University of Mississippi

eGrove

3-2005

InfoTech Update, Volume 14, Number 2, March/April 2005

American Institute of Certified Public Accountants. Information Technology Section

InfoTech UPDATE

**Newsletter of the AICPA
Information Technology Section**

What's Inside

WINNER
2004
APEX®
AWARDS FOR PUBLICATION EXCELLENCE

WIRELESS TECHNOLOGIES
I'm Wireless. Now What?

By Douglas J. Nakakihara, CPA.CITP

Douglas J. Nakakihara, CPA.CITP, is a senior manager with Holthouse Carlin & Van Trigt LLP, in their Long Beach, Calif. office. He provides technology services, including IT general computer controls review, ASP.NET Web development, application programming, and technology advice. Doug spearheads the firm's Sarbanes-Oxley Section 404 assistance practice, and has accessed the Internet wirelessly on a Palm PDA since 1997.

The ability to access the Internet wirelessly is an ordinary feat these days. However, are people taking full advantage of this tremendous power by merely sending and receiving e-mail, or even Web surfing? Probably not. This is a resource and power that few are really leveraging. Let's take a look at some of the ways you can use wireless connectivity to enhance your professional and personal pursuits.

Let's say you have a Blackberry or Treo, and can send and receive e-mail without being tethered to a land-line connection; certainly, that, in itself, is a major productivity booster. Time previously wasted standing in line and waiting for an appointment can now be used productively to answer correspondence and keep projects moving along. Perhaps you have access to a wireless network — one of the many flavors of 802.11 — and if so, you can walk around with your laptop and handle e-mail and Web research as long as your battery will last.

While what I just described amazed people just a few years ago, there are people reading this article right now that have already yawned more than once. I can hear them saying, "My mobile phone can do e-mail and I can surf the Web on it, too!" They are right. This stuff is becoming old hat. Today, the question is not *whether* to go wireless, but how to best use this technology.

Connect a PDA to the Internet With Your Mobile Phone

One of my favorite things to do is connect my PDA or laptop to the Internet through my mobile phone. You may be surprised to learn that many mobile phones also have built-in modems to connect, for example, your PDA to your phone to get a wireless Internet connection. You do not need a special PC (PCMCIA) card installed in a laptop to wirelessly connect to the Internet. This works in exactly the way a PC connects to the Internet using a dial-up connection. Your PDA tells the modem in your phone to dial a special number, and your laptop connects to the Internet. If you are using a Treo 650, 600, 300, 270 or 180, check out PdaNet from June Fabrics (*www.junefabrics.com*), an application that enables you to use your Treo as a modem.

Of course, you will need to sign up for a special "data" option with your service provider where you pay for a maximum amount of data (e.g., 10MB/month) or an all-you-can-eat

AICPA

plan. Note that you can save data usage by turning off image downloading on your browser. However, some providers run your Web page requests through a proxy server that automatically compresses images — at the cost of a quality image.

Do not expect broadband speeds. You'll be lucky to get something rivaling a land-line dial-up, but hey, this *is* much more fun. However, set-up and connection information to connect is often difficult to find. You may need to spend a few hours doing some Web searches. If you go to one of the big mobile phone stores, find someone who knows how to do it and what equipment works. You also may need a cable between your phone and laptop/PDA, but read on to learn how to get rid of even *that* cable.

Wirelessly Connecting to Wireless

I am so happy to see Bluetooth starting to become popular, particularly in mobile phones. Bluetooth is a short-range wireless technology that is popular overseas and just now beginning to catch on in the states. It is intended for short distances, so it is not a replacement for 802.11x. Unfortunately, an upcoming wireless version of USB (WUSB) may create a standards war, but for now, Bluetooth is the way to go.

A wireless headset is reason alone to opt for a Bluetooth-enabled phone; pair a modem-equipped Bluetooth mobile phone with a Bluetooth PDA or laptop, and you really have something very cool.

Here's a look at my set-up. My current PDA of choice is the PalmOne Tungsten T3. With built-in Bluetooth, blazingly fast 400MHz CPU and a 320 x 480 high-resolution screen, you can get a closer-to-desktop experience browsing the Web compared to using a Blackberry or Treo. The T3 connects to my Bluetooth-enabled Sony Ericsson T616 mobile phone wirelessly, so with my phone clipped to my belt, I simply access the Internet with my PDA as if it had a built-in wireless Internet connection.

An inexpensive USB Bluetooth dongle allows me to connect my laptop to my phone, enabling me to use the same wireless connection (i.e., my phone) for either my PDA or laptop. If I'm out at a client's office and don't have a network connection, I just use my phone! It's much slower than a normal network connection, obviously, but the speed is more than acceptable for e-mail and Web browsing. I can connect to my firm's VPN, and download and upload fairly large files.

