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InfoTech Update, Volume 10, Number 1, January/February 2002

American Institute of Certified Public Accountants. Information Technology Section
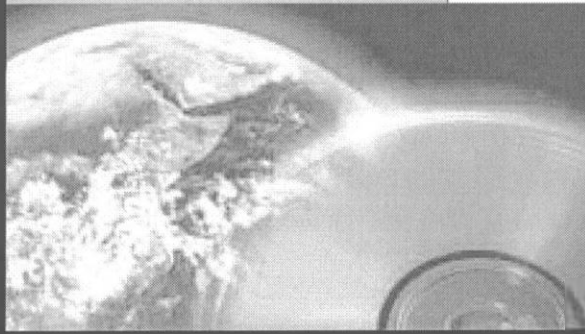
InfoTech Update

Information Technology for CPAs by CPAs

IN THIS ISSUE

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

ELECTRONIC AUTHENTICATION TECHNOLOGIES

IS THAT REALLY YOU? A DISCUSSION OF AUTHENTICATION TECHNIQUES

By Mark D. Mayberry, CPA, CITP

Mark D. Mayberry, CPA, CITP, is a senior manager with BDO Seidman, LLP in Chicago, Ill. He is involved in technology strategy and risk assessment.

With privacy and security continuing to dominate the news, the issue of authentication is making more headlines than ever before. Whether we understand the finer points, most of us can't pick up a newspaper or watch the news without some kind of story on artificial intelligence, security breaches and high-tech concerns.

As unfortunate as it may be, as we age, we are taught by our parents and teachers to grow more and more distrustful of those around us. As a child, we trust everyone, but as we grow older, this trust turns to skepticism, and in many cases, this doubt may certainly be justified. At the core is trust of another human being, and whether it is the business world or our personal lives, human identity is at risk.

Bottom line: are you who you really say you are, and how can you measure the doubt? Electronic authentication is a start. Military and law enforcement has used authentication for years, and we now are seeing some of that technology permeate the business world. Many CPAs and accounting professionals who do not regularly consult or

work in technology may be curious as to why electronic authentication is a concern.

In the accounting marketplace, using various methods of artificial intelligence to confirm or discover identity paves the way for all kinds of assurance services, systems access and verification. One of the components of the AICPA's WebTrust v3.0 Security Principle and Criteria is non-repudiation. How can a business be sure that the customer ordering the merchandise is really that customer? Non-repudiation is used to ensure that, once authenticated, the customer cannot deny the order was sent. It is one thing for someone to deny ordering a $25 book from a Web bookseller, and quite another to have the customer deny ordering 1 million widgets after you just finished manufacturing them. As companies migrate to electronic transactions with customers and vendors, the more they need to be aware of the implications of authentication.

SysTrust also addresses authentication as part of its Security Principles and Criteria. As a trusted advisor, you may want to review these Principles and Criteria with your clients and help them apply these to their organizations.

At its basic core, the way we understand electronic authentication is based

Is That Really You? A Discussion of Authentication Techniques

on something we know, something we have and related high-tech tools, like biometrics.

Something you Know

An example of "something you know" is your personal identification number (PIN) you enter when you use your automated teller machine (ATM) card to gain access to your bank account. Verification involves a comparison of the information entered to the number maintained by the bank. If the numbers match, the card is authenticated and you get access to your account. If you, or someone trying to assume your identity, fail to enter the appropriate code after a few tries, the card will de-activate.

Also, if your card is lost or stolen, you can call the bank to prohibit access, and the bank sets the card number to an inactive state. No matter what PIN is entered, access will be denied. In addition, during the process when access is denied, the ATM may keep and destroy the card in question.

Another example is the password you enter when you attempt to log in to a network server, a secure Web site or the code used to turn off your home security alarm. These can be easily forgotten; so many people try to use the same password for a number of devices or sites. However, using the same password compromises sensitive information. Once the password is known, hackers will try it to gain access to other information using the same ID. The password and accounts can be entered without further verification.

The information you have should remain confidential. Don't write down your list of IDs and passwords, and leave the list in your desk drawer, or worse yet, taped to your monitor.

Something you Have

Another type of authentication involves "something you have," such as an employee badge. The badge includes information about who you are and what access you should have. You may swipe the badge through a card reader or wave it over a device by the entry door to your office or building lobby. The information on the card is compared to information maintained in the company's security system. If your card is active, you get in.

Some cards look blank, but actually will call up your picture from the central system. You are compared to the picture that is associated with the card. If that is not you, be prepared to be questioned. The item you have should be carefully protected. Without a picture, the holder of the item can pretend to be you and may not be challenged.

