

University of Mississippi

eGrove

Newsletters

American Institute of Certified Public
Accountants (AICPA) Historical Collection

11-1997

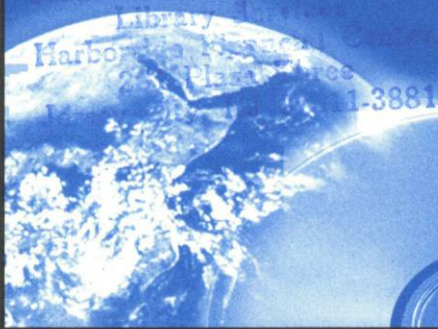
InfoTech Update, Volume 6, Number 6, November/December 1997

American Institute of Certified Public Accountants. Information Technology Section

Follow this and additional works at: https://egrove.olemiss.edu/aicpa_news



Part of the [Accounting Commons](#)



InfoTech Update

Information Technology for CPAs by CPAs

IN THIS ISSUE

5

Ten Case Studies for CPA Firms

7

AICPA Internet/Intranet Conference

8

You Are Aware Of Viruses, But What About Germs?

9

Remote Control Software: Applications and Software Packages



SECURITY

LAPTOP SECURITY FOR CPAs

By Roman H. Kepczyk, CPA and Mark Payne, CPA

Roman Kepczyk is a principal with Boomer Consulting, a firm specializing in technology consulting to CPA firms. Roman has served on the Information Technology (IT) Research Subcommittee and currently serves on the IT Practices Subcommittee. Mark Payne is a senior manager in the Mid Atlantic Area Information Systems Assurance and Advisory Services Practice (ISAAS) of Ernst and Young LLP and recently served on the AICPA IT Research Subcommittee.

Firms regularly send staff into the field with \$6,000 laptop computers containing much of the practice's software and a large amount of firm and client information. In addition to these computers, most accountants also carry their appointment books and copies of important client files in their computer bags. What will your firm do when (not if) one of these computers is stolen? According to Safeware Insurance Company in Columbus, OH, one out of fourteen laptops purchased last year was stolen. The threat is very real and all firms should develop proper procedures and precautions to minimize the risk by providing training, purchasing insurance, and using hardware and software deterrents.

continued on page 4

1998 TOP TECHNOLOGIES

AT THE TOP OF THE LIST, NOTHING BUT NET

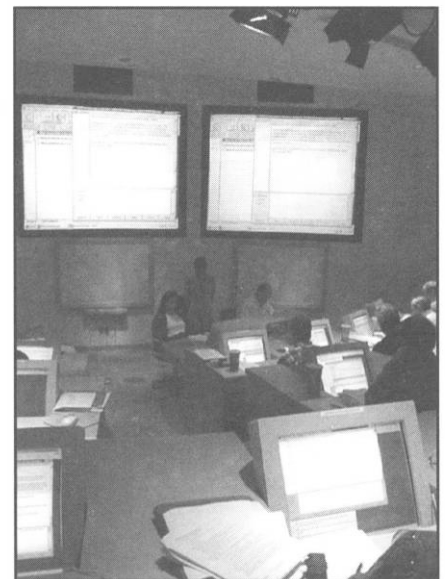
Internet, Intranets, Extranets and Private Networks Top the AICPA's Top Technologies List for 1998

By Andrew R. Gioseffi, CPA

On October 16 and 17, 1997 the AICPA Information Technology subcommittees and selected guests held their annual retreat to define the list of top technologies for 1998. This year's event, again held at the University of Arizona GDSS Lab, identified the Internet, Intranets, private networks and Extranets as the technology area with the likelihood of having the greatest impact for accountants in the upcoming year.

Last year's number one technology, security, slid down to number three. Moving ahead of security but not strong enough to make it all the way to the top is the Year 2000 issue. Y2K as it has become known came from nowhere to number six in 1997, and now has risen to the number two position on this year's list of technology issues to watch. The Year 2000 looms as a major business problem as

continued on page 2





Top Technologies List for 1998

continued from page 1

companies re-program their 20th century computers to comprehend calendar years beyond 1999.

Before entering the lab this year, the IT Team created a Top Technologies page on the AICPA website. We invited members of all AICPA committees with knowledge of and interest in technology to participate. We asked them to comment on last year's list and to identify new items we should consider in the lab this year. The response was impressive. In fact, we are currently investigating ways we can expand the process even further. The feedback gained online helped to ensure that a greater cross-section of the membership had a chance to contribute to the process.

In the lab, we have continued to evaluate the "mix" of participants, again, hoping to ensure that all AICPA membership employment disciplines had adequate representation. This year, the following members participated in the session. Representatives of the AICPA Computer Audit Subcommittee: Chair—Carol Langelier, USGAO; Jim Gonet, Price Waterhouse; and George Tucker, Ernst & Young. Representing the AICPA Tax Technology Committee:

Chair—Gene Prescott, own account; Ed Zollars, Hendricks, Martin, Thomas & Zollars; John Gill, own account. Representing the AICPA MCS Section: Ron Siegneur, own account. Representing the Business & Industry Executive Committee: Mike Harnish, Dickinson, Wright, Moon, Van Dusen & Freeman; Representing PCPS: Don Dale, Goodman & Co. Representing the IT Executive Committee: Sandi Smith, own account. Representing the AICPA IT Research Subcommittee: Chair—Mark Eckman, AT&T; Mike Groomer, Indiana University; Wayne Harding, Great Plains Software; Roman Kepczyk, Boomer Consulting; Robert McCullar, Coates McCullar & Biggers; Jan Monroe, MicroMash; Mark Payne, Ernst & Young; Carolyn Sechler, own account. Representing the IT Practices Subcommittee: Chair—Chris Leach, own account; Ken Askelson, JC Penney; Janet Caswell, own account; George Wilson, Turner, Wilson & Co. Other Representatives: Rick Richardson, Dream Street Productions; Bob Cuthbertson and Don Sheehy—Canadian Institute of Chartered Accountants (CICA). AICPA Staff: Louis Matherne, Director Information Technology (IT); Nancy Cohen, Technical Manager-IT; Michele Lombardo, Project Manager-IT; Barry Melancon, President; and Jane Mancino, Technical Manager-Audit and Attest Standards. Ev Johnson, Deloitte & Touche and a member of the Information Technology Executive Committee served again as the session moderator. These participants represented: members in public practice (from Big Four to sole practitioner), including audit, tax and MCS; industry; consulting; government and education.