Alternatively, since most PDAs and laptops have infrared (IR) ports, you can connect them to your phone in much the same way that you would use Bluetooth. One catch: IR is a line-of-sight connection. This works fine if you are sitting at a desk and are stationary. Forget it if you are walking around.

If you have a Bluetooth connection between your computer and PDA, you can also hot sync without a cable. You'll still need to charge your PDA in its cradle or with a power cord, but that won't be necessary to synchronize your data. I can be in the next office and still sync my files!

HTML — The Universal Language

Whether you are using a Blackberry with Web-browsing capabilities, a Treo or a combo-device like the one described above, the bottom line is that you already have the tools in place, so how can you begin taking advantage of this technology? Being able to send and receive e-mail wherever you are is fun, but is it really more efficient than calling someone on your phone? In many situations, the answer would be no. It is not so much the technology itself that makes you more efficient, but being more innovative in using it is what pays the big dividends.

The great thing about accessing the Web with these devices is accessing regular Web pages; you do not need to rely on the WAP protocol, the standard used for information services on mobile phones. That means you (or your Webmaster) can set up standard HTML forms and interact with them on your wireless device.

If you have people out in the field that regularly transmit data to the home office, a slick solution might be to have them send an e-mail. Of course, someone would have to read the e-mail and re-key the data into another application (Microsoft Excel or Access, for example). It would be so easy to just set up a Web form and have them input the data directly into the form. The data would go directly into a database, saving re-keying time and increasing accuracy. Other possibilities include an office phone list page, resource Web links, project management information and announcements.

All you need to do is develop concise standard Web pages with which to interact. Think beyond merely communicating, and more along the lines of exchanging data. The possibilities are endless.

I hope this is good food for thought, and you will start thinking of new and exciting ways to take advantage of today's wireless technology. You've already got some awesome tools. Starting making something cool happen with them!

....

Contact Doug Nakakihara at *dougn@hcvt.com.* ●

INFORMATION SECURITY
Risks and Opportunities in IT for Companies in Transition

By Jim Carty

Jim Carty is the president of IS Value Corp., a Yardley, Pa. firm helping clients improve their individual/organizational performance and productivity by getting better business results from their information systems portfolio. With more than 23 years' experience in IT, his accomplishments include turn-around situations, organizational restructuring, platform re-engineering and customer based technology initiatives. His focus comes with a particular emphasis on IT economics with achievements in financial reporting systems, code reuse, operational efficiencies and systems architecture.

Mergers, acquisitions, IPOs, divestitures and restructurings all share the same goal: to increase shareholder value. Yet, information technology, one of the main paths to realizing that value, is all too often given short shrift.

For companies in transition, technology plans can have a major impact on earnings; it is a pendulum that can swing in a company's favor and help realize the transition's objectives … or cause earnings to fall.

In a transition, there are the financial targets to hit and an execution to achieve them, creating an interesting dichotomy in many deals. While it's common to bring in outside financial advisors to ensure accurate numbers, companies seldom invest the money up front to conduct an objective assessment of their current and future technology architecture and strategy.

Overlooking the value enablers in technology introduces a high degree of risk to the ultimate outcome of the deal. What are some of the risks and opportunities prevalent in transitional situations?

Mergers and Acquisitions

One of the simplest, most powerful value opportunities in mergers and acquisitions is allowing technology to have a seat at the table early on in any of the discussion. This makes the technology teams a true partner in evaluating and executing the transaction. Information technology has become critical to the core operation within most organizations, so underestimating its impact on operations is a major risk for many companies.

Technology Integration

According to a recent *Business Week* report, 66 percent of all mergers and acquisitions destroy shareholder value. Much of this can be attributed to a lack of planning on how technology integration will actually generate the synergies factored into the numbers. If you look at the financial statements of many companies, post-merger or acquisition, restructuring charges pop up on financial statements long after the deal has closed. Technology integrations, in the best of circumstances, are often lengthy, expensive projects. A lack of planning on the impact of mergers and acquisitions on technology infrastructure, as far in advance as possible, can really hurt a company when investors are judging performance in three-month increments.

Companies also overlook the fact that technology integration and process integration go hand in hand. Both of these are capital intensive and potentially very disruptive. As in most IT matters, moving in lockstep with the business is essential.

Why do two thirds of all M&As destroy value rather than create it? Excluding the impact on IT in early conversations while the deal is being put together, and then being told to "make it work" after the closing, is a surefire way to miss all of your financial projections. This approach to IT also can cost a lot of money; all the advantages of doing the deal become more like assumptions rather than estimates, without a solid, actionable IT plan prior to closing. There is tremendous value in letting the two organizations get a jump start on the integration process.

A big challenge in any integration project is figuring out what pieces from each entity should be brought together. Without enough time and resources to address this, companies often make a default decision to use one or the other party's technology platform in total. Although this might occasionally be the right path, you're arbitrarily jettisoning quite a bit of intellectual property. Including IT in strategy sessions brings better, more informed decisions about technology integration strategy and how the different pieces should be connected in the new entity.

