

Disaster Planning Considerations for Wireless Phones (Part 1 of 2)



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If your wireless provider has an unexpected outage, can your customers still reach you? In part 1 of a two-part series Leo A. Wrobel and Sharon M. Wrobel discuss the importance of addressing your wireless phones in your corporate emergency plans.

The gradual decline of wireline telephone service in the U.S. and worldwide is forcing today's technologists to rethink disaster recovery, for a couple of reasons:

- Wireless phones are not simply a convenience anymore
- Wireless phones can be indispensable in an emergency by helping users to maintain command and control

We discuss both of these points in this two-part series

Backing Up Your Backup

To make sure that you can avail yourself of wireless technology in an emergency, it's a good idea to start with a backup plan for your wireless phone itself. This point was driven home to us recently by the following personal experience (eerily similar to a [previous event](#), when we were almost caught flat-footed by a major snowstorm

Our office is served by wireless Internet, on two separate feeds handling office phones and data access. We back up this configuration with wireless phones. Our reasoning is that even if both Internet feeds should fail due to a widespread outage, we can still communicate with clients via wireless phone. However, because we use our wireless phones daily, not just for emergencies, many of our clients are used to bypassing the switchboard and calling us directly at our mobile numbers. This trend is exacerbated by the fact that Leo's mobile number spells "Call Leo." Since that number is easy to remember, people often use it

Recently, our wireless provider sustained trouble at its tower, probably due to a lightning strike that didn't knock out the tower but just impaired it. Suddenly our wireless calls became hit-or-miss, with about 50% being blocked during peak hours. People could still call our office number, but our most common callers were now ingrained in the habit of dialing up "Leo" or "Sharon" on their wireless phones. They had no way of knowing why our responsiveness was suddenly so poor.

For a firm that creates disaster recovery plans, that image frankly stank

On the bright side, the outage gave us a chance to exercise our wireless phones' recovery plan, which we had put into place about a year previously. Just in case our service provider should ever fail, we had modified our wireless devices to use VoIP to make calls over the Internet

Like millions of other people do these days, several of us carry the Apple iPhone. Our iPhones now have the ability to use other carriers (through a process called *unlocking*), and they have VoIP capability preinstalled, including the ability to use our usual phone numbers in an emergency

The iPhone isn't exactly the most "open" platform unless some modifications are made, so implementing this plan wasn't necessarily easy, but here's how we did it

Customizing the iPhone for Emergencies

At first, we started with "unlocked" iPhones, subscribed to T-Mobile. (We have personal reasons for not using

AT&T.) When bringing up the screen to make a call, we get the familiar dial pad screen shown in [Figure 1](#).



[Figure 1](#)

Other than the T-Mobile logo, this screen probably looks just like yours. But look at the springboard in [Figure 2](#). We have not only the normal green phone icon, but also a yellow icon called "Siphon".



[Figure 2](#)

When the Siphon icon is pressed, a dial screen comes up. At first glance, it looks just like the regular iPhone dial screen. With a closer look, however, you can see that this dialer is for making VoIP (or "SIP") calls, as shown in [Figure 3](#).



[Figure 3](#)

VoIP dialing from a wireless handset isn't exactly new to the industry, but it is fairly new for the iPhone. The Siphon program allows the user to set up virtually any VoIP service provider or even to connect to a company's IP PBX. Setup is a snap, right from the iPhone's own Settings screen. The Siphon program shows up in the Settings screen (see [Figure 4](#)).



[Figure 4](#)

When you press the Siphon icon, it brings up the specific settings for your service provider (see [Figure 5](#)). A variety of providers can be used, including Skype. The idea is that anywhere you can find a Wi-Fi hot spot, you can make calls.



Figure 5

We used a provider called Gizmo 5 (recently acquired by Google). Gizmo provides outbound SIP calling for about a penny a minute, and the quality is pretty good. Signup is simple on the Gizmo website. Although the service was originally intended for making calls from a desktop PC, it adapts just fine to the iPhone and other IP-capable devices. We were also able to secure an inbound number for \$35 a year.

A really handy feature for us is that the Gizmo service lets you customize your outbound Caller ID. We changed the Caller ID to reflect our normal wireless numbers, for two reasons:

- We wanted to keep the VoIP number private so that customers wouldn't use that number for non-emergency situations. (But even if someone used that number, inbound calls are free on Gizmo so we had no worries about cost.)
- When we call a client on VoIP during a wireless outage, using our custom Caller ID prevents the customer from rejecting an "unknown" caller.

Likewise, even in an emergency customers can continue using the same number for us always. We can let calls go to voice mail, or we can forward the wireless number to the Gizmo line and answer our calls as usual.

We had to resolve one other issue with regard to inbound calls. The iPhone is designed to run only one application at a time. Since we had an immediate need for disaster recovery, we had to "jailbreak(hack)" our iPhones to run an application called Backgrounder, which allows all versions of the iPhone to multitask. With the help of Backgrounder, our iPhones can answer VoIP calls in the background while we're doing other tasks such as reading email. Once the Backgrounder application is installed, all the user needs to do is press and hold the button on the front of the phone and the message shown in Figure 6 appears.



Figure 6

With this approach, the Siphon application can be closed, and the phone can be used for other activities. If a call comes in, the phone rings, allowing the user to close the active application and answer the call. A second click of the button disables Backgrounder.

If you're reluctant to unlock your iPhone, you can use other applications that are available from the App Store. One of them is called iTalk, as shown in Figure 7. Notice the buttons that allow you to select between cellular and SIP call:



Figure 7

Summary

Please don't come away from this article with the idea that we advocate doing anything illegal or in violation of copyright laws with regard to unlocking or "jailbreaking" wireless phones. Various kinds of blocks and software installed in wireless devices may simply be geared toward creating a captive customer base for the service provider. During an emergency, such as a service outage, this arrangement may be contrary to our customers' need to reach you, and in those cases you'll want to get onto another carrier's service as soon as possible.

Thankfully, some carriers are wising up. In addition to programs like the iTalk application we've discussed here, consider the fact that Verizon Wireless now lets customers make VoIP calls via Skype. T-Mobile makes phones available that automatically switch between wireless service and your home or office hotspot for only an additional \$10/month. That's some pretty cheap insurance.

The next time you select a wireless device, take disaster recovery and resiliency into account, making sure that you can stay in touch no matter what happens. Don't think this need is important? Try leaving your iPhone, BlackBerry, or other wireless device at home for the day. That trick should make you believe.

In part 2 of this series, we'll consider the importance of developing corporate standards for your wireless devices.
