

## THE SERVER'S UP!

Communication, planning, restoration, and protection: technology's role in emergency preparedness.

**TECHNOLOGY IS INVALUABLE DURING AN EMERGENCY. A GOOD IT SYSTEM SUPPORTS** communication, preparedness, and recovery in many ways, but it also needs to be protected in order to be effective. The chaos and destruction that make effective communication so important in a disaster are exactly what make it so difficult.

With the right tools—including many that have been developed after 9/11 and even since last year's devastating hurricanes—administrators can know the status of school buildings, parents can hear that their children are safe, and emergency personnel can learn the schools' situations and how they should respond.

### PROTECTING YOUR INFRASTRUCTURE

Before Hurricane Rita came ashore, administrators at Calcasieu Parish Public Schools (CPPS) in Lake Charles, Louisiana, thought in a worst-case scenario they'd be closed for three days. After the storm, however, the area had no electricity, extensive water damage, and a population that scattered throughout the South to avoid the storm's destruction. The schools were shuttered for more than a month.

But CPPS' computer network was up and running 24 hours after the storm subsided, and the district ran payroll for more than 6,000 employees three days later, when the near-empty town was still filled with National Guard. "We're the largest employer in the area, so we felt like it kept morale very high and really sent a message that we are coming back from this," says Sheryl Abshire, the district's administrative coordinator of technology.

The district began preparing for the possibility of a monster storm several years ago, planning that paid dividends when Rita hit. In many ways, CPPS' plan to protect its IT infrastructure serves as a best-practice model. For example, rather than depending on administrative staff, who were focused on the many other

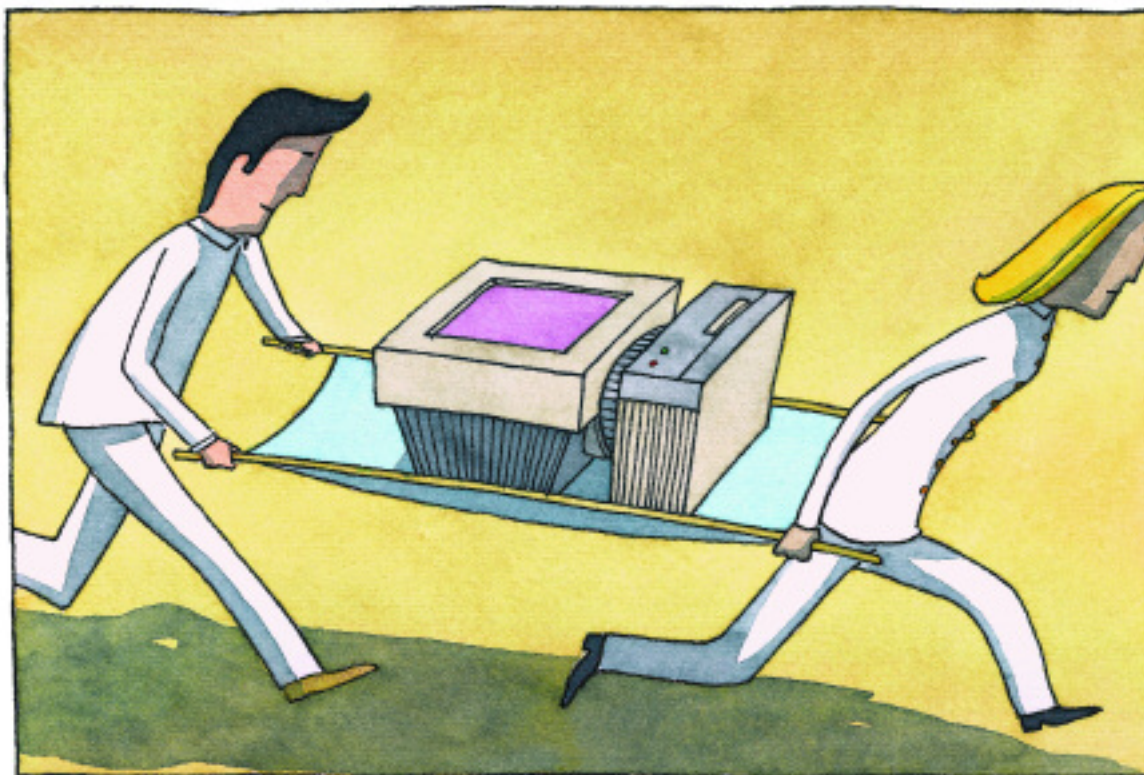
disaster tasks, to look after the computers in every school, tech-support staff at each facility were designated as key contact people in the event of a storm. They had learned a drill for several different scenarios—for such a serious storm, they powered down all the CPUs, covered the machines with plastic garbage bags, and moved them away from the windows. The tech staff also backed up key data to disk, especially critical digital teaching content, which was taken with the evacuation.

Abshire had created a very mobile, flexible central computer system that was easily unracked and driven out of the storm's path about 12 hours before the storm hit. "We had an arrangement with our network provider to run the machines in another city if we needed," Abshire says. But it wasn't necessary. The district had bought a large natural-gas electrical generator for the central office, allowing the returning computer racks to be run back at district headquarters, even as most of the rest of the town was in darkness.