Lab participants voted on the effect of each technology issue on auditing, accounting and assurance services, tax, consulting, and financial and operational management. In voting participants focused on the impact of each technology on revenue, organizational productivity and effectiveness, personal productivity

1998 Top Ten Technology Impacts (Overall)

Rank	Description
1	Internet, Intranets, Extranets, and Private Networks
2	Year 2000 Issues
3	Security and Controls
4	Training & Technology Competency
5	Electronic Commerce
6	Communications Technologies — General
7	Telecommuting/Virtual Office
8	Mail Technology
9	Portable Technology (Notebooks, Palmtops, etc)
10	Remote Connectivity

and effectiveness, as well as related risks and exposures.

The Top Ten Technologies for 1998 are: Number 1: Internet, Intranets, Private Networks and Extranets

— Accessed by over 15 million people worldwide, the Internet is a network of thousands of computer networks that offers news groups, mailing lists, Internet chats, the ability to access computer networks from remote locations, file transfer protocols and the World Wide Web. Intranets are created when a Web server is added to a local area network to permit access to the organization's own documents placed on that server with a Web browser. Private networks like Intranets, local area networks and wide area networks connect users at physically dispersed locations to share resources such as data, text, voice and video. Extranets are information and communications networks that take the concept of an Intranet a step further. In addition to providing connections between company employees (Intranet), the Extranet connects the Intranet to suppliers, trading partners and perhaps even customers. A well crafted Extranet could support all major daily business, supporting electronic commerce, data transfer and telecommunications.

continued on page 3

INFOTECH UPDATE, November/December 1997, Volume 6, Number 6. Publication and editorial office: AICPA, 1211 Avenue of the Americas, New York, N.Y. 10036. Copyright © 1997, American Institute of Certified Public Accountants, Inc. Opinions of authors and the AICPA staff are their own and do not necessarily reflect policies of the Institute or the Information Technology Section. Any hardware or software products mentioned do not in any way represent an endorsement by the Institute or Section.

Andrew R. Gioseffi, CPA
Editor
AGioseffi@aicpa.org

J. Louis Matherne, CPA
Director
JMatherne@aicpa.org

Philip H. Friedlander, CPA
Coopers & Lybrand, LLC
Technical Editor

Top Technologies List for 1998 *continued from page 2*

Number 2: Year 2000 Issues — This issue has been described as having the potential to cost billions of dollars to solve. The Year 2000 issue will make financial calculations that use dates such as mortgages, retirement plans, interest calculations, loan balances, mortality rates, etc., incorrect because databases on mainframe systems had been programmed with 'two-byte' year fields. The computer will therefore read '00' as 1900 and not 2000 and beyond.

Number 3: Security and Controls — Security issues deal with policies, procedures and methods that assure that access to files and directories in a network are restricted to authorized users. As more and more consumers conduct business over the Internet, security becomes a major concern. Encryption measures that scramble critical information and "fire-wall" devices that block unauthorized access by hackers are expected to become increasingly more important in the immediate future.

1998 Top Ten Technology Impacts — Accounting and Auditing

Rank	Description
1	Security and Controls
2	Year 2000 Issues
3	Electronic Commerce
4	Auditing Electronic Evidence
5	Training & Technology Competency
6	Electronic Audit Work papers
7	Internet, Intranets, Extranets, and Private Networks
8	Portable Technology (Notebooks, Palmtops, etc)
9	Electronic Document Authentication
10	Continuous Auditing (embedded audit modules, continuous testing)

1998 Top Ten Technology Impacts — Tax

Rank	Description
1	Internet, Intranets, Extranets, and Private Networks
2	Training & Technology Competency
3	Electronic Document Submission (e.g. Tax Return Filing, EDGAR)
4	Communications Technologies — General
5	Mail Technology
6	Security and Controls
7	Remote Connectivity
8	Image Processing & Document Management
9	Telecommuting/Virtual Office
10	Electronic Document Storage

Number 4: Training and Technology Competency — In today's age of continuously changing information, training and technology competency are key to the success of any business. It's difficult to keep up with the pace at which computer applications are modified. In addition, software vendors are constantly updating their products. The onslaught of advanced technology makes continuous training a necessity for users to make the most effective use of technology.

Number 5: Electronic Commerce — Electronic commerce is a way of doing business on the Internet. Basically, it means using computer and communications technologies to link and integrate the business processes of multiple enterprises. The retail industry uses electronic commerce for placing orders, paying invoices and selling products electronically among numerous trading partners. Other examples of electronic commerce users are the manufacturing, banking and health care industries.

Number 6: Communications Technologies, General — Communications technologies package and transmit data, text, voice

and/or video information among its users. Digital wireless data and voice communications, faster data transmission protocols such as ISDN, cable modems, remote access, local area networks, information gateways, and satellites all are anticipated to have significant impact over the upcoming year.

