The Cloud

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B y the time you read this, for many of you, Superstorm Sandy will be a distant memory. But, I know some of you will still be dealing with the impact of this devastating hurricane. Nearly 8 million people lost power. Thousands of homes were damaged or destroyed. At least 124 people were killed across the region. Telecom services, both wireless and wireline, were knocked out across broad geographic areas.

Although we, as Christians, have some solace in knowing that our God is sovereign and that he works all things to our good and His glory, disasters of this scope and scale are simply overwhelming tragedies for those at the center of them, even for those with the strongest faith. It is my hope and prayer that this column honors our brothers and sisters in the region and does not minimize what they have been through and continue to endure.

That being said, I believe one way that God uses events like Sandy to our good is to serve as a wakeup call to our frailty and our dependence on Him. As technologists, we must have a healthy fear of the Lord. "The fear of the LORD is the beginning of wisdom, and the knowledge of the Holy One is understanding." (Proverbs 9:10).

The wisdom that we have from God, and our fear of the power of God displayed in natural disasters should lead us to consider how prepared we are for disasters that might impact our homes, our churches, our ministries, or our businesses. If you

lost power, could you keep operating? If you lost your computers, could you recover?

Although it was massive clouds that rained down destruction on the northeastern U.S., I propose that "the cloud" may be a valuable ally in preparing for the next calamity.

What is the Cloud?

Exactly a year and a half ago I wrote about the cloud in the very first "power and danger" column. In that column, I described the cloud in this way: "Cloud computing gets its name from the concept of moving computing activities (processing, storage, database management, content streaming, etc.) off of dedicated resources in an environment controlled by the owner of those activities and into 'the cloud' – the amorphous and ever-changing collection of resources connected to the Internet."

At the time, there had been a number of high-profile failures by cloud service providers, but even so I described the benefits: "new types of services are providing flexibility, agility, and
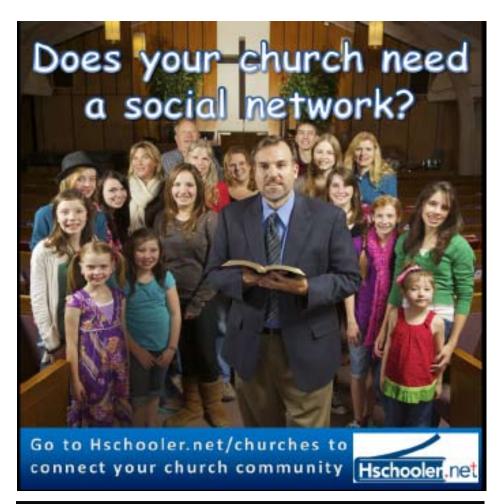
theoretically reliability that has previously been hard for organizations and individuals to achieve." I concluded the column on a favorable note: "Do these three failures mean that we should give up on cloud services? For most of us, the answer is a resounding no. These providers invest $billions to implement reliability well beyond what our small budgets could match. Yes, there will be outages, but in all of these cases, customers didn't lose data, and the systems were back up relatively quickly. If you've ever suffered a major system outage, I'm guessing there's a good chance you can't make the same claim."
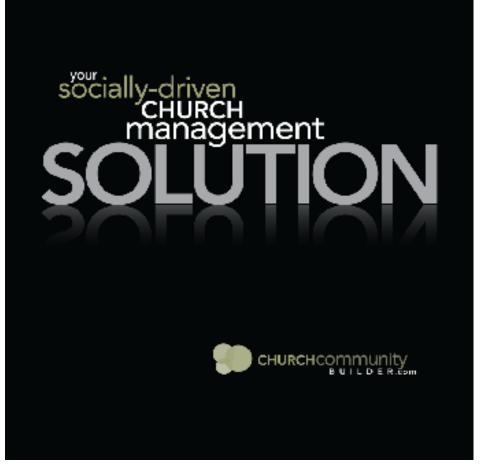
How could the Cloud help prepare for disasters?

There are many cloud services, but I'd like to focus on three types for your consideration to provide you and your organization flexibility in adapting to difficult circumstances.

The first is simple e-mail services. Very few organizations actually manage their own mail servers these days, but cloud-based e-mail services, like Google Apps, provide great flexibility in configuring and managing your e-mail accounts. A cloud-based e-mail solution also eliminates the risk that a single lost server can take down your ability to communicate and wipe out years worth of back messages. [Google offers free accounts for non-profits](#) with fewer than 3,000 users. Google Apps includes more than just e-mail, with personal and shared calendars, shared file storage, and Google Docs.

Which leads to the second type of cloud service worth considering – cloud based documents. There are a number of

services out there that replace your PC-based word processor, spreadsheet, and presentation software with web-based equivalents. In addition to Google Docs, alternatives include Zoho, Peepel, OpenGoo, Microsoft Office Live, and Buzzword. Web-based document editors makes it easy to share documents with others in your organization and to collaborate. More importantly, from a disaster recovery perspective, cloud-based documents are independent of any single PC or location, making it easy to pick up where you left off, even if you're starting from scratch with a new computer.

Of course, there will always be files that we need to store on our local machine. That doesn't mean we can't protect against loss of that system. There are a number of cloud backup solutions that automatically keep updated copies of your critical files stored in the cloud, ready to be restored to your original or new system. Some of the leading options include SugarSync, CrashPlan, Carbonite, Mozy, and ElephantDrive.

Does the Cloud represent danger to our churches?

There are two concerns we should have with Cloud-based solutions. The first is with the security and privacy of our information. The second is with the reliability of the service.

For security and privacy, a couple of the articles I read in researching this column recommended using encryption software (such as TrueCrypt) in conjunction with cloud-based backup solutions. Since Cloud-based solutions are designed to make it easy to share information with other users or to restore data to different computers, there will always be a risk that the wrong people will gain access to the data. You must weigh this against the benefits of a cloud-based solution.

When it comes to reliability, we must consider two scenarios – what if the service is down when I need it, or worse yet, what if the provider goes out of business or otherwise shuts down the service? Can you extract your data from the service and migrate to a competing service? These concerns are particularly valid for cloud-based document solutions, which may

drive you to the solutions from more well-established providers, such as Microsoft, Google, or Adobe. Similarly, the reliability of the service itself is probably relatively well correlated to the size and maturity of the provider. Outages will happen with any solution – the whole point of this column is to make sure you can recover as quickly and smoothly as possible.

It is my hope and prayer that these articles on the power and danger of technology will encourage you in your daily walk with Christ. Whether it is the printing press, radio, television, personal computers, the Internet, the Cloud, mobility, Wi-Fi, or map apps, new technologies continue to advance our ability to know God and to serve Him, wherever we go.

Russ McGuire is an executive for a Fortune 100 company and the founder/co-founder of three technology start-ups. His latest entrepreneurial venture is Hschooler.net (http://hschooler.net), a social network for Christian families (especially homeschoolers) which is being built and run by seven young men under Russ' direction.