Another example of something you have is your garage door opener. Think about how many people you know also own the same, popular brand of openers. What keeps you from opening your neighbor's garage door? The code inside the door opening unit and the one in your opener must match. Since there are possibly millions of combinations, the chances of someone opening your garage door are very slim.

One of the trendier high-tech examples of something you have involves obtaining a digital certificate. When you download something from the Internet, you often will receive a prompt to accept a digital certificate before proceeding. You can even check a box to always accept these from the well-known vendor.

Cost isn't a factor; you can obtain a digital ID from a Certificate Authority for less than the price of a nice lunch. With the digital ID, you can digitally sign your e-mail, and encrypt the message and attachments from being read by intruders. The receiver of the message now knows that the message really came from you.

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Biometrics

Biometrics involves the use of something physiologically unique about you, and describes products that are used to authenticate the user based on physical characteristics. Common biometrics include fingerprints, facial images, voice patterns or retinal scanning. The ultimate biometric very well may be DNA.

Fingerprints have been used in law enforcement since 1903, and in the military, other biometric devices have been used for years to authenticate people in secured areas. Fingerprints are routinely obtained when someone is taken to the police station for questioning. The fingerprints are then compared to those maintained in the computer system. If a match is found, the person is the same. No alias needed.

Fast forward to the 21st Century: companies are installing fingerprint scanners at the entry of secure areas. The person attempting to gain entry would need to have his or her fingerprint scanned. The image is then compared to the image maintained on the system. If there is a match, and the person is authorized to enter, the door will open. If not, a record of the invalid fingerprint is maintained and can be investigated. You can even get a keyboard with fingerprint scanning.

A relatively new device is starting to appear at airports, and in light of enhanced security measures, should be very wel-

come. As you enter the security area, your picture is taken and immediately compared to a database of people that security personnel are trying to find. If there is a match, expect to be pulled aside and questioned. This is done using facial recognition. While not widely used, expect to see this type of device in the future. Currently it is in testing at a California airport.

There are cultural aspects to the acceptance of biometrics. Many think that "big brother" has too much information about us already. While the technology is readily available and widely used in the military, it will be some time before we see some of these in the corporate world. Just keep an eye out for this to start becoming part of your everyday routine in the future.

Open the pod Door, HAL

Although electronic authentication has made great advances, don't forget your passwords just yet. The use of passwords for access will be around for quite awhile. However, other types of online authentication are coming. Smart cards, public-key infrastructure and biometrics exist, but are not mainstream. In the meantime, begin watching science fiction, techno thriller movies more closely to get an idea about the potential for authentication devices.

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Resources

Information Security — Resource Center — CPA2Biz (*www.cpa2biz.com*) has launched a comprehensive security resource center providing VeriSign product discounts and security articles that will enable CPAs to adopt leading edge security practices in their own firms and and be a first choice provider of security services to their clients.

Articles include:

"Signing Off — Electronic Authentication Technologies"— an article from the AICPA's Top Ten Techs Web site *(www.cpa2biz.com/CS2000/ResourceCenters/Information+Technology/Top+10+Techs/Technologies/2001_01_toptentechs_ techs_issue_homepage_technologies_10426.htm).*

"How to get a Digital Certificate" — Susan Bradley's E-Bitz Column in the 2001 July/August InfoTech Update *(www.cpa2biz.com/CS2000/ResourceCenters/Information+Technology/IT+Section/2001_07_aicpaorg_members_div_ infotech_news_julhtm_10498.htm).*

Other Resources:

National Electronic Authentication Council (NEAC) — under the National Office for Information Economy, NEAC is a clearinghouse for tools, resources and materials supporting a standardized, national framework for authentication of online communications *(www.noie.gov.au/projects/consult/NEAC).*

Center for Democracy & Technology — federal and business information related to digital certificates and policy *(www.cdt.org/digsig).*

LEVERAGING USABILITY TO MAXIMIZE YOUR WEB SITE

By Cory Knobel

Cory Knobel is a principal of the Optavia Corporation Network in Madison, Wisc. Optavia serves clients worldwide through training, design, evaluation, development and usability consulting; leveraging proven user-centered design methodology to create interactive environments that satisfy customer needs and achieve business objectives.

Usability: a word that has captured the attention of the Web-enabled world. Businesses are told that it is important, but find it difficult to justify any expense in development budgets. Usability is the ability of a customer or user to *effectively complete a task*, with *high satisfaction* levels. Practitioners and interface designers herald it as the holy grail of integrating user experiences with technology. How do we bridge this gap? Is usability the panacea that brings people and technology together? Is it really that important?