Customers

During an M&A, the retention of customers is as critical as a smooth transition. Information systems comprise the face of your company; customers interact with you, for example, through the Web, kiosks, direct mail and electronic billing — all powered by technology. It will be quickly and painfully obvious to your customers if your technology integration plan and execution is lacking, and they will leave for the competition. As we move more and more into the knowledge industry cultures, and markets everywhere mature, it is critical to protect your customer base. In any M&A, if you can retain your customer base through effective planning, you've positioned the deal for success.

Database Strategy

For many companies, "data" *is* the company: an organization knows its customers and what they buy based on the details that are retained in its database infrastructure. In an M&A, your IT advisors must spend time crafting the database level of your architecture, and as such, each one must be integrated for smooth functionality.

In a technology framework, the database powers other tiers, including business logic and customer presentation. Any technical synergies should start at the database level and work their way up. Companies that start from the top down will find themselves running into many database challenges in data consistency, reliability and data maintenance. For example, cross-selling different products and services is often cited as a major advantage of a merger, because it's a win-win for the company and customer. For that to happen, a coherent, structurally sound database integration strategy needs to be implemented. The database level is where you need to put the two businesses together so you can offer customers new services and products from a wider knowledge base.

In a merger or acquisition, it's important to consolidate on a data cleaning/data warehouse strategy that will deliver a normalized database and won't unnecessarily drive up the costs of regulation compliance. Your data warehouse strategy, which will drive the effectiveness of direct mailings and other promotions, is critical to customer retention. Take, for example, customers who are in one system and the other, yet have different account numbers. These customers could easily become bombarded with incoherent offers creating an unhappy situation. Your CRM

systems, which rely heavily on the database, will start to frustrate customers rather than encourage and support your interaction with them.

Web Services and XML

A key value enabler in any M&A is departing from legacy practices and realizing there is a whole new set of options on how to integrate organizations from a technology standpoint. Companies that use M&A strategically and conduct deals regularly should consider a service-oriented architecture using loosely coupled integration technologies, such as Web Services and XML. These enable a corporation to realize integration benefits at a fraction of the cost of traditional middleware approaches. An M&A also should be looked at as an opportunity to evaluate or re-evaluate services options, including outsourcing/insourcing, ASPs, application rental, grid/utility computing and other options.

Private Equity Investments and IPOs

Raising a round of money to grow your business is certainly an opportunity, but when it comes to making an investment in technology, it's a crossroads event that many companies fail to recognize. Too often, the process becomes a matter of buy more, build more and expand the IT department, rather than stepping back and evaluating infinitely greater options. In many cases, there is far greater advantage to renting technology services as needed rather than owning them, especially in fast growth situations. The exception is when your intellectual property is also your competitive advantage, and that asset is software-based.

> **In a merger or acquisition, it's important to consolidate on a data cleaning/data warehouse strategy that will deliver a normalized database and won't unnecessarily drive up the costs of regulation compliance.**

Scalability

Scalability is one of the true challenges for any organization dependent on technology. Assuming that a company truly understands what scalability is, a common mistake is to use your funds to build capacity. The question becomes how much capacity to invest in and what projections to base it on. Business plans, for the purpose of raising money, always have some type of hockey stick curve in their forecast, so building systems capability based on forecasts can be risky. Who can afford to build capacity two to three years out and hope to grow *into* it?

Companies are realizing that building systems capabilities is an expensive, time-consuming task, and in a growing business, this game of catch up is one you do not want to be playing. A key value enabler is investing in technology planning rather than system building. The plan should identify a coherent plan for providing the needed capacity without a lengthy, expensive build process. To do that, every company should identify a list of strategic technology partners who can lessen the risks inherent in scalability.

IT Strategy

Receiving a large investment is a watershed event providing an opportunity to stop what you're doing in technology and objectively assess if your strategy is correct. This is the time to question whether you can afford your current strategy and if it's a good fit for where the business is headed. Too many companies have numerous large capital investments in technology ready to go, so that once the money comes in, they spend and start building. A key value enabler is to look at total cost of ownership (TCO) and return on investment (ROI), and match those numbers against your competition's operating ratio and your own expected margins.

Turnaround Situations

In a turnaround situation, technology can be your best friend for quickly getting things back on track, but it is seldom aligned correctly with the business in terms of budget, quality or applications. Let's look at some ways to use technology for success.

Signaling Effect

When an organization is in a turnaround situation, everyone is wondering if management knows what needs to be done and can quickly implement the needed changes. When a turnaround effort is started, technology can provide a signaling effect to investors and customers that says we know what changes need to be made and we are willing to make them. As a result, vendor rationalization and consolidating purchasing power often can save you money very quickly.

