

VOIP to the Rescue

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News Analysis: The American Red Cross uses VOIP for all of the same reasons you should, but for the Red Cross, the stakes are vastly higher.



Slide show: VSATs support Red Cross Katrina relief effort

Imagine what it must be like to attempt a phone call in the littered wasteland that was once the central Gulf Coast of the United States.

Not only are there no phones, there are no phone lines, no central offices, nothing.

While there is cell service—T-Mobile was apparently running at full capacity within a day or two—sites are swamped with high priority calls. Making a phone call can be nearly impossible.

Worse, the **American Red Cross** is taking the lion's share of the responsibility for handling the relief effort.

This private charity runs the shelters, helps support survivors, hands out everything from food to blankets, and tries to reunite families.

But without phone service, the job is tough indeed.

While the Red Cross makes good use of the hundreds of ham radio operators that are willing to provide weeks of unpaid labor, there are never enough of them.

Because of its critical communications needs, the Red Cross has turned to VOIP (voice over IP). But this isn't the VOIP you're thinking of. This is telephony on the edge.

This is a phone service that exists in partially ruined Kmart stores, sports stadiums and firehouses.

A phone service that must serve the needs of volunteers, managers and thousands of survivors. A phone service that must provide access to the Internet and to the world.

So what do you do when you must communicate but there's no infrastructure? You use a global network of satellites to carry your connections.

In this case, the Red Cross uses VSATs (very small aperture terminals) to provide the critical links.

Those VSATs are being assembled, tested and prepared for shipment at the national headquarters of the American Red Cross in Falls Church, Va., a suburb of Washington, D.C.

There a team of volunteers made up of ham radio operators and engineers from defense and aerospace companies is building the VSAT equipment by hand from parts donated to the Red Cross. These VSATs then provide a TCP/IP link to the outside world.

Of course, you can route nearly any kind of phone call over a VSAT.

The Red Cross chose VOIP because it allowed phones to be set up in advance with a PBX located at the headquarters.

[Click here to read more about carriers' efforts to restore service to the Katrina-ravaged region.](#)

In addition, because VOIP phones could share the bandwidth with Internet access and other traffic, it made more efficient use of the VSAT link that other methods might have.

According to David Craig, Senior Engineer for the Response Technology unit of the Red Cross, the organization is currently using Cisco Call Manager to handle its IP voice network.



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Craig cited the ease of set up and the ease of use as important reasons to use VOIP as well.

"There's no switching in the field," Craig said.

He noted that the satellite equipment and the VOIP and networking equipment would frequently be put into operation by people with little formal training, so it had to be something ordinary people could do.

This way, everything can be configured before it's shipped, and then simply plugged in when it arrives on-site.

Craig said he also likes the fact that the disaster phone system can be managed from anywhere.

He said that the Red Cross only has two employees in the network operations center. All of the rest of the staff are volunteers.

He said that this way, volunteers can keep an eye on the network and on the voice traffic at all times.

This is a plan that the organization has been using since Sept. 11, 2001, when it was first put into operation, Craig said.

"We want this to be cost-effective for our donors," Craig noted. He said that the ease of deployment, as well as the effective use of bandwidth, accomplished that.

The deployment of the VSAT systems and the IP phones to Red Cross communications centers in the region impacted by Hurricane Katrina began on Sept. 7.

Now volunteers are preparing a hundred more VSATs and hundreds of IP phones for shipment in the next few days.

Everywhere they go, VOIP will go with them, providing some of the first reliable phone service since the storm hit.