Understanding Usability

While simple browsing is one strategy when visiting Web sites, it has become more common for people to use the Internet with specific goals in mind. They seek a particular piece of information, contact another person or company, or complete a transaction.

Users now look to the Web to complete their work and find useful tools, following a workflow or process to achieve goals. Like any other tool, the Web has become something we actively *use*, and this is where usability comes in. In Figure 1, usability optimizes the balance among three elements: technology (the way we access the Web), processes (what we do with the Web); and equally important — people.
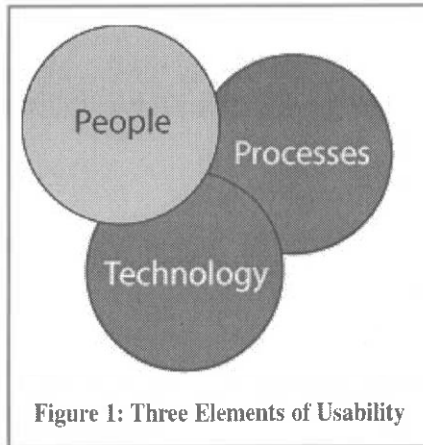

Figure 1: Three Elements of Usability

There is no doubt that the person sitting in front of the computer is of ultimate importance to the interaction we design. The power of the user is best expressed by Keith Instone, a leading usability engineer and curator of usableweb.com. In answering why companies should focus on usability, he says, "Users are in charge. They hold the power in their keyboards and mice. Do what *they* want or else they will take their business elsewhere."

With this type of power in the users' hands, providing an experience that is both successful in enabling users to achieve their goals, as well as subjectively satisfying, becomes an obvious differentiator in a competitive market.

What are the factors that determine this differentiation? Usability can be broken down into five main categories that work toward this overall goal.

Learnability: upon first encountering the Web site, how easy is it for users to understand the site's structure and the tools provided to them to achieve their goals?

Memorability: from one visit to the next, can users remember what they learned in previous visits?

Efficiency: is the workflow laid out in a way that allows users to be more productive, minimizing the number of steps or cognitive "speed bumps?"

Ease-of-use: are the terminology and content of the site familiar to the user? Are the tools provided to users familiar and easy to use?

Appeal: Does the user leave the site feeling satisfied and supported? *Keep in mind that appeal is more than just visual appeal.*

The obvious way to proceed is to maximize all five of these areas, but unfortunately, this is not always possible. Usability is a balancing act, and the distribution of resources among the five areas depends on the usability goals of the Web site. For example, look at an intranet Web application used for expense reporting. Employees may need a higher lever of **efficiency** (for employee productivity) and **memorability** (since employees may only access it once per month), but can withstand a lower level of **learnability** (if training is provided) and **appeal** (since users do not have alternatives). Of course, maximizing each of these within the constraints of site goals is the desired outcome, and becoming clear on what comprises the proper balance is the challenge.

Usability and E-Commerce

Obviously, the business community believes that one prominent, Web-enabled process is the ability to "transact." The Web as a tool of commerce holds great potential; however, questioning users during usability testing frequently shows they do not trust various steps in the online transaction process. Users consistently state that they do not
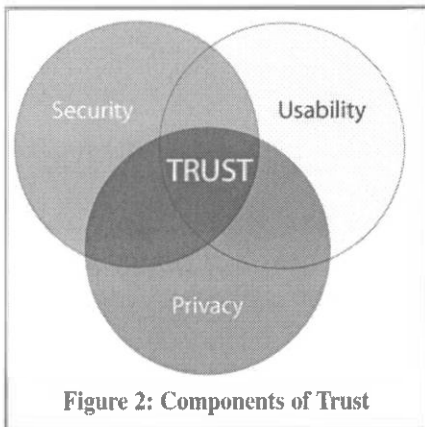
Figure 2: Components of Trust

feel their credit card information is secure, and are not convinced that their personal information will remain private. In addition, complex purchasing processes and vague or non-existent confirmation of purchase leave customers unsure of successful completion of their task — to buy.

Yes, the technology may be secure. Secure Sockets Layers and encryption may be completely in place. However, customers typically don't possess the technical knowledge to assess more complicated technology, and as a result, remain unconvinced. Fostering trust through the Web interface design — improving the usability by alerting users to the security and privacy of the site — is shown in Figure 2. Gathering feedback from target users and customers can provide invaluable insight on the design elements that foster this trust, and make customers more likely to engage in transactions with your online systems.