Vendor Expense Rationalization

It's common to find that an organization does not have a vendor policy or is lax on its enforcement. Narrowing the vendor list, leveraging purchasing power and negotiating for better prices can provide immediate savings.

Divestitures

Regardless if an organization is public or private, every business should know its valuation, or what it's worth. Depending on the business, technology can represent a big part of that valuation, so it benefits companies to measure and track the value of their technology assets. The primary asset of most companies is the intellectual property that is very often encapsulated and deployed in the company's data stores.

Value Measurement

Many companies do a poor job of documenting their IT assets and maintaining documentation, which means they are getting less than fair value for those assets. They also might face legal problems at closing time since the licenses were never assigned to the new owner. Technology vendors seldom let you assign a license to another party without some paperwork, if at all.

The first step in transferring ownership is providing proof that the company owns the software. This proof should be in the form of the original signed license agreement. This piece of paper is usually unavailable and was misplaced a long time ago; what's needed is to request the assignment in writing and see what the company's policy is. This often comes with some financial costs, such as the requirement to upgrade or reinstate maintenance. Some companies, like Microsoft, won't assign licenses. In that case, you need to buy all new software licenses for the new corporation.

Inventory and Documentation

Another value enabler is presenting the buyer with a complete list of technology assets that are part of the deal and documentation. The documentation will be very helpful to helping the buyer understand how the entity can use the different technology pieces.

Consider Outside Resources

Technology is too central to many organizations not to make it an integral part of every transition situation. In most instances, there are too few, if any, resources to adequately focus on the technology components. Many companies rely on outside financial advisors and legal counsel for the three- to six-month timeframe it takes to complete this kind of project.

It is time for companies to do the same with technology and realize they might do well to consider outside technology resources to make sure the financial targets are hit and shareholder value increases.

Contact Jim Carty at *Jim.Carty@ isvaluecorp.com.* ●

Mary Hoover is Right at Home

By Scott H. Cytron, ABC

The world might seem like a more glamorous place outside of Topeka, Kan., but Mary S. Hoover can't think of anywhere she'd rather be than in the state capital working for a governmental entity.

By the way, she's been working there 25 years.

A CPA.CITP, CIA (Certified Internal Auditor) and CGFM (Certified Government Financial Manager), Hoover is chief audit executive with the Office of Audit and Consulting Services at the Department of Social and Rehabilitation Services (SRS), where she directs all facets of the audit function for SRS. She is involved in managing customer expectations and relationships; developing competencies of her staff through training and education; and communicating risk models, governance and audit processes to senior management. She also serves in a consulting capacity on a number of enterprise teams providing advice on controls, risks and measurement systems.

"I've told many that when I started at SRS in auditing two months after graduating from college, I only intended to stay for about a year," says Mary. "I had planned to work at a public accounting firm or in private industry, but once I found out about SRS, I was hooked on what it is about and what its employees collectively contribute to the state, communities and individual people's lives."

The Department of SRS provides social and human services to millions of Kansas state citizens, says Mary. These citizens gain access to services, including healthcare, mental health coverage, food assistance, energy assistance, rehabilitation services, child support and child welfare services.

The Office of Audit and Consulting Services, which she oversees in her role as chief audit executive, provides SRS management and other stakeholders with decision making through risk assessment, audit and consulting services.

"Our office has responsibility for all information technology audits of the Department. We have an audit management area exclusively devoted to this function, headed by an individual who is a CISA (Certified Information Systems Auditor). The determination of which IT areas to audit is based on our assessment of risks and is done in concert with the chief information officer and her staff.

"All audits are approved by our audit committee," Mary adds. "We also perform external quality assurance on systems development projects for our ITS Division. In Kansas, legislation requires that all projects of state agencies follow a generally accepted project management methodology to assure projects are completed on time and on budget. It is our job to assure compliance of our ITS Division to this methodology."

Mary says her department also is involved on an as-needed basis with team members on systems and security projects. It's also not unusual for Department staff to look to her area for expertise in IT security and controls, and compliance with COBIT, as they develop new systems and security applications. COBIT is a generally applicable and accepted standard for good IT security and control practices issued by ISACA, (Information Systems Audit and Control Association), the same organization that promotes the CISA designation.

"Most recently, we've been heavily involved in HIPAA privacy and security projects," she says. "For example, we are working on a HIPAA project right now that involves an assessment and possible remediation of existing systems and networks to comply with the provisions of the law.

"I'm also proud of having devoted my career to public service and the responsi-

bilities inherent in that choice," she says. "It's not easy choosing government service for a number of reasons. Prior to September 11, we mostly suffered from citizens believing that we didn't work hard enough or misused hard earned taxpayers' monies. Now, we have to consider our vulnerability to outside threats simply because we chose government service.

Mary says that most of the people she works with, including herself, would choose the same career path again.

"Perhaps for me it's about SRS and the mission more than my role in it. It's rewarding to work somewhere where you can see that what you do does have an impact on improving people's lives. This is inspiring and exciting, admirable and honorable. On top of that, I get to be involved in auditing, which I also love. It just doesn't get better."