Number 7: Telecommuting/Virtual Office — Telecommuting allows employees to work at home while communicating with the office by electronic means. The virtual office is one in which a practice's usual work is performed in a highly unconventional setting. A virtual office could be located in one's home or on one's laptop computer that is located somewhere new every day. The overall concept here is that the traditional boundaries of the workplace have been torn down and the focus has become the actual work itself rather than where it is accomplished. Enablers to telecommuting/virtual office include the computer (with printing/faxing capability), remote access (e.g. ISDN, 56K modems), and perhaps video conferencing technology.

continued on page 4

1998 Top Ten Technology Impacts — Consulting

Rank	Description
1	Year 2000 Issues
2	Internet, Intranets, Extranets, and Private Networks
3	Training & Technology Competency
4	Communications Technologies — General
5	Electronic Commerce
6	Mail Technology
7	Portable Technology (Notebooks, Palmtops)
8	Strategic Technology Planning
9	Remote Connectivity
10	Business Process Re-engineering



Top Technologies List for 1998 *continued from page 3*

Number 8: Mail Technology — The various technologies available to shorten response time and to enable business activity to occur in a more timely and efficient manner. Includes electronic mail, voice mail, video mail and active messaging (two-way paging).

Number 9: Portable Technology (Notebooks, palmtops) — Portable technology provides the ability to easily access information on the road or anywhere out of the office, such as notebook computers with modems and infrared

1998 Top Ten Technology Impacts — Financial and Operational Management

Rank	Description
1	Year 2000 Issues
2	Security and Controls
3	Internet, Intranet, Extranet, and Private Networks
4	Training & Technology Competency
5	Electronic Commerce
6	Communications Technologies — General
7	Mail Technology
8	Strategic Technology Planning
9	Technology Management
10	Disaster Recovery

ports. Another example is a PDA (which is a handheld computer) that serves as an organizer, electronic book or note taker and includes features such as pen-based entry and wireless transmission to a cellular service or desktop system. Portable technology provides another way to leverage the value of professional time when away from the office.

Number 10: Remote Connectivity — Remote connectivity enables portable technology, thus allowing notebook users to gain access to their office network/corporate Intranet and conduct business while not physically in the office. The remote computer has access (e.g. through a modem) to all shared devices on the network (drivers, printers, etc.). Other enablers include PC card network adaptors and an Ethernet port with a T1 line.

Last year we reported that the forces of technology seem to be greater than the individual components. It remained true this year as well. While discussing some enabling technologies, the lab participants continually returned to the concepts and issues and evaluated how they would affect the day to day business activities of CPAs as they fulfill their roles in practice, industry or wherever they function. Accordingly, in addition to the overall top ten list, separate lists identify the top

1998 AICPA Top Ten Emerging Technologies

Rank	Description
1	Agents (intelligent agents, focusing agents, filtering agents)
2	Push Technology
3	Smart Cards
4	Voice Systems (voice/speech recognition, text to speech)
5	Auditing Electronic Evidence

technology opportunities for each CPA functional area: accounting, auditing and assurance services; tax; management consulting; and financial and operational management.

Participating CPAs also identified several emerging technologies that may significantly impact consumers and businesses in the near future. The ones to watch are: agents, push technologies, smart cards, voice recognition systems, and auditing electronic evidence.

Andrew R. Gioseffi, CPA is a Technical Manager on the Information Technology Team and Editor of InfoTech Update. Mr. Gioseffi is an employee of the American Institute of CPAs and his views, as expressed in this article, do not necessarily reflect the views of the AICPA. Official positions are determined through certain specific committee procedures, due process and deliberation.

IT

Laptop Security for CPAs *continued from page 1*

Step One

The first step for every firm should be to make staff aware of the threat and develop a laptop security policy. Employees must be reminded of the value of the equipment and data (the data is often worth many times the price of the hardware) and trained in proper hardware and software precautions. A security policy should include at least the following directives:

- ❖ Always backup data before traveling. Back it up to a separate source when on the road.
- ❖ Observe all firm hardware and software security precautions.
- ❖ Never leave your computer unattended. Hold it in your hands at all times or hang it over your shoulder.
- ❖ Be aware of your surroundings, especially in busy areas, such as airports (security checkpoints) and other high traffic areas.
- ❖ Secure the laptop whenever you leave a room or take it with you.
- ❖ If your laptop disappears, notify the police or security immediately with specific information. Record your computer's make, model, and serial number

in your wallet, your suitcase or in another separate place.

- ❖ If possible, engrave your company name/logo and a phone number on the PC, and carry it in a bag other than the traditional PC tote. Security Tracking of Office Property (STOP) has a metal plate that permanently imprints "stolen property" on a machine if it is removed.

After employees and clients, the firm's data is the most valuable asset and must be protected. Written procedures can help assure that data is backed up regularly to the network (or floppy disks) and kept in a protected location. The firm should also

continued on page 5

Laptop Security for CPAs

continued from page 4

block access to machines by using passwords and encrypting client data (scrambling the data electronically so others can't use it)

Software and Hardware Options

Some software packages assure that even if a machine is stolen, no one can access the hard disk or designated directories and files. Programs such as Norton's Your Eyes Only and AT&T's Secret Agent allow highly secure levels of encryption. Your Eyes Only prohibits "booting up" without the use of the proper password, which is also used in its screen saver. It also can encrypt files or directories within Windows Explorer "on the fly," which means they are encrypted when saved and decrypted when loaded almost transparently. Your Eyes Only is rated among the best products in security features, but lacks the ability to encrypt entire E-mails, something that Secret Agent does well.

There are also hardware deterrents that can be put in place. For example, a cable offered by several manufacturers secures to a special slot in the back or side of most laptops in order to lock them to a desk or other immovable object. Other options include motion or distance detectors, such as Versa Lock's Sonic Pro, which (when

properly armed) lets out a 105 decibel shriek if the machine is removed. These are usually strong deterrents if employees use them actively and consistently.

