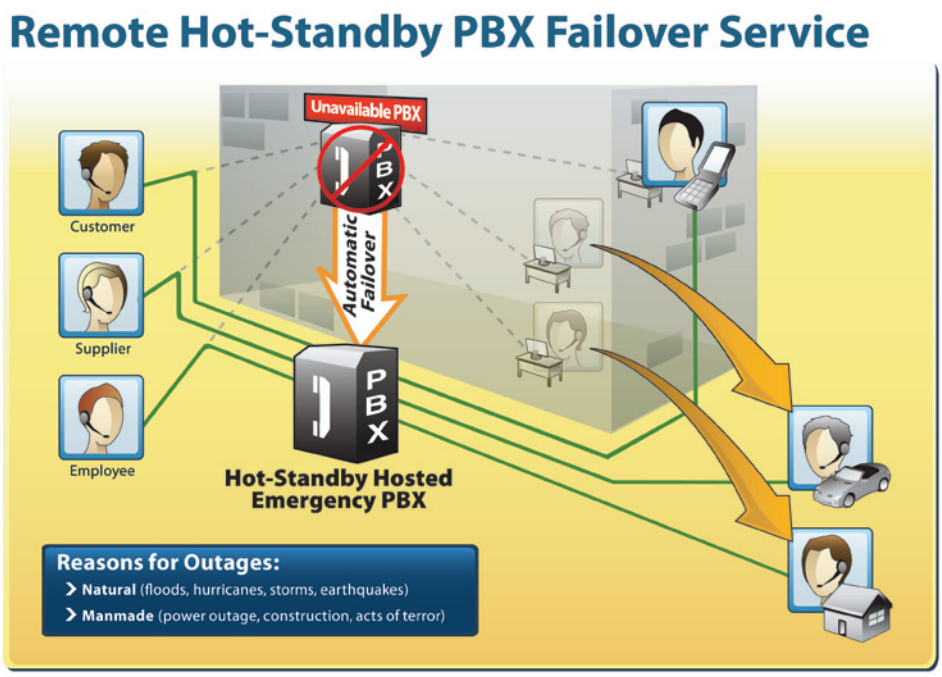
When Disaster Strikes

Recovering your phone system keeps your business and your customers connected when the inevitable occurs. By GREG BRASHIER



If not before, then certainly after Sept. 11, 2001, companies of all sizes were forced to confront the very real loss of information-technology systems and data in the midst of a disaster. "Disaster recovery" became a line-item on information-technology (IT) budgets and covered desktops, servers, storage systems and networks.

A few minutes loss of transaction data can amount to millions of dollars in lost revenue. This, of course, says nothing about the lost revenue due to a halt in transactions until system operation is restored.

But, what about the loss in business continuity when the phone system also goes down? Customers call and get no answer. That, too, can precipitate a substantial loss of revenue.

"Even if someone has to take messages, this small step in reassuring customers and partners that business is continuing is key in curtailing losses," said David M. Goldes, president of Basex, a recognized expert in collaborative business services.

Most medium- to large-sized companies have private-branch-exchange (PBX) systems. These are usually implemented through on-premise hardware switches controlled by complex software. Their connection to the outside world is through telephone company trunk lines. If the trunk lines are disrupted, the ability to call outside the company goes down. If electrical power is disrupted, the PBX phones cease to operate.

Disaster Recovery

The IT industry has devised innovative schemes for keeping data losses to a minimum and preserving some degree of business continuity following a disaster. Redundant storage hardware, located remotely from one another, store copies of the same data. If one is damaged, the data is preserved. Redundant network servers provide "hot" backups so that if a primary server fails or is damaged, the redundant server takes over. In fact, some elaborate schemes can quickly redirect all network traffic to a remote system capable of picking up where the damaged system left off, with minimal loss of data.