Mary actively uses her CITP designation and promotes it as much as she can because it has brought more credibility to the IT audit function.

"When I first received the designation, having it helped opened doors for our office to provide expertise to other state agencies," she says. "Now our IT audit expert — the individual holding the CISA — can show our own Department and external groups how good we are at what we do." ●

Mary S. Hoover
CPA.CITP, CIA, CGFM
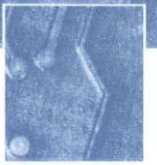
The Digital Home is Here, Now!

By Randolph P. Johnston, MCS, MCP

Randy Johnston, MCS, MCP, is a partner in K2 Enterprises, a technology CPE provider based in Hammond, La., that serves the U.S. Market. He is also a stockholder in Network Management Group, Inc. a technical consulting firm based in Hutchinson, Kan. During this entire career, Randy has taught people about technology around the world.

The line between "digital home" and the office workday continues to blur, but this does not mean we have to work *everywhere*. Technology gives us the advantage of choosing when and where we do tasks, since we can work effectively from home and can monitor our digital home from work. While high-speed communications, wireless and convenient portable devices make our work lives more convenient, there are many digital technologies in the home that make our time at home more enjoyable.

For example, "non-desktop PC" technology is making a difference in how we work and live at the office, and how we live and work at home. Remote-controlled 802.11 wireless cameras monitor the office during and after hours, or act as a security system at home throughout the day … a large screen TV resides in the office conference room, as well as the living room at home. So, imagine sitting in your living room and attending a vendor's Web cast before heading off to a client's office, reading a book or technical publication, or answering email on your TabletPC while on the back porch!

When it is time to go to the client's office, you might have satellite radio or an MP3 player hooked into your car's audio system to provide music or pre-recorded books. You also notice that the movie you've been looking for is in your car's DVD player. Once you arrive, you take digital photos of a client's business on your cell phone with its built-in camera so you can incorporate them into a services proposal. Scrawling notes on your Tablet PC may be excellent documentation of your time together. If today is one of those days you really need to be productive, working from home on applications in the office and connecting with clients through your VoIP (Voice over IP) phone may save you commute time or typical office interruptions.

The intent of this article is not to teach you *how* to implement the technologies, but to give you a vision of all the items available and how they work together. A shopping list with current pricing will give you an idea of the cost and is available at *www.nmgi.com*.

Home digital technologies fall into three categories: 1) personal computer productivity and communications, 2) audio and video creation and playback, and 3) security and environment. All of these systems can be automated, and doing so can be extremely convenient. Table I on page 8 illustrates some of the options available right now, and as you can see from the list, there are plenty of technologies that make life in the home more pleasant and easier. Let's look at each of these different areas and how you can implement them.

Computers and Communications

A mandatory building block to the digital home is high-speed broadband communications. High-speed comes in several forms today, but the most common are DSL, Cable and Wireless. New technologies to watch for include BPL (Broadband over Power Lines), approved by the FCC in October 2004, as well as fiber optics. High-speed communications enable Internet Access and VoIP telephone calls, and frequently integrate into your home's AV and security systems. Since high-speed communications are so important and relatively inexpensive, some homes have multiple high-speed lines from different sources to ensure communications connectivity. This thinking is not too different from the days when we had multiple phone lines in our homes for voice, fax, teenagers and our home office. Today, all of these phones could be provisioned over a single high-speed broadband line with subscriptions for as many numbers as needed.

Once high-speed broadband lines reach the home, they should be protected by firewalls. If multiple lines are used, a multi-homed firewall like the SonicWALL 2040 should be used. Otherwise, a smaller firewall from vendors like SonicWALL, NetGear, D-Link and Linksys are fine. If 802.11x (A, B, G or N) wireless is desired in the home, the firewall often can be purchased with wireless and switch capability.

No digital home should be without a hardware firewall! Some brands of firewalls can help with additional services, including virus filtering, content filtering or creating a virtual private network (VPN) back to your office. Hopefully, you can see that a strong firewall is an important protection element in your digital home.

Wireless phones in our homes have been a convenience, and the quality of the connection has certainly improved as we have progressed from 900MHz to 2.4 and 5GHZ phones. Expect new products that will have cellular and 802.11x capabilities in a single unit. For now, we can select interfaces to our broadband connection that will allow wired phones and computers to use VoIP. Vendors like Vonage, Avaya, Cisco, 3Com, Skype and Linksys are active participants in these technologies.

You should bring of all the communications technologies into a single spot in your home if possible, and if space allows, mount much of this technology in a wiring rack. The rack can serve as the distribution point if you need to have a wiring system for computers, audio or video. Further, the rack should be supported by an Uninterruptible Power Supply (UPS). The rack can also serve as the place to put the increasingly popular Network Attached Storage (NAS) disk systems to safely keep and back up important files from all of your computers, as well as the video and audio systems in your home.

