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Voice
over
IP

feature story

VOICE OVER IP...WHAT IS IT AND WHAT WILL IT DO FOR ME?

Last time we talked about how IP is the communications protocol of choice. Nothing's changed since then. And despite the freewheeling, lightning fast advancement of technology, IP is actually beginning to make some noise with regards to voice application. Imagine, if you will, a protocol that consolidates separate voice, fax and data resources over one infrastructure.

Voice over IP makes this possible.

COMMUNICATIONS CONSOLIDATION

Organizations everywhere just like yours are constantly seeking to reduce communications costs. Voice over IP does enable this by consolidating all your communication needs onto one platform.

For instance, your office likely has three separate sources of communication — a telephone network (voice), a fax machine (fax) and a network of computers with Internet access (data). Traditionally, all three have run on separate platforms, potentially with separate installations and separate providers. IP enables all three to be run on one platform.

The cookie here is that, in the future, one device will handle all of your communication needs. Now maybe sending an email won't feel any different.

But when was the last time you dialed up your favorite supplier using your computer keyboard? And then talked to him/her in real time with nothing more than a mic and speaker on your desktop?

This communications convergence represents the future of voice technology and offers an opportunity for huge savings. While the actual price of integrated IP communications services will depend on the service provider, it would likely be roughly the same as what you have now or less. But there are tons of future applications that this technology would simplify. A few of them are:

Future Ready — Voice over IP will simplify the migration to future technologies as they arise. That means you are never trying to catch up with technology — it changes and so do you, at lightning speeds!

Training & e-Learning — Makes for easier and more interactive distance learning and training, which results in more knowledgeable, happier, more satisfied employees who deliver better customer service. This positively affects *your* bottom line.

Ease of Change and Movement — Voice over IP ensures easy and seamless internal or external personnel relocations because each individual maintains a dedicated IP identifier no matter where in the network they are located. No time wasted. No frustration waiting for reconnection. Your basic plug and play. It's all about good business sense. And it saves money too.

Presentation Delivery — One single infrastructure handles all your teleconferencing needs instead of having separate video and audio connections. Meetings start on time, run more smoothly and more efficiently. It's just a better way of doing business.

The result? Higher productivity. Increased communications value. Lots of satisfied customers. A healthy company with healthy communications.

What You Need To Know

As in any case where technology is involved, there are some questions you may want to ask before you invest, just to ensure it is right for your business situation...

Security. What kind of security issues or risks are associated with Voice over IP? Is it any more a risk than using the Internet? Do I need to be aware of anything external that may affect my connection security?

Service Reliability. How reliable is the service? What are the ramifications of a power outage? Is there an alternative service you provide if this were to happen? Is Voice over IP a solution that works best alongside an emergency landline?

Quality of Service. Is quality of service an issue at this point? Can I expect the quality of service to improve as marketplace prevalence grows? Are there tiered levels of quality available?

At this point, most service providers are testing VoIP technology in their networks and continuously improving their offerings to address these concerns. While it's not readily available as yet, commercial service on this platform can be expected in the not so distant future.

For more information on VoIP services, please contact your AT&T Canada Sales Representative.

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Telecommunications Made *Eeeeeasyyyyyyy*...

By now you know that high-speed Internet access can significantly improve your business processes. And for many, it has become a mission critical component to doing business. In North America, high-speed is readily available, and comes from different technologies. One of those is Digital Subscriber Line (DSL) technology. Because of its makeup, it's not for everyone. But are YOU a company who can benefit from DSL? Read on and find out.

What is DSL?

DSL is a technology that delivers high-speed access to businesses (and homes) using nothing more than — believe it or not — the existing copper telephone wiring.

Here's how it's done. As with any connection, there are typically two pieces of equipment on either end with some type of wire or fibre — through which information gets transferred — connecting the two. Think of the two tin cans with the string.

In a DSL connection, the two pieces of equipment are referred to as the Digital Subscriber Line Aggregated Multiplexor (DSLAM), which is found on the provider's network; and the Terminal Adaptor, which is found on the client's premises.

Where a standard copper wire could generally only support one communication — typically a telephone — these two end pieces of equipment communicating back and forth allow that same copper wire to handle a lot more bandwidth.

IN A NUTSHELL, DSL is not a product or service! DSL is a technology that takes existing voice cables that connect customer premises to the phone company's central office (CO) and turns them into a high-speed digital link.

Why Do I Want to Invest in DSL?

In the short term, DSL has begun to put high-speed Internet access within the reach of many small and medium-sized businesses. There are tangible customer benefits such as:

Excellent Value — DSL provides higher bandwidth at either the same cost or less as regular dial up. There is no downside.

Increased Reliability — DSL provides 24/7 access and does not tie up any phone lines. Conduct business at 2 am if you wish.

