

Selecting the Right Outbound Notification and Emergency Communications System (Part 1 of 2)



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[Return to the article](#)

Leo A. Wrobel and Sharon M. Wrobel, of b4Ci Inc. and NaSPA, list the important qualities to find when choosing a communications system for emergency situations

<CRASH!>

"What in the world was that?"

Sharon and Leo have used that phrase a lot over the years, having raised seven children. It usually starts with a sudden loud noise originating upstairs with the kids. Leo usually tries to ignore the racket and not look up from the TV but Sharon can almost always be counted on to look up at the ceiling and yell, "What happened?!" particularly if sharp cries accompany the aforementioned household anomaly. "What happened?!" might just be the most popular phrase in our household, right after "When do we eat?"

Humor aside, isn't a phrase like this one literally the first thing anyone asks after an unusual event? It's the same when responding to a disaster. There is an immediate need for accurate information about precisely what happened. Based on that information, responders can make intelligent, informed decisions about what to do first.

Fortunately, today it's possible (and highly desirable) to automate this process with the help of many new and exciting technologies. But how can your company select a system from among the many options available? Should you use an outbound notification system? What about command-and-control communications, especially if the phone company itself is out of service? How will you accommodate inbound calls from your company's customers which are often the very lifeblood of your organization?

Many companies have responded to the growing need to maintain control in a disaster. A good one can help you to organize your recovery effort and stay in control, by helping you to get the word out immediately about the emergency, be it severe weather, fire, sabotage or terrorism, system failures, etc.

How do you begin to select a service or company? The primary considerations when evaluating the myriad commercial alternatives available today are as follows:

1. Alerting the right individuals to the disaster
2. Delivering instructions to orchestrate a safe and effective response

Let's examine the issues in more detail

It's All About 4Ci

Helmuth Karl Bernhard Graf von Moltke, a nineteenth century German field marshal, originated the famous quote, "No battle plan survives first contact with the enemy." No matter how well you plan for situations, a disaster introduces change and new complexities. Imagine terrified cavemen retreating after a well-planned skirmish, screaming, "They have clubs!" Every new development in human history since that time, from bronze to iron to gunpowder to nuclear weapons, has changed not only the face of battle but also the whole paradigm of a battle plan. Those who could quickly communicate and adapt had a better chance to respond and survive. Although we face a different enemy in the world of contingency planning, the same is true in our profession, where situations and required responses can change just as dramatically.

The U.S. military has long recognized the need for what it calls "4Ci," which stands for *command*, *control*, *communications*, *computers*, and *intelligence*. The first three elements should be self-evident; in order to recover from any disaster, you must be able to maintain command and control through communications. Computers (and other electronic aids) are part of the equation because decisions today often need to be made faster than people can make them. In this context, a "computer" may be a PDA, smartphone, laptop, or any other device that aids the responder in making faster decisions. Finally, in the context of 4Ci *intelligence* is the ability to determine what happened, with 100% certainty, in order to be able to coordinate recovery. First-rate intelligence means making first-rate decisions leading to a successful response, whereas inferior intelligence can lead to wasting valuable time following blind leads and inaccurate assumptions, at the very time when seconds count.

Considerations for Evaluating an Emergency Communications System

The 4Ci aspects of disaster recovery have become a lot easier, thanks to VoIP (Voice over I/P), managed PBXs, and some good old-fashioned innovation by commercial providers. These solutions offer a quantum leap in recovery technology on a subscription basis at zero capital expense, with just a manageable monthly cost. In our opinion, no recovery plan today is complete without an evaluation of what's available in this era. Look for a system with the following primary characteristics

- Outbound notification
- Inbound call recovery

The following sections discuss the details you need to check for each of these two feature areas.

Outbound Notification

In an emergency, if your phone system isn't working, or the provider is unavailable, how will you contact customers? How will you let employees and business partners know about the situation and the status of your organization? Our previous articles have discussed this topic in some detail, so the following list just highlights the major points to consider with regard to selecting a notification system

- **Does the system broadcast email?** Most of the people you will need to contact probably have a PDA, laptop, or smartphone that can receive email. Remember that the Public Switched Telephone Network (PSTN) may be a casualty of the disaster, and normal communication may not be possible. Email uses the VoIP protocol, which is a technology designed for disaster recovery. Years ago, military planners realized that AT&T primary toll offices might be destroyed in a nuclear exchange. This was the driving force behind creation of the Internet protocol (IP), in which semi-smart packets of information could find their way through the portions of the network that were still intact. The strengths of the Internet protocol work for commercial planners to this day. Email might still get through when a lot of other infrastructure is gone.

Examples: Take a look at [Dell MessageOne](#) for a smart commercial application of this technology. Another can be found in a package offered by a firm called [Telecontinuity](#).

- **Is text messaging available?** With the phone systems out, email still might get through but maybe not. If the situation is dire enough, even Internet service providers could be affected. Does that mean that you must remain out of touch? Not if you plan ahead. Consider the text messages that many of us send every day. These messages traverse the [Short Message Service](#) (SMS) network, not the Internet. SMS, also known as [Signaling System #7](#) (SS7), is the data network that tells the voice network what to do. It's quite a resilient system. A lot of emergency communications systems use SMS message notification and can allow you to broadcast thousands of text messages in a disaster. This system offers two obvious advantages:
 - The SMS network is different from the Internet, so even if your Internet service provider is out of commission, you still may be able to send out messages
 - Because most cell phones can receive text messages, many of the people you need to contact may already be carrying the equipment to receive your message

NOTE

A significant number of organizations block text messages to company phones, in order to control costs. If that's the case in your company, make sure that you also have a procedure to call your wireless provider immediately after a disaster to remove the block; otherwise, you could lose a valuable way to communicate in

a disaster.