The Usability Life Cycle

In its most basic format, usability is not one specific tool or technique. It is a process and a philosophy of design with the needs of the end user in mind. The process can be broken into three phases (shown in Figure 3): analysis, design and evaluation.

Analysis includes gaining a thorough understanding of your customers, including age, Internet experience, online shopping habits and patterns, equipment used to access your site, and environmental factors that may influence their interaction. It also details the objectives of the Web site, as well as the tasks that customers can complete through the interface.

The design phase involves much more than simply creating visuals. Issues such as information architecture (organizing the information effectively and logically), navigation, workflow paths and provided tools (buttons vs. drop-down boxes vs. search functions) must be addressed. Each step in the design process builds on the information gained in the analysis phase; constantly checking to ensure that what is being built meets the known needs of users. Once all these decisions are made, design of the actual pages can take place.

Evaluating the design can be done through a number of techniques intended to catch potential user hang-ups early in the process. As shown in Figure 3, design and evaluation is an interactive process, and the results enable an informed return to the design with data on user perception and performance. Many Web sites go through two or three iterations before reaching an acceptable level of usability.

Some of the techniques used to evaluate Web sites include:

❖ *Usability testing* — observes real target users performing real tasks with the interface in a controlled setting; usability tests require specifically designed testing protocols or procedures, and skilled facilitators and observers;

❖ *Heuristic evaluation* — involves usability specialists reviewing the complete design based on experience, knowledge of human factors principles and best practices in Web design, making changes as proposed by the alternative designs tested at successive stages;

❖ *Design walkthroughs* — these gather a team of people, usually key stakeholders and end users, to step through the defined tasks with the interface to uncover process and workflow flaws and inconsistencies; and

❖ *Standards and guidelines reviews* — while these are similar to heuristic evaluations, they concentrate on aspects of the site adhering to established standards and guidelines. These standards can come from outside sources, including the World Wide Web Consortium (W3C), or may be developed internally. For example, commercial Web sites may need to strictly adhere to corporate style guides regarding fonts, size of fonts, colors, and placement of logos or other branding elements.

Evaluating the interface at key points in the development process is critical. As

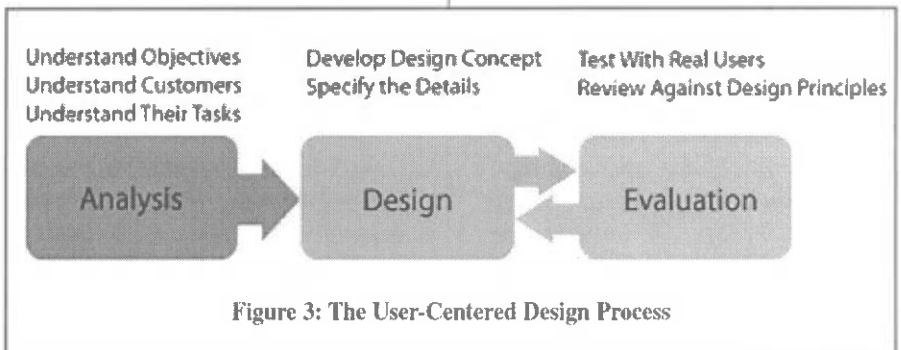| Understand Objectives | Develop Design Concept | Test With Real Users |
| Understand Customers | Specify the Details | Review Against Design Principles |
| Understand Their Tasks | | |

Analysis → Design → Evaluation

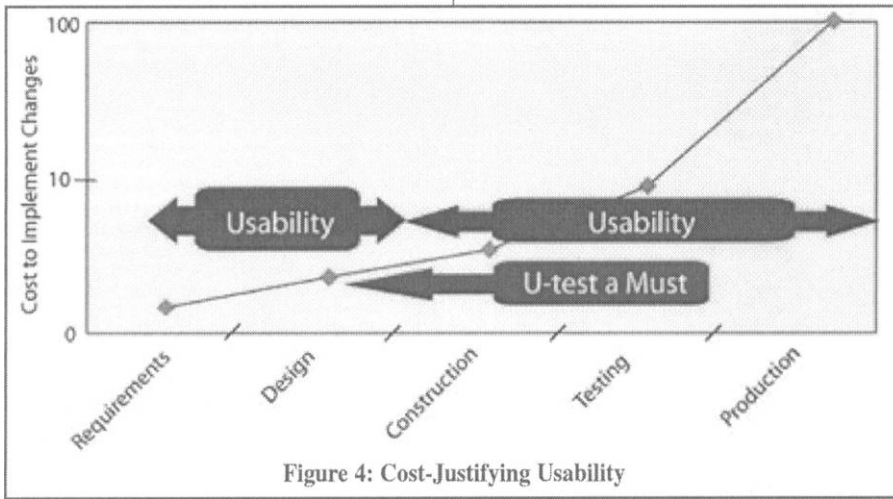Figure 3: The User-Centered Design Process