Finally, we are getting to a computer you can use for personal and business tasks. If you are setting up a home office, consider having all of the following placed on carefully selected or constructed furniture: two or more monitors, and at least one with video playback capability; scanners; separate fax if desired; printer; cradle for charging and syncing your cell phone/PDA; and adequate lighting and workspace. Make sure to consider ergonomics in your home office with the proper positioning of the monitors, keyboards and other peripherals, as well as purchasing a good supportive chair. Ensure enough room to have a combination of desktop and laptop, two laptops, or a laptop and a tablet. Allow plenty of space for storage of software, bags that you may carry the equipment in when you leave home, and possibly room for more than one person in your family to work.

Audio and Video

Getting the audio and video entertainment "right" in your home will heavily depend on your lifestyle and tastes. For example, don't be afraid to put television monitors in positions that make sense to you. This could be in the family room and the kitchen, as well as the bedroom ceiling or the bathroom in front of the tub. Remember, these televisions are placed for *your* convenience and enjoyment.

For your main television viewing, consider the benefit of having a large screen HDTV, whether it is LCD, Plasma or comes from a digital projector. Larger images of 42", 51" and much more, when projected, are very common. If you use projection, purchase a high-quality screen with a heavy back that may be permanent or retracted.

Table I

Computers & Communications	Audio & Video	Security & Environment
Broadband Communications	Theatre surround sound	Security Cameras
Firewalls	Large Screen TV	Heating and cooling
Voice over IP Phone	Whole House sound	Lighting control systems
Wireless	MP3 Audio Library	Intercom systems
Shared disk and printers	Digital Satellite TV	Motion Detection
Cellular/PDA	Portable MP3 Player	Irrigation system
Virtual Private Network	Audio Books	Pool and spa monitoring
Portable and Desktop computers	Video on Demand	Vehicle Detection
Internet Access	DVD and CD Library	Temperature, water sensors
Game Consoles	Multimedia Libraries	Safe Rooms

This viewing center deserves support with Digital/HDTV signal capability from either a satellite or cable provider. This signal should be supplied to all television monitors in the home. If multiple sets are used, make sure that you purchase the appropriate equipment to split the signal, and feed different TV stations to each position. You will probably want the TV signal splitter in your rack possibly with VCR and DVD/HDTV/Blu-Ray playback units run by remote control, rather than having the units right next to the TV. Additional "fun" equipment could include recliners, sofas and universal remote controls.

The primary viewing center also deserves a solid surround sound system with properly placed speakers. Additional television sets may have smaller surround sound systems installed. However, this brings us to a key decision point with audio in the digital home. Do you want music feeds in all rooms *and* outside near the pool? It may be more cost effective to build one audio system for the home broken up into zones for different rooms and needs. The whole house sound amplifier could support multiple

surround sound systems, while still supplying other audio feeds throughout the home if needed. Consider your desire for whole house sound before investing extensively in stand-alone surround systems. Key players in the audio portion of the market include Speakercraft, Denon, Sony, Marantz and Phillips.

The source of your audio and video programming is an area that has changed rapidly in the last few years, and continues to evolve rapidly. Some of the choices for audio programming include satellite radio (XM and Sirius), MP3 libraries (iTunes, RealPlayer and MediaPlayer on computers), MP3 players, or computers with Microsoft Multimedia Edition. Audio can be distributed throughout the home wirelessly with devices like the Creative Labs Sound Blaster Wireless Music or Apple Airport hardware. Audio programs can also include recorded books and speeches from sources like audible.com.

Video distribution also is new and improved, with on-demand programs from satellite or cable TV providers, from MultiMedia PC libraries, or from hard media shipped by one of the many subscription services or from a local store. And yes, of course, live programming is available from the multitude of channels.

Video teleconferencing is making its way into the home in part because of higher speeds and reduced cost in the technology. VoIP support may be part of the formula, or the videoconferencing may be as simple as cameras attached to PCs and driven through software products. With these technologies, you can certainly be on the receiving end of a Webinar or videoconference in your home just as easily as in the office.

Security and Environment

Home security systems can be outsourced to traditional services, but the digital home is smarter than the simple sensors used by today's home monitoring services. For example, you may bypass the home monitoring vendor with a properly installed digital home monitoring system. The alerts can be delivered to your pager or cell phone, and monitored through a Web browser.

The latest innovation for security is cameras that can be remotely controlled, such as those available from Sony. The cameras themselves can be wired or wireless, and have IP addresses that are accessible inside the home. With appropriate authentication, they are available outside the home via a Web browser.