Added Insurance

Laptops will be stolen, so it is important to have good insurance coverage. In most firms, an inexpensive rider can be added to your existing policy. Some insurers, such as State Farm and Safeware, provide coverage for a \$5,000 laptop for around \$100 per year. If you are relying on an employee's homeowner's insurance, be sure that it includes coverage of business assets. If a machine has been stolen, products such as Absolute Software's Computrace TRS may help in recovery. The software regularly disables the laptop's sound and dials a toll-free number to "check-in" when it is connected to a phone line. If the machine has been reported stolen, police are notified the next time the computer calls, as the software pinpoints the computer's location.

In addition, engagement letters should indicate that the firm uses laptops and should discuss the liability for transporting client business records on the PCs. It may well be prudent for the firm's general counsel to review the standard engagement letter and offer appropriated additional language.

Guidelines to Ensure Laptop Security

- **NEVER** leave your laptop unattended
- When you are not using your laptop, lock it up in a safe place
- Do not leave a laptop in a car
- When traveling through airports, don't put your laptop through the metal detector. Rather let the security agent inspect the laptop by hand.
- Place your name and company's name and telephone number on the laptop
- Use a power-on password. Choose a password that is not easy for someone to guess.

Enhancing the Benefits

Overall, laptops have made CPAs more effective by making them more available to clients and prospects. This mobility brings with it the risk that unsecured data or equipment can be stolen and client confidences unwittingly disseminated. Firms must realize that the benefits far outweigh these risks and, most important, that they can minimize them with proper training and use of security precautions. **IT**

BOOK REVIEW

CREATING A VIRTUAL OFFICE; TEN CASE STUDIES FOR CPA FIRMS

By Anita Dennis

Is your firm perceived as being as technologically sophisticated as the competition? Is it in a good position to recruit top-notch professionals? Is it positioned to cut back on extraneous costs?

Interviews with cutting-edge firms across the country have found that one way to answer all of these questions with a resounding "yes" is to convert to a virtual

office. On its most basic level, a virtual office is one in which a practice's usual work is performed in a highly unconventional setting. Some of the people involved in virtual offices have a great deal of technology knowledge, while others use very basic options, such as the local phone company's Centrex system, to make it work.

Ten Case Studies

Here's a rundown of how ten firms have applied the concept in their own practices:

- ❖ A Virginia sole practitioner and all but one member of his 5-person firm work full time from their homes, tied together by phone, fax and e-mail. The CPA also retains a small downtown office location where one staff member works

continued on page 6



Ten Case Studies for CPA Firms

continued from page 5

and where clients can be met. The firm's lease costs have dropped from \$1,500 per month for a larger space that once housed the entire firm to \$200 for the rented office. To take advantage of this option, "get back to basics," advises CPA John Gill. "Provide solid services and keep overhead as low as possible. That's what gives us the competitive edge over other small firms—what we spend on overhead."

- ❖ Although many practitioners believe that their prestige will drop if the virtual office is used in a high-traffic practice, Florida tax practitioner Cecil "Pat" Patterson meets clients in an office in his home, while his staff person works from her residence. Having closed his traditional, downtown office, he reports that clients are happy to meet in a welcoming, relaxed atmosphere. The key to maintaining a professional edge, he advises, is not to scrimp on hardware and software. "Don't equip a virtual home office with a computer better suited for home use because it won't stand up to everyday wear and tear," he says. Hardware and software for each computer location cost him about \$2,000, including the printer. His home office, where he prints out all of the tax returns in busy season, is the exception. The faster-producing printer there cost about \$1,500 alone. His telephone system is the voice mail package offered by his local phone company. Each office—including those of his remote employees—has three lines: one for the fax, one for the computer modem and one for regular incoming and outgoing phone calls. He uses remote processing capabilities and Windows 95 to maintain and activate his firm's network.
- ❖ A husband-and-wife CPA team operate a multioffice practice from a basement office in their home. They maintain

small traditional offices in two nearby towns because of the visibility they offer and the opportunity to meet clients. They have cut costs—from \$2,800 for two office suites to \$650 for their two smaller rented spaces—and are able to spend more time with their children by bringing their real work home. To connect the firm's three locations, the partners are combining the capabilities of Windows 95 and Windows NT, making use of Windows' peer-to-peer networking capability. The partners are shopping for a server on which to run Novell 4. The partners plan to add a mail server so that faxes can be received on computer mail boxes, sorted by recipient or into junk mail.

- ❖ A pension benefits boutique has seven firm members working from their homes in Texas and Georgia. The practice, which spun off from a Big 6 firm, finds no trouble in serving far-flung clients and communicating with each other through the mails and over the phone or the Internet. Despite the firm's small size, firm members believe the arrangement helps them compete for top talent. "We can attract the very best people in the field because we can offer comparable amounts to what they're being paid and increase their quality of life so dramatically," says Sarah Henderson of Ed Johnson & Associates. "This business requires long hours. With the virtual office you can work without abandoning your family." The firm's long-range goal is to add as many as 10 to 20 employees around the country. "People who do what we do are very hard to come across and we can effectively compete with any employer in the nation because of the way we do our business," Henderson believes.
- ❖ A tax partner of a firm in San Antonio, Texas, works most of the time from an office in Raleigh, North Carolina. The arrangement is successful because of

long-standing client relationships and because firm members cooperate on each other's engagements. Botello Mathtys and Polansky partner Laura McNutt advises, however, that professionals who try this arrangement must be proficient in the uses—and repairs—of their technology. "I'm very well able to move around within software, but when I hit a problem, I don't know what to do. That has been my greatest personal frustration."

