach
EnvoyWorldWide	EnvoyProfiles; partners with Strohl Systems for a full-capability offering
MessageOne	AlertFind; original equipment manufacturer to SunGard and IBM under private-label branding
MIR3	inEnterprise, inTechCenter, inAlert Center
National Notification Network (3N)	National Notification System
RecoveryPlanner.com	RecoveryPlanner v.4.0
Strohl Systems	NotiFind 2.0; uses EnvoyWorldwide telecommunication infrastructure and partners with IBM BRCS
SunGard Availability Services	Paragon Notification; partners with MIR3 to deliver this offering
SWN Communications	Send Word Now

Source: Gartner Research (February 2005)

Key Issues

What strategies, programs, disciplines and best practices will enterprises employ to improve their resilience in the event of a disaster?

REGIONAL HEADQUARTERS

Corporate Headquarters
56 Top Gallant Road
Stamford, CT 06902-7700
U.S.A.
+1 203 964 0069

European Headquarters
Tamesis
The Glanty
Egham
Surrey, TW20 9AW
UNITED KINGDOM
+44 1784 431611

Asia/Pacific Headquarters
Level 7, 40 Miller Street
North Sydney
New South Wales 2060
AUSTRALIA
+61 2 9459 4600

Latin America Headquarters
Av. Nações Unidas 12.551
9 andar — WTC
04578-903 Sao Paulo SP
BRAZIL
+55 11 3443 1509