Figure 4: Cost-Justifying Usability

shown in Figure 4, the cost to implement changes in the design increases dramatically as the development process progresses. Since most Web sites are developed under a budget, cost control is a high priority for most companies in a Web development endeavor. Building a Web site or product that simply does not work, or does not effectively drive business, can be disastrous. *Usability mitigates the risk of building the wrong thing.*

Once this process is completed and the Web site is released, the need for usability studies does not end. Following a user-centered design process from the beginning enables the development of the design to proceed with confidence and usability efforts to come to fruition. However, most Web sites follow an evolutionary process. Over time, more features are added, areas expand, and the skills and needs of users change as they gain familiarity with your site.

In Figure 5, it is clear that the generational development of a Web site can include the usability process throughout. As seen in Releases 2 and 3, usability efforts may shrink as they draw on the work done during the building of Release 1. For many companies, revisiting the analysis and investing in the process around Release 4

addresses the evolving needs and goals of both the customer and the business.

Usability Testing

One of the most common techniques in evaluating the usability of a Web site is known as *usability testing*. Based upon the principles of sound experimental design, usability testing places target users in a setting where they perform typical Web site tasks while being observed by trained staff.

Test participants answer a questionnaire regarding their background on the Web, and are then given a number of scenarios representing tasks normally performed on the site. A trained facilitator and observer guides participants through the test, keeping the environment as free

as possible of test biases. Tests measure the amount of time a participant spends doing a task, the number of errors, how many clicks it takes to complete the task, success rates and other factors. Often, a protocol is used with participants asking them to "think aloud" during the tasks, allowing observers to understand the thought process behind a user's actions. When the tasks are completed, the facilitator asks further questions to clarify what was observed. Finally, the participant completes a questionnaire to give overall impressions of the site and make any final comments.

The collection of this subjective data (participant responses, "think aloud" comments) and objective (task time, errors) provides the information that usability specialists use to define patterns of behavior and interaction with the site. From these patterns, principles of human factors and best practices in Web design are applied to form practical recommendations that provide a better user experience, while protecting and maintaining the business goals of the site.

A common myth regarding usability testing is that it is arduous, time consuming and expensive! The truth: usability testing is completely scalable and need not be a huge burden on development budgets. It also can be done at early stages in the process. Usability testing is
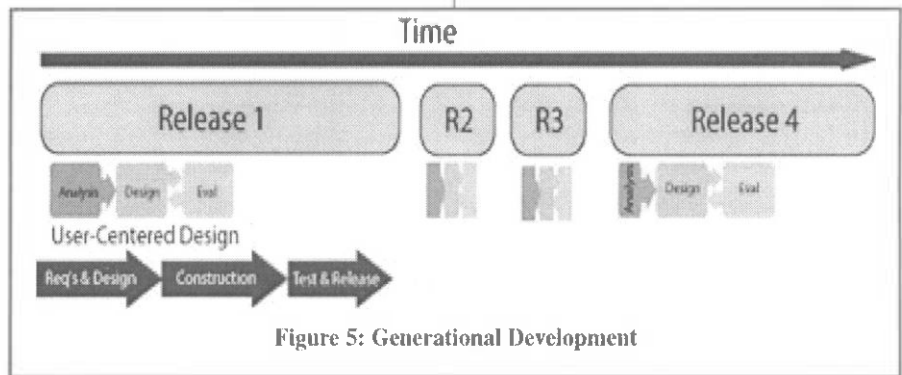

Figure 5: Generational Development

frequently done on paper prototypes during the early design phase, introducing an iteration of evaluating at a cost-effective point. Variations on testing protocols can be performed to uncover usability issues quickly. For most companies, the point *is not* to complete a solid, statistically significant research study. Instead, the overriding goal is to provide practical, meaningful design recommendations that can be implemented efficiently.

Getting the Most out of Usability

How can businesses maximize the benefits of usability practices? The first step is to incorporate a user-centered design and development philosophy to guide Web site and e-commerce initiatives. Many usability firms offer training and mentoring to assist companies in building internal usability teams and skills. Testing your site with real users performing real tasks on a regular basis ensures the evolu-

tion of your site matches the evolving needs of your customers and users.