"We had some principals living in a tent in a barn when we reopened the schools," Abshire says. "We've seen some really magnificent efforts by people pulling together in the community, and I'm glad we were able to have the technical side ready."

The experiences of schools like Abshire's on the Gulf Coast led the Consortium for School Networking (CoSN) to create a new set of materials to help districts to protect their IT equipment in a disaster. "District administrators need to look at the information

For more information on technology tips for emergency preparedness, see *Cable in the Classroom Magazine* (Sept. '06) at [www.ciconline.org/cicmagazine](http://www.ciconline.org/cicmagazine).



systems, the communication systems, and the records and prioritize what is most critical,” says Vicki Smith Bigham, CoSN professional-development director and president of Bigham Technology Solutions, Inc. “What would it be like to not have access to this for an hour, for a day, for a week?”

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### EMERGENCY COMMUNICATIONS

Protecting infrastructure is important, but it's only one responsibility of school administrators. Once disaster hits, district leaders first need to know what's going on. Claire Rubin, an emergency-management consultant and visiting research scholar at the Institute for Crisis, Disaster, and Risk Management at The George Washington University, says that having a list of key websites, such as the National Hurricane Center, lets HQ determine the big picture more quickly.

Outgoing communication about the status of the schools and their inhabitants is crucial. “You need to provide the first responders to the school with all the information they need to make smart decisions quickly,” says Jim Finnell, CEO of Prepared Response, a firm that provides incident management software that creates a computer file that includes everything from key personnel contact information to a building's blueprints to pre-planned evacuation routes and reunification plans. The information is provided to local emergency personnel

online or already downloaded onto their on-site laptops. “Seventy percent of first responders do not have reliable access to the Internet in a mobile environment,” Finnell notes. “In the field, if you're waiting for a page to load to make a crucial decision, you'll go crazy.”

Of course, a regional disaster like an earthquake or hurricane can also leave a school relatively unharmed but on its own for getting the word out to students, faculty, and parents about the situation and the recommended next steps. Here again, technology has brought schools new options. alphaTXT, for example, allows schools to send a text message of up to 120 characters simultaneously to every cell phone number on a prescribed list. “People often don't think their phone has text messaging, but virtually all modern phones are capable of receiving text messages. And young students are very used to communicating this way,” says Douglas Kaufman, the CEO of clearTXT, the company that provides the service.

In the event of an emergency, most parents will probably turn to their televisions to learn more, however.

“Have a plan in place for how to work with the media,” Finnell advises. “They’ll be there immediately if there’s a problem. If you’re organized, they’ll pick up on it right away, but if the district or first responders aren’t giving clear information about the situation, it can lead to a lot of problems.”

Experts agree, however, that you should plan for



multiple ways to disseminate disaster information. “In really big events, you can’t depend on any of the traditional communication routes,” Rubin says. “The only thing that worked in New Orleans during and right after the hurricane was satellite phones. After 9/11, web access stayed up longer than cell phone lines, which were clogged up and useless almost immediately.”

One firm, 3N, says it has a possible solution. The company’s emergency notification service will send a message simultaneously to every person on a list the school provides. The service can work its way through multiple information routes—sending messages to home phone, office, cell, instant message, fax, e-mail—until the recipient has been contacted. “They have to listen to the message and press ‘1’ to confirm they got the message. It also keeps track of who was contacted and when,” says Marc Ladin, the vice president of marketing for the company.

#### RESTORATION OF SERVICES

In the aftermath of the hurricanes that hit the Gulf Coast last year, the Internet has proven to be a powerful tool for helping with disaster recovery. For example, days after Hurricane Katrina landed, the U.S. Depart-

ment of Education put up Hurricane Help for Schools, a website that offers both schools in need and donors the opportunity to submit postings to an online directory. The site has created more than 800 matches since its inception—everything from a single backpack donated by an individual to 2,000 desks donated by Magnus West, Inc, a nonprofit organization based in Minnesota, to the Plaquemines Parish School Board in Belle Chasse, La., which lost six schools to Hurricane Katrina.

Individual schools or districts can also use their own websites as a way to disseminate important information after a disaster. For example, in Biloxi, Miss., in the weeks after Hurricane Katrina hit, the web server was running in the offices of Biloxi Public Schools Superintendent Dr. Paul Tisdale, but the phones weren’t. So the department used the website as a way to get information out about the status of students and teachers and to let everyone know when the schools would reopen.

The interactive nature of the Web allows schools to not only get their news out, but allows its families to communicate with each other—especially useful when the local population has been evacuated far and wide. “Many of our schools changed their front page to be a blog site, where parents and students could post information and ask questions like, ‘Has anybody seen our house, what shape is it in?’ when most people couldn’t come into the

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city because it was still a danger zone,” says Abshire.

