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Voice Over Internet Protocol: Not Ready For Prime Time?

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TELECOM LAW

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Even for the telecommunications "civilian," the topic of Voice over Internet Protocol (or VoIP as it's affectionately called) has received a great deal of attention. While the technology offers a great many features at what can be a great price, there are a number of issues that anyone, whether a single residential customer or large corporate enterprise, needs to consider and prepare for before making the switch from traditional telephony to voice over the Internet.

Very generally, VoIP allows telephone-type calls to be made over the Internet. So, in the same way that e-mails sent to South Africa don't cost any more than e-mails that just go across the street, the issue of pricing of long distance calls is largely no longer an issue. (There are some major subtopics on this subject, but for purposes of this column, this month I'll gloss over them. I promise to return to them at a later date.)

The voice transmission is converted into data and then sent over the Internet. The method of transportation involves breaking the formerly analog (voice) signal into packets and transporting these packets over a variety of routes to a common end point. This "packetizing" can create noise or clipped speech, but the cost savings of converted voice have been so significant that many users of the service are willing to overlook this and other quality of service issues.

A week ago, I received a call from a family friend, Mary, who had a serious problem. In an effort to economize on her many calls to her elderly mother living overseas, she decided, after reading the ad enclosed in her telephone bill, to try the carrier's VoIP service. The carrier, who she was using for both local and long distance, quickly sent a black box by overnight mail that was supposed to enable her to use her personal computer to make telephone calls.

The box arrived almost immediately. Mary was unable to install the box herself, but asked for assistance from a helpful and technically savvy neighbor. The neighbor, and later Mary's electrical engineer son-in-law, both failed to install the black box successfully.

While they worked, Mary noticed, to her dismay, that her home security system was no longer working. When she called the security company, she was told that a service call with a minimum charge of $150 would be required in order to re-activate her system.

The savings on this new VoIP system were rapidly slipping away. Ultimately, when the installation of the black box was abandoned as a result of multiple failures and problems, Mary decided to call her carrier to return to her old phone configuration.

Unfortunately, when she picked up the phone, she had no dial tone with which to place the call. In desperation, she called her carrier using a wireless phone. The carrier told her that while she could return to her old phone configuration, she couldn't have dial tone restored for up to 15 business days.

Under any circumstances, this is a long time, but as a senior citizen, to be without dial tone (including 911 access) was not an acceptable option. As such, Mary was forced to switch carriers and get a new phone number, because the carrier that she'd been with for years refused to relinquish its hold of her old number.

Within 24 hours after contact with another provider, Mary's dial tone had been restored, albeit at a new number. Not surprisingly, once she had dial tone back, the security system again worked. Things were back to normal, but only after an incredible amount of aggravation and a disappointing lack of service response provided by the longtime carrier.

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Like *Aesop's Fables*, there's a moral here —don't make a technology change without understanding and making provisions to attend to all the details.

With VoIP technology, there are many opportunities for both cool features and cost savings possibilities, but there are also a great number of obstacles that need to be addressed and/or overcome before the transition — let alone the operation — will be smooth.

Well known telecommunications providers, including Verizon and AT&T have jumped on the VoIP bandwagon, after both recognizing the opportunities presented and after seeing the success of relative newcomer Vonage. There are other providers as well, including European-based Skype which is the brainchild of one of Kazaa's founders, among others. As is the case with Internet-based businesses, the physical location of the business (for practical purposes as well as, at least for now, tax and fee issues) is largely irrelevant to the end user.

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Back to the landmines. Any service that is dependent on a computer is dependent on power. This is not the case with a traditional wired phone, at least a standard one without too many fancy features, that does not require separate electrical power to provide dial tone. However, with an Internet-based phone service, power must be available to the PC in order to use the phone. This is not an obstacle that can't be overcome — it is just that the user needs to be aware of this limitation.

Secondly, and this may be not be very well-known, the existing E-911 system that allows a first responder to know the precise address of someone making an emergency call from home does not work with VoIP. While VoIP technology will permit a user to maintain his/her phone number no matter from where the phone is plugged in, the same technology is effectively blocked from providing the precise location information that first responders find so critical.

This is a major limitation to the system which both the Federal Communications Commission and VoIP providers are now working to address. However, for the time being, VoIP does not provide the E-911 information that a traditional line provides.

Third, as has been previously mentioned, other devices that require the traditional telephone line, like, for example, home security systems, may not work with a newly configured line. This can be addressed by the provider of the security system, but there will likely be an associated cost in both money and time.

Finally, as has also been mentioned, quality of service may not be at the same level as with a traditional phone line. Because of the mode of transportation of the voice signal, conversations may be noisy and clipped. While some VoIP conversations occur without event, others are reminiscent of the tin can/string model of telephone.

While there are numerous legal issues associated with the provision of VoIP which will be addressed in another column, based upon this tale of woe, and those of others it seems only prudent to, and in fact, important to highlight some of the key practical issues that should be considered before making the leap — whether at home or at work — to VoIP.

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