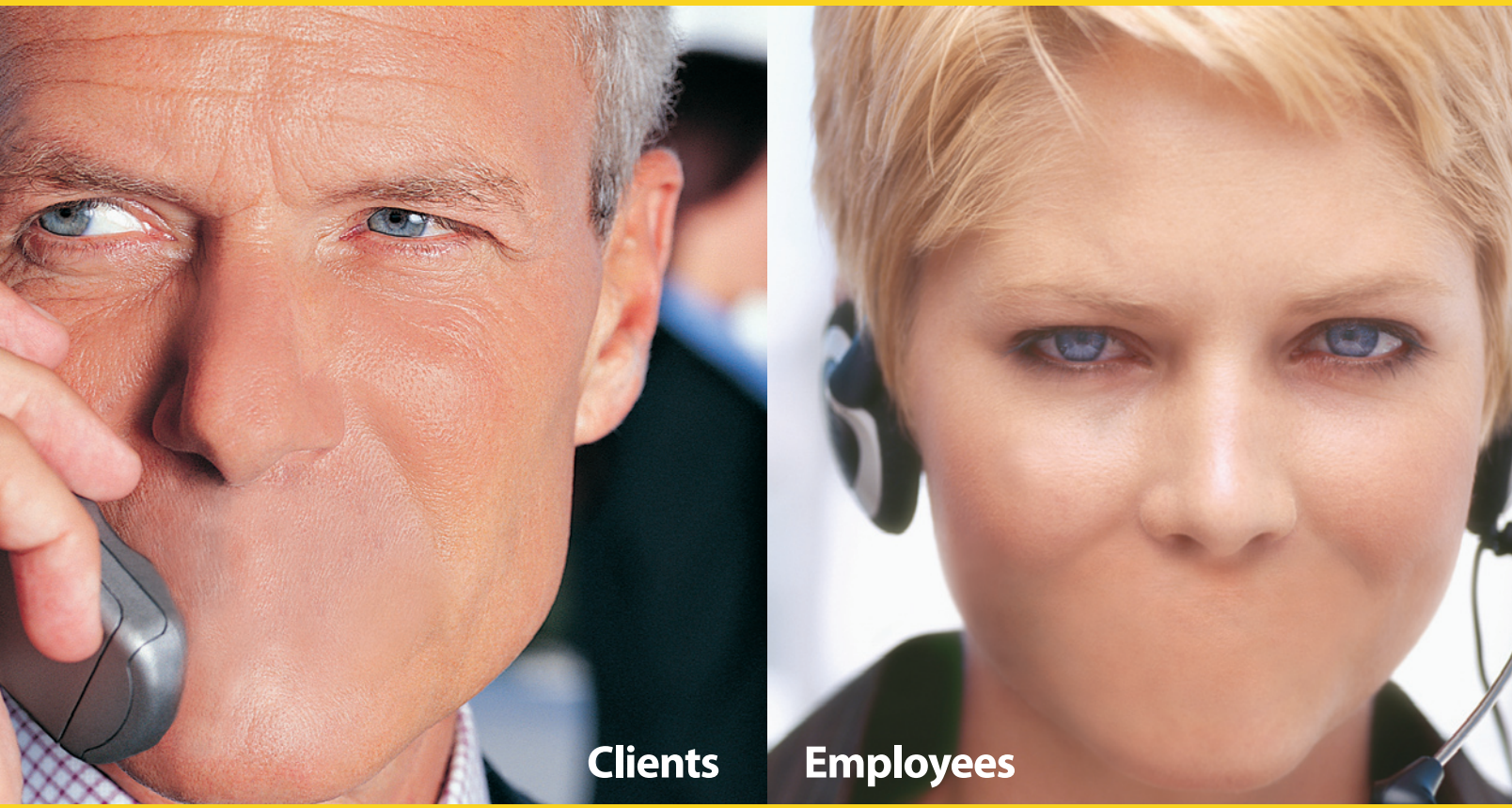
Until now, there has been no comparable system for phone-system recovery. Uninterruptible power systems (UPSs) could keep a PBX running during a power outage, but only for a limited amount of time. Some on-premise PBX hardware redundancy allows for continued operation should a PBX subsystem fail. But, overall, a disaster that knocks out electrical power and/or trunk lines will bring the PBX and any redundant capabilities down, and render the company essentially incommunicado.

In many cases, even with a PBX failure, cell phones in a facility will continue to function. Unfortunately, incoming calls directed at the malfunctioning PBX phones cannot be automatically rerouted by the PBX to users' cell phones – or even branch-office phones in a remote facility. But, there is an innovative way to recover from that downed phone system.

A Virtual 'Hot' Standby

It is now possible to mirror the functions of the primary PBX system with a virtual "hot" standby. Instead of redundant, on-premise hardware and software, the backup system is actually a hosted service that could be located thousands of

Disasters Can Leave You Speechless



Can Your Business Survive A Phone System Outage?

Problems happen. And whether you encounter a major disaster or a simple system failure, loss of your phone system can leave you out of contact with clients, employees, and suppliers. What would happen to your business if your phone system was down? The cost in lost business, client frustration, corporate confusion, and idle employees can be enormous. Business continuity for your phone system can be even more important than business continuity for your data.

Recover Your Voice with PBX Parachute™

PBX Parachute™ from Virtual PBX™ is the award-winning solution to phone system failures. It's a remote, hot-standby PBX failover service that can automatically take over within seconds after your primary PBX system goes down. There is no hardware or software to buy or install, making it remarkably inexpensive and easy to set up and use. PBX Parachute™ can serve as a hot-standby backup phone system, as the main phone system for your disaster recovery site, or just as an emergency "hotline" for your Emergency Response Team, employees, and their families. However you use it, PBX Parachute™ can give your business back its voice.