Supporting these efforts and committing to a user-centered process places companies in a position to release Web sites and products with confidence. With the power of the user to choose, usability can help to ensure that they will choose you and your business.

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IT PRACTICE MANAGEMENT

CAPITALIZING ON TECHNOLOGY OPPORTUNITIES WITH CPA FIRM CLIENTS

By James C. Metzler, CPA

James C. Metzler, CPA, is a partner in ConvergenceCoaching LLC; a consulting firm that helps CPA and IT practices achieve greater success. He also is a partner with Gaines Metzler Kriner and Company, and is founder and chairman of GEMKO Information Group Inc. Jim is one of the authors of the new video course, "Developing a Profitable Information Technology Consulting Practice."

When CPA firms enter the exciting world of information technology services, an unexpected phenomenon occurs in almost every practice. I have seen this de-energize the leaders of the IT practice, as well as discourage the firm's partners and stakeholders. It happens in the biggest and best of firms, as well as the smaller firms just getting started, and is not unique to just IT; it's common to all new niches being built by CPA firms, including investment services, insurance, personal financial planning and other specialties.

I am referring to what happens when referrals from CPA firm members do not occur or dribble in very slowly — usually after the first few IT engagements. CPA firms buy into the IT niche with the vision and expectation that the cross-selling opportunity within their existing client base automatically pours in. What *really* happens is that after the lowest hanging fruit has been picked, the IT practice comes to a screeching halt because it finds itself with an empty pipeline and very few, if any, engagements in progress.

It's exactly the opposite of what was expected. The IT practice leader often blames the CPA partners for not making the

referrals and not having commitment to the IT practice. In turn, the partners blame the IT practice leader for poor financial performance. Emotions soon take over … and finger pointing becomes a common occurrence.

If you can identify with this, you are by no means alone. We know the effect; however, the cause is a CPA profession-wide culture and an everlasting tradition that all new client activity must first stem from the partners (who "own" the client). As a result, many IT practices wait for the referrals to trickle down from the partners without much proactive activity on the part of the IT consultants. I am referring to necessary proactive *sales* activity in addition to general *marketing* events targeted at the CPA firm's clients.

The reality is that partners will do their best to promote IT and a select few partners will excel; but that is just not good enough. Most CPA partners have multiple priorities, high demands on their time, and pressure to sell traditional services. In addition, partners are involved in other great niches and areas of expertise.

The key to mining gold in your own backyard is to initiate and drive the sales prospecting process from the *bottom up* — from the IT practice rather than expecting it to be driven from the top (the partners) down.

First and foremost, inform the CPA firm members that you want to "own" the process of prospecting within the firm's clients to identify potential IT opportunity. Make it clear that you will be working with the CPA firm members and partners

to identify potential opportunities. Make it clear that the partners will be involved when the client is approached for the first time. When consensus to this role is gained, proceed with the following activities:

Gain access to the CPA firm client base and demographics. Many firms are weak in capturing even the most basic client data. However, it is essential to mine the CPA firm client base to end up with quality demographic information you can use in your pursuits. This includes client industry, sales volume and number of employees, as well as the names of the owners, controller, IT manager, CPA firm partner and manager. Also important are the services that the client is presently buying from the firm.

Although this sounds really basic, the number of firms without this data is large; therefore it will take some time to build and polish your new database of CPA firm client "suspects." Some firms have gained this information by using the built-in data extraction and data mining tools within their business tax software package. Once you have determined your method of acquiring the data, determine the appropriate "suspects" in your IT sales process pipeline. Use whatever contact manager you like; the most important activity is to move the selected (and qualified) clients through the sales process of the IT practice.

The operative word is movement. Every client is unique in the activities and length of time that it takes to move them from suspect to prospect to an IT client. One of your best tools is the influence and credentials of the CPA firm and its partners and members.

Gain other sources of data from the intellectual capital in the CPA firm that will yield more business intelligence about the client. Acquire copies of management letters, MAS checklists and internal control questionnaires. Study and attach them to your contact manager, and use them to rate the client as a prospect.

Arrange a meeting. Once you have identified your best suited "suspects," proactively approach the partner in charge of that client and ask him/her to arrange a meeting of introduction. The meeting can be as informal as a breakfast or a lunch. After that, it is up to the IT practice to keep the contact going, with an assist from the partner to promote seminars and similar events.