- ❖ A computer consultant in Arizona travels across the country to meet clients of his firm, which is headquartered in Kansas. Roman Kepczyk dials into Boomer Consulting's local area network using ReachOut and a Cubix card. The most important technology to him are central processing unit speed, random access memory and hard disk space. "Can't have too much of any of them," he says.
- ❖ A Colorado CPA helps clients and other CPA firms learn how to exchange information for traditional engagements over the Internet. For him, a virtual office is perfectly suited to a practice conducted mainly in cyberspace.
- ❖ A Hawaii computer consulting practice has employees in virtual offices on the mainland so they can more conveniently serve clients. In the past, some engagements were lost because potential clients were unwilling to spend the extra travel expenses for a Hawaii-based firm member.
- ❖ A Michigan CPA is building an online consulting firm that will be made up of independent practitioners across the country. Clients will pay for advice in a broad variety of disciplines and will communicate with CPAs online or by phone.
- ❖ A Denver litigation services specialist uses his virtual office as a marketing tool. CPA firms are more willing to act as referral sources because they perceive no threat that his unconventional firm will try to lure away their clients for traditional services.

continued on page 7

Ten Case Studies for CPA Firms

continued from page 6

Know the Competition

These firms have proven that the virtual office is a viable option for a wide range of practices. Would it work for your firm? Many practices may conclude that the complicated logistics, unconventionality and isolation are not appropriate for them. Even if they do, however, it's important that CPAs be aware of the effect that vir-

tual office firms could have on them. For example, what's the best way to compete against a firm that is offering the same quality of services but has cut its lease costs by 2/3? How can a firm recruit a professional who has received a competing offer from a firm halfway across the country that is willing to allow the employee to work from home and set his or her own hours? As the virtual office becomes an attractive option for more firms, CPAs should consider what this

development means for them.

Anita Dennis is a freelance writer who specializes in business topics. These firms are profiled in depth in her book, *Creating A Virtual Office: Ten Case Studies for CPA Firms*, published by the AICPA (product no. 090426). The price is \$2295 for AICPA members and \$2895 for nonmembers; IT section members can order the book for \$1830 (This represents a 20% discount off the member price). Call the AICPA order department at 800/862-4272. Use product number 090426IT11 to get the IT Membership Section price. **IT**

CONFERENCE REPORT

AICPA INTERNET/INTRANET CONFERENCE—OCTOBER 27 AND 28, 1997

By Michele Lombardo

Approximately 110 participants gathered in Tempe, Arizona for the first annual AICPA conference on Internet and Intranets on October 27 and 28. The conference was held at the Buttes resort in conjunction with K2 Enterprises.

Both Internet and Intranet technologies are relatively new areas for most CPAs. Whether you work for a company in industry or you're a CPA who advises companies, a knowledge of the Internet and of intranets will be crucial to your success and the future of your organization. Those attending the conference were a very diverse group from non-CPA MIS staff to managing partners of large firms.

Two days of sessions covered topics such as Internet Security, Firewalls, E-Commerce and AICPA's WebTrust initiative, Web Site Management, Selling products and services over the Internet, and selecting an Intranet Operating System. Featured speakers were Randy Johnston, Val Steed, J. Carlton Collins, William Fleenor, Chris Leach, Robert H. Spencer and Lawrence McClelland.

Participants began the second day with a lively session on Internet security issues led by William Fleenor. Highlights discussed included the increasing role the

Internet plays on business activities on a daily basis. For example, Dr. Fleenor indicated that General Electric announced that they will move procurement for 12 of their business units to the Internet which will result in \$5 billion annually in electronic commerce transactions. Other issues discussed in the session were encryption, e-mail privacy, and public key encryption.

Randy Johnston conducted a session to assist participants in selecting an Intranet Operating System. This session covered various operating system solutions for an Intranet. The features, pros and cons, and pricing for Novell and Microsoft solutions were discussed.



Dr. Bob Spencer presented a Business-to-Business Commerce on the Net session. Examples were given of how shopping on the Internet can save shoppers money. Dr. Spencer held up a camera that he recently purchased and indicated by buying on-line, he saved a significant amount of money. Several pitfalls that

potential buyers on the Internet should look out for are auction sales, pyramids and multilevel marketing, and credit card offers. These areas are most prone to fraud.

The conference closed with a panelist session moderated by Val Steed of K2 Enterprises with panelists Carlton Collins, Randy Johnston, and L.A. McClelland. Panelists answered questions from the attendees in this session. Participants asked questions such as "what is the real potential for CPA's in the Internet/Intranet arena", how will the Internet directly impact the small firm as well as what resources are needed to start developing web sites for clients. There are many opportunities for CPA's in the Internet and Intranet arena. Examples of how the CPA can assist clients are developing a Web presence for clients, electronic commerce, and WebTrust.

Michele A. Lombardo is a project manager on the Information Technology team. **IT**





GERM ALERT

YOU ARE AWARE OF VIRUSES, BUT WHAT ABOUT GERMS?

By Chris Leach, CPA

Chris Leach is a sole practitioner in San Diego, CA, chair of the Information Technology (IT) Practices Subcommittee and a member of the IT Membership Section.

Over the past few years I have on occasion written and talked about computer viruses and even cookies. Now it is time to address the newest threat to computers — **GERMS!**

As the creators of computer viruses have become more ingenious in their attempts to disable our machines and systems, anti-virus software vendors have had to amend their focus. Most recently, major software vendors have had to react to a new breed of viruses based on macro languages. Two years ago, the first appearance of the Word Macro Virus changed all of the then-current rules for detecting and combating viruses.

These macro viruses or “germs” do not infect program files (.exe, .com or .sys), are not operating-system specific and are difficult to detect. In addition, these viruses are not specific to a particular word processing program. They travel from Microsoft Windows to Apple to OS/2 seamlessly and with ease. They will attach themselves to Microsoft, WordPerfect, Lotus,

and Corel Corporation with equal zeal and destructive power. To add to the problem, the Internet has added another dimension. E-mail is often sent with word processing documents imbedded in the message. This adds to the proliferation of these germs because people share more documents than they do programs.