Let your voice be heard. Call: 800-914-8729
or visit us at www.pbxparachute.com

PBX Parachute™
by VirtualPBX™

miles away. Set up in advance of a disaster, the hot-standby PBX is programmed with cell phone, branch-office phone, or home phone numbers associated with the primary PBX phone instruments. Thus, when a call comes in to a non-working PBX phone, it is automatically rerouted to a working alternative.

The phone system, based on the public switched telephone network (PSTN), already has a mechanism for going around a downed PBX. The direct termination overflow (DTO) usually associated with toll-free numbers (or a similar service provided by a local carrier) automatically routes concurrent calls to an "8XX" number to different lines. In the same way, calls to a PBX which is now non-functional will be rerouted to the hot-standby PBX.

From there, all of the primary system's characteristics can be mimicked and calls redirected to branch office, mobile, even home phones. The whole process can be fully transparent to incoming callers.

Making a Hot-Standby PBX Practical

A company could, on its own, buy a second PBX system, locate it remotely, and have an expert program it to redirect incoming calls to any phone reachable via the PSTN system. It would cost nearly as much as the primary PBX, but never be used except in cases of emergency. Although such a scheme would be effective, it would not be a cost-effective way to mitigate the risk of lost telephone communications. After all, acquisition costs plus support and maintenance would make the total cost of ownership nearly equal that of the primary PBX.

Harkening back to the days of computer time sharing, another solution would be having a third-party company create a "super PBX" that could be shared by many client companies. Since these client companies are using the system as a "hot" standby, in most cases, only a few are actually tapping its resources at any time. The possibility of processing or bandwidth constraints is thus reduced to practically zero. The result, then, for each client company is a full-blown replacement of its existing PBX's functionality – in an emergency – but with the cost shared by many companies.

The suggested "super PBX" is not a voice-over-IP (VoIP) solution, using Internet's packet-switched network to circumvent the PSTN. It would be a true PSTN PBX, but one that is hosted and shared. Although VoIP-based PBX services are now available, their reliance on the Internet rather than the PSTN, adds the same vulnerabilities that Web sites now face – periodic bandwidth constriction, viruses, and the like. The PSTN is noted for its bulletproof robustness, and a PBX tied to that network is inherently more reliable. The "super PBX" could be further hardened by adding redundancy to its mix of hardware, too.

Success Factors

In the midst of a disaster, there's no time to manually set up alternative systems. If a hot-standby PBX is to provide real value, it has to be up and running within seconds, and, preferably, without human intervention. By using DTO or a similar service, calls to non-functioning PBX are automatically routed to the standby PBX.

The systems that support is backup PBX should be located remotely from the customer's facilities so that they are not affected by a wide-area loss of infrastructure. And, these systems should have their own disaster-recovery plan – such as redundant, remote systems – to protect them from going down.

Ideally, the backup system would require no support or maintenance on the customer's part. All upgrades are done on the hosting system and reflected, instantly, to all hot-standby PBX's it supports.

Clearly, once the recovery PBX is set up, there will be incremental changes over time. New lines will have to be mirrored, and additions/deletions to alternative numbers will have to be made. The customer should be able to administer those changes, remotely, via a Web interface.

The alternative system will need to be able to handle varying loads during the course of the disaster, so the supporting system must be able to dynamically balance those loads and increase bandwidth as needed.

Innovations in PBX technology, and hosted PBX services, make telephone-system disaster recovery both a practical and dependable risk-management choice. Phone systems can now join IT systems as part of an overarching approach to uninterruptible business.

It's All About Business Continuity

Natural and man-made disasters are, for the most part, unpredictable. We may know there's increased likelihood, but we rarely know when and where. One test of a business' mettle is its ability to keep going after taking a major hit. That's why Fortune 1000 companies on down are paying increased attention to data preservation, operational system redundancy, and business-continuity planning.

Phone-system continuity has rarely been part of those plans. Alongside details about IT system disaster-recovery procedures, those for the phone are often conspicuously absent. Innovations in PBX technology, and hosted PBX services, make telephone-system disaster recovery both a practical and dependable risk-management choice. Phone systems can now join IT systems as part of an overarching approach to uninterruptible business.

❖

Greg Brashier has more than 25 of years experience in the telecommunications, networking, and storage fields, with a focus on fault tolerant DR and BC products and services. Currently, he serves as VP of Marketing for Virtual PBX, inventors of the first hosted PBX service.