As the sales process continues, always include the partner in the sales activity process through ongoing communication (oral or written, including email). Invite the partner to subsequent meetings and always gain the partner's insight into the targeted client when needed.

Once you become a master at mining the IT opportunity in the CPA firm's clients, extend your activity to other non-client business contacts of the partners. Chances are very good that you can extend your reach by using the same methodology. However, always remember: to win new IT engagements, the process must be driven from the bottom up on a proactive basis.

Contact Jim Metzler at *jmetzler@gaines-cpa.com.* ⓘ

Developing a Profitable Information Technology Consulting Practice

This videocourse is for CPA partners or principals who are thinking about increasing their firm's revenue by implementing an IT consulting practice—from business planning through service delivery—with experienced practitioners sharing their hard-earned knowledge. Video presenters include James C. Metzler, CPA; Jennifer Lee Wilson; Peyton Burch, CPA; Nancy Cohen, CPA: Peter Frank, CPA/CITP; Taylor Macdonald; and Richard E. Wilson, CPA.

Publication Included! *How to Build a Million Dollar Technology Consulting Practice* by James C. Metzler, a Harcourt Professional Publishing paperback with a practice aids CD-ROM.

Field of study: Consulting
Recommended CPE Credit: 16
Author/Moderators: James C. Metzler, CPA and Jennifer Lee Wilson
Level: Basic
Format: One 210-min. VHS Tape/Manual/Paperback
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ANNUAL INDEX

This index offers a list of articles presented over the 2001 calendar year.

Feature Articles (by technology)

E-BITZ is a new, periodic column in InfoTech Update focusing on practical applications of various technologies to enhance a practice or business.

E-BITZ WITH SUSAN BRADLEY

SHOULD YOU UPGRADE TO WINDOWS XP?

By now, anyone even remotely connected with computers knows that Microsoft will continue to release new versions of its Windows operating system (OS), the latest being Windows XP. The decision to upgrade or stay with a current OS is difficult, and often depends on both cost and productivity.

While Windows XP is the new kid on the block, it is built on the backbone of one of the most stable platforms around — Windows 2000. And, while there are small issues with connecting XP to existing networks, in particular Microsoft Small Business Server 2000, XP easily blends in with the rest of your machines. Here are some reasons to upgrade.

Upgrade or die. Microsoft stopped supporting Windows 95 on Dec. 31, 2001 and will discontinue support for Windows 98 and NT workstation on June 30, 2003. In June 2002, Microsoft is expected to stop selling Windows 98 and NT to computer manufacturers. A new OS is considered "mainstream" for three years. Therefore, if you are purchasing any new computers in the coming months, Windows 98 or NT should not be on your shopping lists.

Professional vs. Home. First let me warn you that a computer running XP Home cannot, and will not, connect to a firm domain-based network. An XP Home will be able to support a peer-to-peer connection, so when looking at computer choices, ensure you choose the Professional version in an office environment. You may also need to purchase this version for someone who wishes to connect remotely to the office network from his or her home. Therefore, choosing the right OS is critical.

Laptops. Laptop screens are notoriously harder to view than their desktop counterparts, and XP has taken the lessons learned from the Pocket PC platform with "Clear Type" technology that makes the Laptop-viewing experience vastly superior to prior versions. However, this desktop viewing property is not a default; you must go into advanced properties of the monitor to turn this on. This technology is also available for flat-screen monitors as well.

Application Compatibility. Windows XP now has a built-in operation system emulator. For example, if you have a program that just doesn't like Windows XP, click on a box to tell the OS to "run as" Windows 95 when accessing that program. And yes, Windows 2000 and XP will run *most* DOS-based applications.

Device Driver Rollback and Backup. Ever loaded a device driver only to blow up your operating system and not be able to get back and operate your computer until many hours of restoring and reinstalling? Windows XP has a feature that tests the driver you are installing to ensure it is "digitally signed" by Microsoft. XP will warn you if it is not signed, and if you insist on installing the driver, it will take a "snapshot" of the system before the driver is installed. As a result, if the driver does not properly work, you can restore your system to the last known "good" installation.

System Tray. There are times when the system tray is so full that there is no room for minimizing applications. Windows XP understands this issue. You can choose to auto-hide those tray items that are not active. In addition, if you have up to five MS Word documents open, rather than opening up each document in a new place on your system tray, XP saves tray space by stacking the Windows on top of one another.

Windows Messenger. MSN's Instant Messenger (IM) is built into Windows XP as its own messenger program, and you should consider this as "real-time" email because you know instantly whether someone is online and has received your message. How is this helpful? When collaborating with a colleague on a project, if he or she is not in your same office, an IM greatly assists in communication of ideas.