Examples: Check out [Velleros](#) to see an SMS-based system in action. To find providers; just run a web search on *SMS messaging*.

- **Can the system initiate your emergency response plan in multiple ways?** Since it's impossible to say with certainty which telecom technology will survive after a disaster (wireless, landlines, email, etc.), planning for several options leaves you "room to live." Find out whether the system you're considering can be initiated via web connection, touchtone phone, wireless phone, or PDA. As an additional option, can the service provider start the system for you if you're completely cut off?
- **Will the system establish outbound conference calls?** One feature I enjoyed 30 years ago in the Air Force was the ability to pick up a phone, dial a special code, and have every command center that needed to be involved on the line with me based on the *specific disaster* that happened. At that time, the capability required a \$50 million [Autovon switch](#). Today, you can get that feature in a \$1,000 server or lease it from the right provider.

NOTE

Make sure that the response is based on the appropriate disaster. You don't want a cycling system that time-broadcasts heavy snow warnings to your Miami branch. With some foresight, many different response plans can be stored, based on probable scenarios and rooted in particular geographies. Search on *outbound notification systems* and you'll be amazed by the number of choices.

- **Does the service offer "find me/follow me" features?** Whether they're at home, in the office, or in the car and via pager, PDA, or text message, can you be sure that you'll never lose touch with key first responders? The "find me/follow me" feature tries all available devices until the person is located. There are more phones in service per individual now than at any previous time in recorded history. A service that rings each number automatically (home, office, wireless, etc.) saves you the trouble of documenting all those numbers.

NOTE

Make sure that "find me/follow me" works by dialing the person's *regular office number*, as opposed to a new one you have to remember and document! Plan for no more than one number per person, and use technology for the rest. Then keep that single contact number updated in your secure PDA or on your wireless phone.

Inbound Call Recovery

Don't just think about how you'll call out. Remember that a lot of people—employees, customers, clients, patients—may be trying to call *in*. It's possible that in an emergency these people will have no idea what has happened, so don't expect them to dial special emergency numbers, or to take any additional action whatsoever. By planning ahead, however, you can use technology to make the disaster transparent to anyone who calls. Look for the following features in any system you're evaluating:

- **Can the service redirect inbound telephone calls instantly?** You want to be able to send calls to any working telephone number—branch office, home phone, wireless, VoIP, satellite phone, etc.—*without* having to call the phone company. This feature obviously saves the time delay of trying to disseminate new emergency numbers later.

Example: [Telecom Recovery](#) has a very feature-rich offering.

- **Can the service duplicate the call prompts that exist today in your network?** If customers are used to pressing 1 for sales, 2 for customer service, etc., transparency preserves your normal business and makes callers believe that everything is okay, even if they know that a disaster has occurred.

Consider Your Responders' 4C Preferences (A parody by Leo and Sharonoor is it?)

Baby boomers:

- Want to talk on the phone

- Prefer the interaction of the spoken word
- Attend seminars, conferences, etc. (face-to-face contact)

Generation X:

- Want to email
- Attend webinars, not seminars

Generation Y:

- Prefer texting, rather than talking
- It had better be all about *them*

Generation Z:

- Cry long enough, the bottle or breast will come
- Who knows what *this* generation will have for 4Ci in 2030?

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Other Considerations

What kind of feature richness can you expect on outbound notification systems? Here are some of the options to consider:

- One system we've found lets the recipient press a number on the phone after hearing the recording, with three possible options:
 - Instantly be placed into voice conference with other members of the recovery team
 - Be connected with a live person
 - Hear more detailed instructions
- That's a very useful feature in a disaster; otherwise, the caller could end up listening to 60 people's voice mail at the same time!
- What if you plan for one disaster, but another disaster happens? Can the caller members for the commercial solution you selected be changed quickly? Can this be accomplished by a touchtone phone if you can't get to a PC, or vice versa?
- Can you instantly activate voice conference bridges, based on department, telephone number, individual persons, or recovery team? Conference calling is enormously helpful in any response
- Can the system forward faxes to email accounts or hotel fax machines? Hold them in storage for later retrieval? What about *broadcasting* to hundreds of locations?

Summary

From a technological perspective, your organization should be able to communicate in a disaster. In addition to the 4Ci benefits afforded by today's technology, the serious contingency planner should look for services to ensure that inbound calls from customers function appropriately after a catastrophic event. In art 2 of this series, we'll concentrate on inbound call-recovery services, from the standpoint of the large enterprise user.

Good luck, and happy planning

In addition to his work with his own two companies, [TelLAWCom Labs Inc.](#) and [b4Ci, Inc.](#), Leo A. Wrobel is honored to have been elected president of the [Networking and Systems Professionals Association \(NaSPA\)](#) a not-for-profit company concentrating on the needs of tens of thousands of members since 1986. NaSPA specializes in career development, employment, information technology, and disaster recovery. Contact Leo at 214-888-1300 or email leo@b4ci.com.

*Sharon M. (Ford) Wrobel conducted extensive publishing and regulatory research for her former employer (a nationwide telephone company), a function she continues today as vice president of business development for [b4Ci, Inc.](#) Sharon was a major content contributor to Leo's book *Business Resumption Planning, Second Edition**

(Auerback Publications, 2008), and coauthored his latest book, Disaster Recovery for Communications and Critical Infrastructure (Artech House Books, publishing in 2009). She published more than a dozen trade articles in 2008 alone. Sharon attended the University of Maryland and El Centro College in Dallas, where she trained as a registered nurse before joining Leo in his businesses. Sharon also served honorably as a public official, accepting appointments to the city's Planning and Zoning Commission and Historical Commission. She can be reached at sharon@b4ci.com.