Scope & Flexibility — DSL itself comes in various formats — i.e. ADSL, HDSL, IDSL, etc. — with a choice of speeds ranging from 32 Kbps to more than 50 Mbps. Services can be designed to suit your needs.

How Can I Get Maximum Value Using DSL?

DSL technology can open new doors for you in terms of your overall business capabilities. How that happens is entirely up to you, but DSL allows previously unavailable applications to begin to help improve communication with your customers and help you achieve your goals.

Internet Services — The most obvious value is higher speed Internet access.

Voice Services — Much like Voice over IP (see page 1) Voice services over DSL will become readily available in the future and will open business communication even further. For example, teleconferencing can be better executed with more seamless audio and video tracks, saving time and money.

Multi-Media on Demand — Higher bandwidth allows you to handle more complicated content, such as heavy graphical data or streaming video. For example, many companies can now stream their annual general meeting. With DSL technology, shareholders who are unable to physically attend can still be there.

WAN Connectivity — Allows for growth by providing you with higher speeds to multiple locations.

Leveraging Same Access Pipe for Multiple Services — Get more out of your existing communications infrastructure.

Internet DSL is readily available and fully deployable right now. But is it for you? To learn more about DSL and other means of high-speed access delivery, please contact your AT&T Canada Sales Representative.

See how Internet DSL can benefit YOU.

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Just So You Know...

- There are exactly 1,048,576 bytes in one megabyte. Half a byte is called a “nybble”.
- The first operators employed by the Bell Telephone Company were young boys who worked standing up. Only after several years did it occur to anybody to provide them with chairs.
- The first female operator was Emma M. Nutt, who started working for Telephone Dispatch Company in Boston on September 1, 1878. Prior to that, all operators were men.
- There are more telephones than there are people in Washington, D.C.
- Computer viruses were first discovered in the late 1980s, and since that time, IBM’s Thomas J. Watson Research Center has collected more than 10,000. It is estimated that six to nine new viruses are found daily. About 1,200 computer viruses are in circulation.
- Customers will soon be able to use their cellular phones to “Dial-a-Coke”. The new “smart vending machines” being developed by Coke will come equipped with a phone number that customers will be able to dial to have a Coke dispensed. Following the transaction the charge will appear on the customer’s cell phone bill.



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Email in ASP Could be the Better Way

Online collaboration refers to groupware functionality such as group calendar, group schedule, group contact lists, threaded discussion lists, chat room capabilities, etc.

e-business feature

You've come to rely on email and online collaboration for bridging communications between business partners and employees. Yet services like email are quickly becoming non-differentiating. There's no real tangible advantage from one company to the next because everyone has it and is using it.

Building, hosting and supporting your own messaging infrastructure in-house is taxing on your internal resources. You have to worry about capital funding, monitoring, delivering on performance, assuring 24x7 availability and security, finding and keeping skilled IT staff, developing new functionality, etc.

There's A Better Way

Email and collaboration services are available in an Application Service Provider (ASP) environment, which means you can outsource the whole kit and kaboodle to a supplier, who will take over complete management of the entire infrastructure.

The most critical benefit in using an ASP application in any given situation is a significantly reduced total cost of ownership. Depending on what research you pay attention to, the ASP environment can decrease total cost of ownership by 30 - 50%. So, instead of having to purchase costly software applications enterprise-wide, your company can rent the application from a provider and access email and collaboration over the Internet in a pay per user per month environment.

So, in terms of email and collaboration services, your provider manages the entire solution and allows your internal IT resources to concentrate on more revenue generating activities.

What could be better than that?

Two Options

For the most part, there are two major email and collaboration suites available in ASP format — Microsoft Exchange and Lotus Notes. Although both solutions offer similar features and services, the hosted MS Exchange solution delivers three key services:

- **A Hosted Server and Infrastructure with Software** — Medium-sized businesses can take advantage of a vast range of functionality such as calendaring and contact databases that are not available within a pure email environment. The network architecture, software licenses, upgrades and patches, security, availability and support are guaranteed and are scalable to grow with your business. As well, some providers may offer a simple to use tool that allows your company to manage end-user changes as well as email distribution lists at your convenience.
- **Two Methods of Accessing the Application** — Your employees can have access to their mailboxes through a web browser — such as Internet Explorer or Netscape Navigator — and/or through the Microsoft Outlook icon

that resides on their desktop. Accessing the service through a web browser is ideal for companies with remote users, contract employees or employees sharing computers with limited hardware. You may wish to provide desktop access to employees who require additional functionality such as task management and journaling.

- **Planning and Migration Services** — The migration process is tough and can be very challenging. Your MS Exchange provider will take you through it every step of the way and make the transition as seamless as possible.