Remote Assistance. Windows XP includes Remote Assistance, allowing you to look at another computer, in a similar manner as pcAnywhere. However, if you have ever tried to run something like MS NetMeeting behind a firewall and gone bald while tearing your hair out in the process, getting Remote Assistance working behind one is currently not possible. The NAT [network address translation] ability in your firewall/router makes it unable to be between your

computer and the remote controlled computer. The only way to remedy the situation is to remove the firewall's protection, but with security an overriding issue, this is not acceptable in a corporate environment.

Licensing. If you haven't heard by now, Microsoft is changing its licensing plans. No longer will you be able to purchase "upgrade" versions of software that will load over the top of any prior version. Unless you sign up for software assurance by July 31, 2002, you will need to purchase a "full" version of the program. This can be costly for some businesses. I would advise you to call your business software vendor or visit *www.microsoft.com/licensing*.

But, before you upgrade … if you have any doubts whatsoever about rolling out any software to your business, it is imperative that you test to make sure your critical applications will work with Windows 2000 or XP. You will find that most all applications will work properly and most drivers are XP-compatible. Typically, most users have experienced issues with peripheral drivers that should be fully tested and approved by now. Early users of Windows XP and the Small Business Server 2000 found that they had to manually add the fax software from the XP machine and not use the shared fax wizard included in the network..

As we support our clients in their technology needs, I would recommend that a few older computers be kept in the back room with older operating systems so that we can properly support them. In the meantime, grab a copy of Windows XP and load it on one computer in your office. You might be surprised how quickly the tremendous enhancements turn you into an eXPerienced computer user!

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COMDEX 2001 STARS

By Roman H. Kepczyk, CPA, CITP

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November's COMDEX show in Las Vegas is traditionally the launching point for many new products. Here's a summary of a few of the most interesting technologies and applications.

For the past few years, we have seen the slow merging of our phone, pager and PDAs, with Web-browsing. While the Kyocera Palm-OS phone has had some success in this area, it was the Handspring Treo and Motorola Accompli that had the best new packaging.

Scheduled for release in early 2002, the Treo phone (*www.handspring.com*) has a flip-down keyboard to reveal either a Palm OS input area or a small finger keyboard (similar to RIM pagers) that allow easier typing of messages. If you like the finger

The AICPA Information Technology (IT) Section recently began distributing *Tech Alert*—email updates with high-tech news and information as it affects accounting—to Section members on a regular basis. A recent *Tech Alert* featured another view of COMDEX. Tell us what you think about *Tech Alert*, or any other aspect of *InfoTech Update* by sending an email to *infotech@aicpa.org*.

keyboards, thumboard from *www.seiko-austin.com* can add that capability to your palm PDA. Similarly, the Accompli (*www.motorola.com*) resembled a two-way pager, but also had a built-in cell phone. With either product, the number of communication tools that would have to be carried by an individual is reduced.

On the extreme side of communications tools, National Semi-conductor demonstrated their Oragami PDA that combined all of the features of your

RIM pager with a phone, browser and video conferencing, into an incredibly small form factor.

A few years ago, we demonstrated the SmartPad (then owned by Cross) that allowed you to write on paper and download up to 50 pages to your PC. Now owned by Seiko (*www.seikosmart.com*), the SmartPad2 can link to any Palm OS PDA and capture information instantaneously, providing the best of both worlds to your digitally-challenged personnel.

Portable storage products have come a long way in the past few years.

Earlier this year, we purchased the Agate USB key fob capable of storing 64Mb of files for $229. At COMDEX, we saw similar products for almost half the cost, including a 1Gb USB fob for $599 (*www.usbdrive.com*). For individual laptop backups, CMS has added a 20Gb ($499) and 30Gb ($699) portable system (*cmsproducts.com*).

Visioneer (*www.visioneer.com*), known for its PaperPort Deluxe software and scanners, has rolled out their 9650 scanner capable of 12PPM that can auto-feed 25 documents (up to legal size)

for under $600. For Handspring Visor users who would like to project Power-Point shows with their PDA, Margi (*www.margi.com*) has developed a product that can reduce your travel load.

"Wearable" computing has come a long way, and Wearable Tech is now becoming more fashionable. Companies like Dockers Mobile pants has lots of extra pockets (*www.dockers.com*), and the Scott eVest (*www.scottevest.com*) has built-in cables to connect your PDA, phone, pager and other items in a format similar to a camera vest. ITU

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