Fortunately, all the news is not bleak. Anti-virus software companies have responded with the needed tools and products to help combat this problem. Anti-virus software is no longer only a desktop solution. Now it is common to find virus-scanning software at the network level, and at e-mail gateways, firewalls and Internet sites. With all of these layers of defense, you can rest assured that each attack by a virus will be detected and removed — you hope.

The appearance of other Internet tools, such as ActiveX and Java, add yet another opportunity and threat. These technologies have caused fear in some organizations concerned about the appearance of a hostile applet. Java-based applets that would do any damage to the hard disk would be difficult to create. ActiveX, however, direct access to Windows functions and a virus could cause tremendous damage at the system level.

Well, now that we are convinced that we need to re-evaluate our virus software, the first question is usually, which software should I use? First, consider which software would fit your way of doing business. Questions to ask include: Do you have multiple servers? Can workstations be updated from a central location? Can you be notified via pager should a virus be detected?

Next, consider a vendor that has products for all levels of protection for your organization — from desktop to network, e-mail gateway to firewall and Web browser. It is also a good idea to use products from two separate vendors to scan the same information so that what one product misses, the other will pick up.

Finally, weigh the cost-benefits against risk factors. As in any business transaction, there is no sure thing. Don't throw money at a problem that can more easily be solved with common sense and care. Backing up data is a common sense step that is often overlooked.

Anti-virus software is like an insurance policy. You never want it (or want to afford it) until you need it — desperately.

As always, good luck and good computing!

IT

CHKDISK.OUT!

DILBERT® by Scott Adams



Reprinted by permission of United Media

TECH TOOLS

REMOTE CONTROL SOFTWARE: APPLICATIONS AND SOFTWARE PACKAGES

By Noreen B. Murga and Phil Friedlander, CPA

Noreen Murga is an accounting student at the University of South Florida. Phil Friedlander recently served on the Information Technology Practices Subcommittee and is a former adjunct professor at the University of South Florida. This article is based on research conducted by Ms. Murga.

While the concept of remote control seems to go hand in hand with business travelers, the technology is also being used by telecommuters, home office workers, top executives, and even help desk staff. Most individuals use remote control software to access files and applications on their computers back at the office. Still others take advantage of their

networks' resources, such as printers and CD ROMs. Yet remote control software's capabilities go beyond this.

Network administrators are using this technology to manage remote users as well as internal users on the company's LAN (local area network). Remote control software enables the network administrator to perform tasks such as software updates to the entire network. This technology is also being used by help desk staff. Without ever leaving their desks, they can diagnose a problem, fix it, and even train the end users. Remote control software can also be used to handle customer problems. Technicians can "peek" into the customer's PC, find the problem

and resolve it. Training and downloading of software upgrades can also be achieved with the help of remote control software packages. In addition, business travelers and telecommuters find many uses for remote control software.

While on the road, professionals can hook up to the office, update files or databases, input sales orders, examine their inventories, or check for e-mail with the help of remote control software. It's even possible to dial in at three o'clock in the morning if business takes a professional across the globe. Telecommuters especially find remote control software's capabilities useful. It is estimated that approximately eight million workers in the United States

continued on page 10

System Requirements

Package Name	LapLink	pcAnywhere 32	CoSession Remote 7.0	Carbon Copy 32	Reach Out 6.0
Company Name	Traveling Software	Symantec	Artisoft InSync	Microcom	Stac Electronics
Processor Requirements	386 DX 33MHz	486 SX 25 Mhz or higher	Intel 386, 486 or Pentium processor (or a compatible non-Intel processor)	486 or better	386 or higher (286 or higher for DOS)
RAM Required	8MB RAM	4MB of RAM required (8MB recommended)	4 MB of system memory (8MB with Windows 95)	8 MB RAM	4 MB Ram (640 KB for DOS)
Hard disk space required	7MB hard disk space	16 MB hard disk space		5 MB hard disk space	6 MB hard disk space
Operating System	Windows 95 or 3.1 (which requires DOS 5.0 or later)	Windows 95 or Windows NT3.51, NT 4.0	Windows 3.1 or higher, running in Enhanced mode	Windows 95 or Windows NT 3.51, 4.0	Windows 95, Windows 3.1, Windows for Workgroups (DOS 5.0 or higher for DOS)
Monitor requirements	VGA compatible monitor	VGA or better video			VGA or better
Modem requirements			Hayes-compatible or other synchronous modem or null-modem cable	AT-compatible modem 14.4 kps or higher recommended	
Other requirements / features	Free parallel cable	Free parallel cable			



Remote Control Software

continued from page 9

telecommute at least once a week. With remote control software, the capability to transfer files means that they can be kept on more than one computer.

The Internet opens up so many possibilities, and companies are using remote control software to take advantage of them. With the help of remote control software, software developers are able to set up sites where individuals browsing on the Internet can "test drive" new software without having to install it on their own computers. For the most part, individual users are interested in basic remote control capabilities, but just how does remote control work?

Here's How it Works

For illustration purposes, let's say we have two computers. The one in the main office in Seattle is the host, meaning it can be controlled by another computer. The other is in one of our small remote offices in Arizona.

Arizona's computer is considered the remote client. The computer user in Arizona wants to access and update some information in the computer in Seattle. Arizona loads the client remote control program that runs under Windows. Arizona's client remote control program uses a local modem, which in turn dials the modem attached to the computer in Seattle. The computer in Seattle is running software that enables Arizona to control Seattle's computer. Seattle's software recognizes its modem and when Arizona dials in, Seattle's software "wakes up" and prepares Seattle's PC. The user in Arizona then types the request on its keyboard and the computer software sends that input through the telephone lines. The computer in Seattle receives the keystrokes as if they had been typed right there on Seattle's keyboard. If Arizona uses its mouse, the coordinates of the mouse are transmitted to Seattle. The cur-

sor on the computer in Seattle moves to the new position. Meanwhile, Seattle transmits a copy of its computer screen to the computer in Arizona so that Arizona can actually see the applications being used in Seattle. There are several off-the-shelf remote control software packages that can perform these functions.

