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OFFICE COMMUNICATIONS & TECHNOLOGY:

By Harry DeMaio

Has Business VOIP Really Arrived?

Yes, we know the "P" in VOIP really stands for "Protocol," and that doesn't mean diplomacy or manners, but the rules and standards that make any technical process widely usable. The internet Protocol (IP) is the procedural foundation for all of your company's internet, email, and web-based functions.

Last summer, Cincy Business published a story on office technology and communications ("One-Stop Shopping," June/July). Local experts were predicting wider use of the internet for all kinds of business communications, including the conversion of office "land line" phone systems.

VOIP is one of the communications buzzwords du jour. People are gradually becoming more familiar with the idea of home and personal VOIP through services like Vonage or Skype, and Time Warner Cable of Southwest Ohio is aggressively marketing combo packages of digital cable TV, internet access and VOIP for the home.

But what about commercial applications of internet telephony? Has the day arrived when businesses can knock thousands of dollars off their budgets for long-distance and international calling? The answer is a quantified "yes." Today, making telephone calls through internet systems have established more than a toehold (but less than a full scale beachhead) here in the Tristate business environment.

A more enthused response comes from David Goodwin, principal and co-founder of Advanced Technology Consulting Inc. (ATC), a telecommunications consultant and solutions provider based in Mason. ATC has been using VOIP for more than two years. Goodwin just returned from a conference where it was reported that VOIP now has about 13 percent of the business phone market. "Some studies say that by the end of 2008, 55 percent of all businesses will be utilizing VOIP."

A number of major vendors are providing or planning to provide VOIP business service in the Tristate, led by Cincinnati Bell and Time Warner. We also found some users who had gone beyond the tire-kicking stage, but are reluctant to be quoted directly about their competitive strategies in using VOIP, or about their experiences to date, although most of the initial response has been good.

BUZZWORD CENTRAL

First, here's another buzzword for you to drop at your next cocktail party: convergence. "It means pretty much what any vendor, techie or business person wants it to mean," remarks Dave Heimbach, director of Small & Medium Business Strategy for Cincinnati Bell. But it speaks to the bundling of data, voice, video and other communications services into one powerful (but often loosely defined) package. It usually, but not necessarily, involves integrated devices such as video/PDA/cell phones, IP adapted phones, reconfigurable data/voice, or virtual PBX (done through software at the telco's or network provider's central offices). Sometimes it still looks like POTS: plain old telephone service. But it is what's inside that counts.

Don't confuse using VOIP with switching from land-line connections to wireless. Cell phones do not, repeat, do not use the internet Protocol (yet). For example, Time Warner and Sprint just announced a new service called Pivot to join the other cell services in Southwest Ohio. But Time Warner will not have its business-class VOIP (as yet unnamed) in that region until at least October, according to Time Warner Business Class Vice President Richard Human. The reason? "Quality control," he replies. "We want customer satisfaction from the beginning." Time Warner has a limited-release VOIP program in progress in Texas and Wisconsin, Human adds.

So, while the transition from hard wire to no wire is moving merrily along on its own accelerating course and speed, VOIP is running on a different and more slowly developing timetable. Depending on the technology and circumstances involved, wireless may enhance or inhibit using the internet for voice traffic.

CONNECTION NIRVANA?

Information nirvana would seem to be all things connected to all things in all configurations over reduced-cost transmission systems and networks.

"There's a lot to be said for having the kind of flexible communications that will allow you to link your business operations, internal management, vendors, customers, roaming employees, 24/7 outsourcers, fall back facilities, remote sites and any number of dynamically changing groups with a minimum of hassle, a maximum of effective interaction, special tailoring where needed and a low price to go with it," says Alex Desberg, marketing director for Ohio.Net, which specializes in business VOIP and now has several Greater Cincinnati clients. All this while using a full complement of voice, audio, print, photos, graphics, video and tons of good old data files and text as desired and required.

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Goodwin notes that with his system, messages left on his VOIP line are translated into WAV files and can be forwarded to his PDA while he's out in the field.

Back to what VOIP is, and why you should care.

Basically, VOIP means the transfer of your business voice telephony from the time-honored Public Switch Telephone Network (PSTN) to the packet switched world of the internet.

You probably know that the internet is based on creating data packets out of digital information and routing those packets individually through whatever paths are currently available. When they get to the destination address (attached to each packet) they are re-assembled and become files, e-mail, web images, audio and or/video. Well, why not use internet technology for direct voice or any voice for that matter? After all, anyone who owns a CD player or recorder knows you can convert analog (waves) of voice, music, etc., into streams of digital bits. Depending on how good the conversion is, you can get some amazingly clean and full-range sound. Well, let's do it over phone lines. In fact, the phone companies are using digital transmission now, especially over their optical nets. But when they do, the message stream usually still captures and dedicates the link for its full duration. Even with voice circuit multiplexing, there is a lot of dead air taking up the line. The internet protocol, because it breaks up information into packets and routes them based on availability, can make fuller use of those circuits by packing any number of conversations into the same space and time.

Therein, dear reader, lies the prospects of VOIP. More traffic at the same (sometimes lower) price. However, there are several assumptions in this value proposition:

- Sufficient traffic has to be there to take advantage of the packeting and routing.
- The service should be flat rate or progressive rate, so you can get more talk for less money, especially on long distance or international calls, which leads to…
- The global reach of the internet should be of value.

Also note that internet traffic and services are not subject to the same tariff, structural and service area restrictions as the legacy-switched networks. Your VOIP vendor will no doubt have enhanced reach and service latitude, courtesy of the Federal Communications Commission's hands-off attitude toward IP. Desberg of Ohio.net sums it up this way: "We see more companies willing to bite the bullet and go hi-tech and we're notorious rule breakers. We like going against the (industry) grain." Especially when the regulators are neutral.