Some vendors supply component systems, such as Omni System, that provide touch pads, Web access and wireless, and radio frequency remote controls that control multiple systems in your home. Sensors can be installed for heating and cooling, lighting control, motion detection, vehicle detection, and to monitor other systems in the home. This includes irrigation (watering the yard), pool, spa and even sump pump, through systems that send alerts, if desired, when a system is not working. These also can all be monitored and changed via a Web browser when you are not at home.

Finally, many new homes are being built with affordable "safe" rooms with protection systems, food and water, and emergency communications. Your level of desire for safety can determine how much can be spent on these types of systems.

How Does This Apply to My Office?

The most interesting issue to raise is how much of these home technologies should be used in the office, and are there any other office technologies you should migrate to the home? For example, Verisign and RSA security systems provide unique security tokens to minimize the need for user IDs and passwords in larger companies. Should your homes have similar security? Can you use wireless or cellular phones, or other technologies, including RFID tags for security purposes? Yes, possibly, when they are simple enough and cost-effective, but the home technologies already mentioned in this article are all readily available today and continuing to fall in price.

The key office technologies migrating to the home include servers, shared disk and printers, firewalls, and VPNs. The key home technologies migrating to the office are wireless, big screen TV, IP security cameras and portable MP3 players. For many of us, our ability to work when and where we want, and likewise to play when and where we want, is a function of having enough technology that we can choose to work or choose to play when it is good for us, our families and our friends.

....

Contact Randy Johnston at randyj@nmgi.com. ●

> **Home security systems can be outsourced to traditional services, but the digital home is smarter than the simple sensors used by today's home monitoring services.**

E-BITZ focuses on practical applications of various technologies to enhance a practice or business.

E-BITZ WITH SUSAN BRADLEY

"Least User Privilege Account" Vital to IT Security

I don't trust myself, my employees or their computers anymore. Strange comment isn't it, coming from a technology geek like myself? You see, I've realized that we've grown up in a world where we've been used to installing any software we want and downloading anything we like, but there are two HUGE problems with that approach: first, being tricked into downloading something, and second, based on how we've set up our systems and Web browsers, merely surfing to a site can allow "bad things" to come into our systems and execute.

As Aaron Margosis states in his blog (*http://blogs.msdn.com/aaron_ margosis*), if you're running as an admin, an exploit can:

❖ install kernel-mode rootkits and/or keyloggers that can be close to impossible to detect;

❖ install and start services;

❖ install ActiveX controls, including IE and shell add-ins (common with spyware and adware);

❖ access data belonging to other users;

❖ cause code to run whenever anybody else logs on (including capturing passwords entered into the Ctrl-Alt-Del logon dialog);

❖ replace OS and other program files with Trojan horses;

❖ access (Local Security Authority) LSA Secrets, including other sensitive account information, possibly including account information for domain accounts;

❖ disable/uninstall anti-virus;

❖ cover its tracks in the event log;

❖ render your machine unbootable; and

❖ if your account is an administrator on other computers on the network, the malware gains admin control over those computers as well.

Slowly, in the marketplace, we are moving toward a goal of "least user privilege account" or LUA – a process in which you do not have the automatic right to download *anything*. You must use an alternative username and password to allow a program to install. This is a process where you do your daily tasks in a much "lower" protected level of rights.

Think desktop, not laptop. Desktops are typically more controlled in a firm than laptops that are more mobile and versatile. Think back to the last time you needed to install software on those machines. How long ago was it? Last week? Last month? Many times in typical desktop environments, we install software on

such a rare occasion or preferably in a server environment that can be pushed out from the server. As a result, you can have desktops locked down in a much more protected state.

Does your receptionist need the ability to download screensavers that may lead to malware and Trojans being installed in your network? Probably not. Do your executives need to accidentally click on a link that hijacks their home page? No, so what are the steps that need to be done to make a more protected system? The steps to enable your system to be protected by "user mode" is pretty easy ... the steps to get your line of business applications to work in user mode may not be.

❖ To change your workstation to operate in user mode, log in as the administrator of the workstation. If you don't know what the administrator's password is, try using a blank password. Many systems are shipped with a blank password for the admin account, because in Windows XP and 2003, the account cannot be accessed over the Internet. As strange as it sounds, a blank password may actually be more secure.

❖ Once you have logged in, click on start, control panel, user accounts, click on the user account you wish to try running as a limited user and log in as that user. Now, launch all of your line of business applications and take note of the ones that fail to run properly.

Here's an example. A sample small business application clearly states it must have either administrator rights on the local machine or power user rights. In order to get this application to work properly without administrator or power user rights, you must do the following in the group policy of a server to push down to all the affected workstations these permissions:

❖ create a Quickbooks Users group;

❖ add your users to this group;

❖ give the group Full Control to HKEY_LOCAL_MACHINE\Software\ Intuit\QuickBooksRegistration;

❖ give the group Full Control to HKEY_CLASSES_ROOT\.QPG;

❖ give the group Full Control to HKEY_CLASSES_ROOT\obja.obja;

❖ give the group Full Control to HKEY_CLASSES_ROOT\ Quickbooks.application; and

❖ give the group Modify rights to the Program Files\Intuit\Quickbooks Pro folder.