Remote Control Products

We will be examining five different products: Traveling Software's LapLink for Windows 95, Symantec's pcAnywhere 32 for Windows 95, Artisoft InSync's CoSession Remote 7.0, Microcom's Carbon Copy 32 for Windows 95, and Stac Electronics' Reach Out 6.0. We will begin by looking at installation and setup.

Installation and setup are basically free of problems with all five remote control software programs. Testers for PC Computing magazine found that with pcAnywhere 32 and CoSession Remote, the settings for host and remote modes and connections were confusing. All five packages have online help. LapLink has Quick Steps, while the remaining packages each have Wizards. Automatic detection of the computer's modems and communications ports is also standard on all five packages. Each comes with a license to copy the program onto two computers. LapLink includes its 16-bit version for people still using Windows 3.1, and Reach Out includes its version for DOS as well as for Windows 3.1 all in one box. Once the programs are up and running, both LapLink and Reach Out have the look and feel of Windows 95 Explorer, which makes them simpler to use for Windows 95 users.

In order to reduce connection times, all the programs except CoSession Remote automatically disable the Windows wallpaper and screen savers. These large bitmaps take extra time to download and time is of the essence in remote computing. LapLink, for example, filters out any bitmaps larger than the maximum bitmap size designated

by the user. With every new remote session, LapLink has an AutoConnect feature that automatically connects the user to the previous connection whether it was by way of cable, modem, or a network. Reach Out users have the luxury of simultaneous monitoring for incoming calls through the modem, the network, or the Internet. This frees the user from having to decide beforehand how he or she is going to connect (Reach Out). TAPI is Intel and Microsoft's Telephony Application Programming Interface. LapLink supports TAPI, which lets the programs share the same communications port. Otherwise, if a user wants to send a fax that also requires the port the remote control software is using, he or she would have to shut down the remote control software in order to send the fax. When this is done, sometimes unexpected interruptions occur and the connection is cut off.

Unintentional interruptions can become a problem, but LapLink, CoSession Remote, and Carbon Copy all have recovery capabilities. With these products, all the user has to do is try to reconnect with the computer. The software will reinstate the user to where he or she was when the interruption occurred.

All the programs allow the user to access and transfer files from a remote PC. PC Computing magazine's testers experienced some difficulty locating a file using pcAnywhere 32, but usually file transfer is a trouble-free task with remote control software. The transfer speeds of the programs do not vary by much, but extra features on some of the programs help accelerate things. Both LapLink and pcAnywhere 32, for example, can reduce the color depth on the host machine to improve speed performance. Symantec suggests using a two-color, black-and-white mode for a gain of up to 50% in performance. But speed is not the only consideration when remote computing. It is also important that the functions are as easy to use as possible.

continued on page 11

Remote Control Software

continued from page 10

File transfers are performed with a simple drag and drop feature. The testers for PC Computing magazine did not find file transfers easy with pcAnywhere 32 because the host and remote modes left them unsure of the next logical step. The host and remote modes also caused confusion with CoSession Remote. To ease the confusion, Artisoft has labeled the windows "This Computer" and "The Other Computer." All five of the packages also have what CoSession Remote refers to as Intelligent Transfer, in which only the parts of the file that have changed are transferred. This is yet another way to save on connection times. LapLink also employs an adaptive compression method that improves file transfer speeds and uses less space to save the file. pcAnywhere and Reach Out both have drive mapping, which lets the application running on the host machine access the data it requires from the remote PC. This actually cuts down on file transfers. For transferring files from the laptop to the desktop, four of the packages allow a direct connection with parallel. CoSession remote, on the other hand, only allows a direction connection using a null-modem cable, which is not easy to use. With all this transferring of files between machines, it is important to keep both sets of files synchronized and up-to-date.

All the programs have synchronization capabilities. pcAnywhere 32, for example, has its AutoXfer feature that allows the user to set up a group of files to be transferred automatically whenever the user connects. LapLink, on the other hand, has a Scheduler feature, which uses Windows 95's System Agent to run LapLink's Xchange Agents run at planned times in order to transfer files. LapLink also has a preview feature so the user can be sure the correct file is being transferred. During transfer, LapLink, pcAnywhere 32, and CoSession Remote

permit the user to perform other remote control functions at the same time.

In addition to accessing and controlling files, remote control software also enables the remote user to launch applications from a remote machine. This option is available with all five packages. Once again, testers for PC Computing magazine had trouble with pcAnywhere 32. They could not decipher screen presentation of host and remote machines and often couldn't locate the start button to launch a program. An added feature of LapLink is its Screen Resolution Matching. If, for example, the user's laptop is running at a lower resolution than the PC it is connected to, LapLink will scale the other PC's video display to match the settings on the user's laptop. This allows the user to see the entire screen of a launched application. All five programs allow the remote user to access and control a network's resources as well. The remote user can be in California and still use the printer in New York. Both pcAnywhere and ReachOut have a Printer Redirection feature.

Having access to the network's resources can also be handy for training and technical support. With LapLink, you can connect to up to 11 computers at the same time. With a network, a user can monitor an entire group of users. In addition, through separate phone lines the user can help two remote users who are having technical problems. CoSession Remote, pcAnywhere, and Reach Out can even record the training sessions. A Chat function is another feature of remote control software packages. It allows the user to discuss problems online. Unfortunately, CoSession Remote cannot handle multiple simultaneous sessions. Carbon Copy and LapLink also have Remote Clipboard functions. With Carbon Copy, the user can copy items to a clipboard and paste them in the local computer without initiating a file transfer.