LOW COST OF ENTRY

You'd be surprised how affordable a solution of this nature is to deploy. The internal e-mail and collaboration service with ASP functionality can typically be had for a fixed rate fee of roughly \$20 per month per user. With email and collaboration in ASP, your business will continue to benefit from improved individual and team productivity, accelerated implementation and ROI.

For more information about email and collaboration in an ASP environment, contact your AT&T Canada Sales Representative or visit <http://www.attcanada.ca/business/aspservices.html>.

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Baby Steps: Amid the Wireless Hype

It had to happen. Now that the shellac is finally starting to crack on the Internet dotcom “economy”, pundits and the media are desperately searching for The Next Big Thing™ to capture our attention. So far, the safe bet seems to be on wireless — specifically, mobile commerce.

True, most of the hype shows executives all over using the wireless Internet — that is, accessing normal web pages through a cell phone or pager. As is often the case in technology, reality is quite different. Of the 100 million Americans who have a wireless device of some kind (as at the end of the third quarter 2000), only two million were accessing the Internet wirelessly. Little wonder, then, that small- to medium-sized businesses aren't exactly hearing overwhelming demand from their customers to be wireless.

That said, once mobile commerce truly matures — roughly the beginning of 2004 by my forecast — it really will be part of the average consumer's purchasing habits. But there are steps you can take today to get a head start on understanding and using wireless to serve your customers, without breaking your bank account.

THINK ONE-WAY, NOT TWO-WAY

Effective business is about much more than just the final purchase transaction. It's about targeting the right customers; reaching those customers through the marketing clutter; rewarding repeat buyers, and so forth. And yet, the only business applications being talked about are two-way purchasing transactions.

Frankly, I'm hard pressed to understand how buying a book through my cell phone can be a positive consumer experience. (I've tried it.

It took me 74 minutes. I live a half-hour walk from a Chapters bookstore. You do the math.) So rather than assuming you need to facilitate the actual transaction wirelessly, you can be much more effective by using it to send one-way alert messages to the email address of your customers' devices. This can be as simple as signing up for a free mailing list from a service like listbot.com and blasting out weekly specials. However, tread with caution — make sure you only send messages to customers who have specifically permitted their device's email addresses to be used in this manner; perhaps offer it as part of your loyalty program.

SEPARATE YOUR ALERT LISTS

Break these marketing alerts into four or five different categories, and give your customers the option to subscribe to any, all, or none. For instance: One list could be a monthly list of overstocks, another could alert people to that-day-only specials, another could be a weekly list of new products. Remember that you're dealing with a very limited amount of space on those small screens, and one catch-all alert mailing list that serves everyone will interest none.

DEVELOP SPECIAL WIRELESS PROMOTIONS

To help gauge how many consumers are actually using these alerts, build special discounts or offers into the alerts you send. Since most phones and pagers can save messages received, you may find your customers begin using the alerts as electronic coupons. For instance, something as simple as offering a 10% discount for people who bring in and show their wireless alert can provide you with a rough metric of effectiveness.

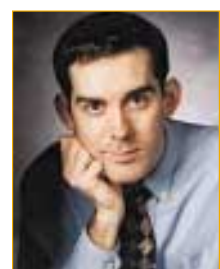
In short, while mobile commerce truly will be

a strong weapon in your business arsenal, it won't happen quite as soon as the marketing machine might have you believe. Between now and then, work on building those alert lists and fostering a trusted relationship with your customers, so that when you're ready to start trying out wireless for real, you'll start out at the front of the pack.

Tod Maffin is “one of Canada's most influential futurists” [Report on Business] and speaks to more than 50 conferences each year on the future of technology in small- and medium-sized business. He hosts todradio.com, a live national show on CBC Radio One, “Future Now” on CBC Television, and is trying to cut down on coffee.

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by Tod Maffin
Technology Futurist and Broadcaster




 A graphic featuring the word "SPHERE" in large, white, 3D block letters. The letters are set against a green, textured background that resembles a globe or a sphere with grid lines.

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Wireless

www.mediametrix.ca/home.jsp?language=ca

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Future Trends





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FEEDBACK

AT&T Canada would also like to thank all those who participated in the recent Sphere Newsletter Readership Survey. We really appreciate your valuable comments and suggestions.

Here are some results:

Articles that were found most valuable in order of rank were:

Security Solutions

Futurescope

Feature Story on IP

Telecommunications Made Easy

Most readers of Sphere rate it as either useful or very useful as a means of communications

Here's your chance to tell us how you feel about Sphere. What do you like? What don't you like? What's missing that you would you like to see? What would you like to learn from Sphere and from AT&T Canada?

Please send your feedback to spherefeedback@attcanada.ca