Whew. That seems like a lot of steps, doesn't it? But it's the permissions that the program wants open, which it does not have

when the program is run in User Mode. Keep in mind that software that earns the "designed for Windows XP logo" are required to demonstrate that they can be run on a daily basis in user mode. Some of our business vendors do make this certification, however, and unfortunately, many do not.

How can you find out what registries and permissions are needed? Sometimes Google is the key and sometimes you need to use some tools to help you determine the permissions needed to set. Sysinternals.com has two files, one is called regmon, the other is filemon that tracks what the applications uses to run and will report back where the app got "stuck" along the way and help you find these issues. In a firm environment, your network administrators may have already done this analysis and already locked down your desktops properly. If they have not, hand them this newsletter and ask them to begin the analysis.

In the road ahead, the next versions of the desktop operating system will be more geared to make it easier to run in this least privilege mode. But even now, we can begin the process of ask-

ing our software developers to support and develop with the "Designed for Windows XP logo" program. In fact, it's a wise move before making any software purchase to ask the vendor if it complies with this program. For any Internet-based application or one that requires additional connectivity, what are the requirements for this connection? Consider having a neutral third-party examine the requirements to ensure they are recommending it to be installed to not lower your firm's security. Better yet, if you are a large enough firm, require secure coding practices in your request for proposal.

These days it's not just our servers and computers that need to be made secure, it's our applications as well. Don't overlook that security involves your entire network and not just your servers. Consider the protection of your desktops as vital as the protection of your servers.

Susan E. Bradley, CPA/CITP, MCP, GSEC, is a principal with Tamiyasu, Smith, Horn and Braun in Fresno, Calif. Contact her at sbradcpa@pacbell.net. ●

25th Anniversary of Tech Conference Brings Reflections and Benefits

A quarter century ago, technology was very different than it is today, with personal computers just beginning to inch their way into the business marketplace and the Internet something only for the government's use.

Early on, however, the AICPA recognized the role technology played — and continues to play — in our lives, and created its very first technology conference. Known today as the annual TECH Conference, this conclave is one of the most anticipated and well-attended of all AICPA conferences because it continues to present cutting-edge topics and information by CPAs and technology professionals to CPAs and their staffs.

Many of the same faces and names that were prominent in 1980 are still around — and the benefits of attending the conference remain plentiful and paramount. In this issue of *InfoTech Update* and other forums leading up to the June Conference, we will reflect on what makes this conference beneficial to any CPA working in, or consulting on, technology-related activities.

The conference opened doors for me that I could never imagined, a successful practice, great friends, an awesome partner — Jennifer Wilson — and now an awesome career with the AICPA.

— James C. Metzler, CPA.CITP, AICPA

The annual AICPA TECH conference is a "must attend" for me. Besides the obvious need to get up to speed on the latest technology, this conference is very inspiring and energetic. The attendees have passion for their work and it is great to be around others who have the same work ethics as yourself. With the after-hours mingling, the TECH conference is prime for net weaving and the atmosphere is exciting. It is one of the most educational conferences I attend.

— Michele Herzog, CPA.CITP, Club 8

Each year I look forward to Randy Johnston's update on network infrastructure and hardware information. He brings out very concise recommendations and system issues that help me better consult with my clients. It is also a wonderful

opportunity to catch up with my peers that also focus on implementing today's best practices in their CPA firms.

— Roman H. Kepczyk, CPA.CITP, InfoTech Partners North America, Inc.

....

If you want to contribute your thoughts about previous TECH conference, please send an e-mail to *infotech@aicpa.org.* ●

AICPA Tech 2005 Conference

June 26-29, 2005
Bellagio Hotel, Las Vegas

For more information:
www.cpatechconf.com

New IT Community Web Site

The AICPA has created a new IT Community Web Site, www.aicpa.org/infotech, to support CPAs who practice in the Information Technology arena. This Community Web site is designed to provide CPAs a vast array of resources, tools and information related to Information Technology in one convenient, online location.

Some of the exciting new resources and tools that are a click away for CPA Business Technologists include:

- ❖ Premium content available exclusively to CITP Credential Holders and IT Section Members.
- ❖ An IT Section and CITP Forum that enables members to network with peers and exchange ideas about best practices.
- ❖ Information about upcoming seminars, events and Web casts.
- ❖ Searchable database of CITP Credential holders for referrals.
- ❖ IT-related products in one central location.
- ❖ A central home for CPA Business Technologists, specially built to meet your specialized needs.
- ❖ Enhanced search capabilities to help you find the information you need easily and quickly.

We encourage members of the IT Section and CITP credential holders to log in and register with the site to obtain all the benefits it has to offer. To learn more, go to www.aicpa.org/infotech.