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UPS AND DOWNS

What about costs? There's the cost of conversion, and perhaps some ongoing monetary burps as the new technology is digested. Your enterprise may need to either boost its internal IT resources — human and technical — or may need to outsource contracted support services. When seeking savings on long distance calls, VOIP is not that different in the homework to be done: weigh the options of unlimited vs. limiting calling minutes among the various providers.

Economies of scale are possible and even probable but there are a number of functions and services made possible by VOIP connection that may have deeper economic impact. Some can be made available through current switched network processes. But, as Dave Heimbach points out, "The odds are that as more VOIP gear is being marketed to the service providers by the Ciscos and Lucents of the world, an increasing number of those processes will be done entirely by software and server technology with the tailoring, flexibility and rapid upgrade turnaround those technologies can provide."

Local experts agree that VOIP comes into its own when business and technical imagination is brought to bear. They also stress the value of seeking a managed service rather than do-it-yourself, in-house assembly, or what Heimbach refers to as "the utility model." A cynic may see that suggestion as self-serving but consider the growth of outsourced data processing that has allowed companies to go back to concentrating on their core competencies (often a major profit plus in itself.) Why not voice?

It's all about getting the right fit for your company's needs, Goodwin says. As in hosting your own web site or paying someone else to manage and maintain that, there's a big difference between a VOIP "managed environment" or a "hosted environment" system.

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He points out, though, that one of ATC's clients, a major Tristate corporation, is saving 30 percent on calling expenses. Where VOIP really can make a difference, Goodwin says, is for companies like his that have offices spread out over long distance (ATC has two other offices in Connecticut). Using VOIP, an employee can simply dial an internal extension number, and a colleague in another state can sound like she's down the hall. "If you have 50 people in your home office, and 15 sales offices spread all over that are nothing more than home offices, it's beautiful…it's perfect for that."

WHAT'S IN IT FOR MY COMPANY?

Here are a few examples from Cincinnati Bell and Ohio.net's features list.

1. Selective Follow Me. This routes specific incoming traffic to a primary number, voice mail, cell phone or a selected alternate person based on the caller, your real-time situation and location.

2. Flexible broadcast. Working off a set of easily changeable lists.

3. Virtual Private Voice Networks. Sub-nets created via software that can assemble and disassemble a high security set of connections using encryption, firewall and password protection for an event, a business process, a relationship, an environment or any other tailored needs. Think of lawyers and clients communicating during litigation, board and committee meetings, merger and acquisition talks, security-related activities, human resources conversations, and vendor relations during bid processes. You get the idea. Being able to construct and deconstruct these types of sub-nets literally on the fly can mean a great deal in increased productivity, reduced costs and corporate risk aversion.

4. Joint corporate voice and e-mail. If I can convert voice messages into a data format (wav, mp3), I can store, forward, catalog, recover and update all communications dealing with a certain subject, individual or process. Alex Desberg speaks of a lawyer customer who keeps a single database of all related communication on a given subject or client regardless of its original communications form.

5. Further enhancement of fixed to mobile convergence. Essentially, making the voice system agnostic to whether there are wires or WiFi supporting the telephone instrument.

6. Enhanced quality, security and availability. This may be an eyebrow-raiser for all of us who live through internet outages, hackers, fraud and identity theft. "Using the internet protocol does not necessarily mean using the public internet, at least not for all voice functions," Heimbach explains. For many of their clients, Cincinnati Bell's managed networks are actually closed and technically enhanced IP systems with protected ports leading to the outside world as needed, he adds. In short, VOIP can allow you to have several classes of internet-based services built to suit your business needs: private to public, strong to vanilla, high performance to economy.

PEOPLE MAKE TECH WORK

With a move to VOIP, some convergence is going to be required—not just in the technology but in your own infrastructure management team. In companies of all sizes, bringing together the people who deal with the phone system and those who manage IT systems is seldom easy.

"It's one of the biggest challenges we face," Goodwin says of the in-house phone vs. computer people. "It's the biggest political battle we fight with larger enterprise clients. The two sides have different agendas, responsibilities and views." The two can be territorial. A person in charge of phone systems, for example, may worry that this new technology could hurt her job security or future prospects, he adds.

All of the vendors and consultants we contacted agree on this key point. Before venturing on a serious telcom transition, make sure your own staff is competent (or can become competent rapidly) in all of the major technologies involved. Are they working at cross purposes and/or protecting turf rather than trying to enhance your company's ability to capitalize on what is new and appropriate? Strive to get your teams educated, acclimated and integrated.

WHAT TO WATCH FOR

No tech solution is without its problems, and VOIP is still being refined, so approach it with incremental goals and periodic evaluations. Keep the cashflow impact front and center. Look for flexible pricing. By using the so-called "managed service" or "utility model," you can place most of the technical obsolescence issues on the vendor rather than your staff and facilities.

There is one technical Achilles' heel that isn't always apparent. Desberg, Human and Heimbach all warn that while today's switched networks supply their own power to the handset, VOIP doesn't. But Goodwin notes that there are a variety of dependable backup options, from power supplies to automatic switching to backup lines.

"In order to take fullest advantage of VOIP, approach it with your business requirements up front," Human advises. Seek reduced costs and fewer technology upheavals, but primarily survey the priorities of your industry or service sector, and of your company.

"There's a right time for everybody," David Goodwin remarks about VOIP. "You don't have to rush into it. But if your phone system is five years old or older, and your calling costs are out of whack, or you're expanding your business, or you have more reps in the field — especially working from home offices — it can be a great fit."

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