With tens of thousands of families uprooted because of Rita and Katrina, distance learning has proven to be another way the Web can help provide disaster relief. “If kids can get to a computer and Internet connection, they can still keep learning,” says Douglas Levin, the director of education policy for Cable in the Classroom. With a consortium of other educational technology organizations, Cable in the Classroom launched vSKOOL, a website that brokered more than 1,400 distance-learning enrollment opportunities for students affected by the Gulf Coast hurricanes. “It’s been most important for high-school seniors and juniors who were on track for post-secondary education and fell off due to no fault of their own. They have been able to access tutoring, test prep for the SATs, and online AP courses.”

The vSKOOL website also includes links to free online resources to help educators and parents talk with students about the hurricanes, and the organization has spearheaded the donation of 19 mobile computer labs,

*Photos.com*

each containing laptop computers, wireless routers, and a printer, which have been distributed to schools that lost their IT infrastructure in the storms.

The next generation of distance learning for disasters is already being discussed, this time in the context of a possible outbreak of avian flu. The Centers for Disease Control and Prevention and the Department of Education are working with many state directors of technology to craft a plan to have online components of many classes in place in the near future, so the entire class can continue to learn, even if a contagious disease is keeping people away from public places such as schools.

## EMERGENCY PREPARATION

The best time to let faculty, students, and families know what to do in an emergency is before it happens. "There are three basic steps we advocate every individual know," says Kristin Gossel, the director of the Department of Homeland Security's Ready Campaign. "Have an emergency-supply kit ready. Have a family plan in place. And know which kinds of disasters can occur in your area and what to do for each. There are different things to do for a tornado or a hurricane, for example."

Launched in 2003, the Ready Campaign includes a website built especially for children, Ready Kids, that helps students learn these lessons with clear, simple information, online games, and engaging graphics and design. Knowing that teachers are unlikely to devote a whole unit to the issue of preparing for disasters, the site also includes information about the issues linked to language arts and geography lessons.

Gossel says that devoting some space to disaster preparedness in newsletters and e-mails to parents is another good way to have everyone on the same page if an emergency occurs. "We try to emphasize to parents that they need to know what their children's school plan is and how to react to it," she says. "When there was a sniper in the D.C. area, schools were locked down, and a lot of parents didn't know what that meant."

A new Web service, Ready-or-Not, allows schools to put the issue of disaster preparedness front and center. By filling out a template, a district's IT department can create a customized web page, with local emergency-response options, important disaster information from sources like the American Red Cross, and links to national and state emergency websites. A customized logo can be added as a link to the district's homepage, so users can learn about disaster issues, even if they came to the site to look for class schedules or the faculty directory.

A number of cable television companies also have created emergency information services in the wake of Hurricane Katrina that are useful classroom resources

for preparedness. The Weather Channel's educational initiative, Project SafeSide, reaches out to teachers and school children to share knowledge, information, and preparedness activities that apply to each weather emergency; and during hurricane season, Cox Communications is airing a new all-local, all-the-time weather-forecasting service on systems serving the New Orleans area.

All of these, and many other services, can help individuals, as well as community and school leaders, as they hope for the best and prepare for the worst. "If we hadn't planned for the unexpected," Abshire points out, "it would have put our entire community at risk." ●●●

## RESOURCES

### **3N: National Notification Network.**

[www.3nonline.com](http://www.3nonline.com)

**clearTXT.** [www.cleartxt.com](http://www.cleartxt.com)

**CoSN:** The Consortium for School Networking. [www.cosn.org](http://www.cosn.org)

### **Hurricane Help for Schools.**

[hurricanehelpforschools.gov](http://hurricanehelpforschools.gov)

**Nassau Schools Emergency Planning Consortium.** [www.nassauschoolemergency.org](http://www.nassauschoolemergency.org)

**National Weather Service: National Hurricane Center.** National Oceanic & Atmospheric Administration. [www.nhc.noaa.gov](http://www.nhc.noaa.gov)

### **"Practical Information on Crisis Planning: A Guide for Schools and Communities."**

U.S. Department of Education: Office of Safe and Drug-Free Schools, May 2003.

[www.ed.gov/admins/lead/safety/emergencyplan/crisisplanning.pdf](http://www.ed.gov/admins/lead/safety/emergencyplan/crisisplanning.pdf)

### **Prepared Response, Inc.**

[www.preparedresponse.com](http://www.preparedresponse.com)

### **Project SafeSide.**

[www.weatherclassroom.com/resources/safeside.php](http://www.weatherclassroom.com/resources/safeside.php)

**Ready Kids.** U.S. Department of Homeland Security. [www.ready.gov/kids](http://www.ready.gov/kids)

**Ready-or-Not.** [www.ready-or-not.org](http://www.ready-or-not.org)

### **The Role of K-20 Educational Technology in Disaster Preparedness, Response and Recovery.**

Louisiana Experimental Program to Stimulate Competitive Research.

[www.laepscor.org/sreb](http://www.laepscor.org/sreb)

**U.S. Geological Survey.** [www.usgs.gov](http://www.usgs.gov)

**vSKOOL.** [www.vskool.org](http://www.vskool.org)