Training and technical support can also be handled over the Internet. Many

remote users are using the Internet to connect in order to avoid long distance phone charges. With LapLink, the user has to know the other computer's IP, or Internet protocol, address. When using an Internet provider, IP addresses change. The Internet provider assigns an IP address when the user connects to the service.

Traveling Software has tried to alleviate this problem by setting up a WINS server for registered LapLink users. The WINS (Windows Internet naming service) server let's you adopt a name with a permanent IP address. The user can simply point-and-click and gain access to any Internet-connected computers anywhere in the world.

pcAnywhere 32 version 7.5 now includes Symantec's Internet SmartList 7 Technology, which helps the user find "pcAnywhere 32 host or gateway machines over the Net or an intranet." This feature makes it easier for the remote user to gain access via the Internet. Connecting to the Internet is not as simple with CoSession Remote 7.0. The user has to know the IP address and can then gain access manually. Reach Out's Super FTP Client allows the user to send and receive several files at a time over the Internet. (FTP stands for file transfer protocol and is the Internet standard.)

With all this data crossing the Internet, it is important to have security measures to protect the company's information. LapLink, pcAnywhere, and Reach Out each has its own proprietary encryption function to protect the data transmitted between the host and the remote client. Other security features included in all of the packages are password protection, log-on notification, keyboard and mouse locking, and screen display disabling. Reach Out even lets the user develop a separate security profile for each user. Checking for viruses is another capability of some of the remote control software packages. Both pcAnywhere and Reach Out have

continued on page 12



Remote Control Software

continued from page 11

built-in checkers that automatically scan for viruses during file transfers. pcAnywhere employs the popular Norton Antivirus technology that was also developed by Symantec. LapLink does not include a built-in virus checker and Traveling Software recommends a "standalone virus protection program" for more complete protection. Traveling Software may have omitted a built-in virus checker because virus checkers "usually degrade file transfer performance."

Many operating systems have power saving features. For example, if the disk drive is not used for a certain period of time, it is shut down, but this can create a problem when remote computing. pcAnywhere can "selectively override power saving features" that cause slowdowns in remote computing.

Other Options

Remote control features are not only found in software packages any more. Microsoft has incorporated basic remote functions into Windows 95 and Windows NT. Both operating systems have basic remote capabilities such as file transfer, file synchronization, and networking features. In Windows 95, three utilities make up the main remote access features: Dial-Up Networking, Briefcase, and Direct Cable Connection. While installing Windows 95, the user can choose the Portable Setup option and all three will be installed automatically. Each utility gives the user a different capability.

Both Windows 95 and Windows NT Workstation's Dial-Up Networking allow the user to establish a dial-up connection with a LAN server. This gives the user access to all the network's resources, including printers. Two of the more popular servers it can connect to are Windows NT Remote Access Server (RAS) and Novell NetWare Connect 2. File transfers and synchronization are accomplished with Briefcase, which is represented as a

file folder on the desktop. The user simply drags and drops the files to be transferred to another PC and then uses Dial-Up Networking to establish a connection. For transferring files from a laptop to a desktop, Direct Cable Connection is used. For some users these operating systems' remote capabilities may be enough, but remote control software packages still have more to offer.

While these operating systems may give the user remote "access" to programs and resources, they do not give the user remote "control" capabilities, such as launching applications from the

other PC. Windows 95 and NT do not include "intelligent synchronization;" they send the entire file, while remote control packages send only the changes made. This makes Windows 95 and NT more time consuming. As Microsoft continues to develop products such as Office 97, which will integrate Microsoft's applications with Web standards, it is clearly well aware of the future of remote computing. Notice also that the remote control software is being developed to integrate with Microsoft products. In my opinion, the market can expect eventually

continued on page 13

Other Readings

Bolles, Gary A. "Remote Control." Interactive Week 17 Nov.1996: <http://www.zdnet.com/intweek/web/issues/950227/how1.html>.

"Carbon Copy." Microcom. <http://www.microcom.com>.

"CoSession Remote." Artisoft InSyne. <http://www.artisoft.com>.

Kawamoto, Wayne and Rich Schwerin. "Reach Your Files From Afar." PC Computing Nov. 1996:108.

Kiare, Matthew. "LapLink Takes File Exchange Another Step Further." Computer Shopper Dec.1996: <http://www.zdnet.com/cshopper/content/9612/cshp0113.html>.

Marshall, Patrick. "New LapLink Offers Easy Remote and File Transfer." PC World Mar. 1996: <http://www.pcworld.com/software/faxcomm-email/articles/mar96/l403p092.html>.

O'Malley, Chris. "Remote Possibilities." PC Computing Sept. 1996:188-196.

"pcAnywhere — Success Portfolio: Commercial Audio Systems, Inc." Symantec. http://www.symantec.com/pcanywhere/sp_cautos.html.

"Reach Out 6.0" Stac Electronics. <http://www.stac.com>.

Rupley, Sebastian. "Office 97 Targets the Web." PC Magazine 8 Oct.1996: 31.

Simon, Barry. "Let Windows Answer the Phone." PC Magazine 22 Oct.1996: 241+.

Somerson, Paul. "Don't Leave Home." PC Computing Oct.1996: 65.

Stanczak, Mark. "Symantec Re-Energizes Remote — Control Computing." PC Week 8 July 1996: <http://www.pcweek.com/archive/1327/pcwk0031.htm>.

Sullivan, Kristina B. "Users Take Remote Control." PC Week 15 Apr.1996: <http://www.pcweek.com/archive/960408/pcwk0116.htm>.

"The Whitepaper Report." Artisoft InSync. <http://www.artisoft.com>.

Remote Control Software

continued from page 12

to see complete remote control features in future Microsoft operating systems.

Top Choice

In Chris O'Malley's article in PC Computing, LapLink was chosen over pcAnywhere and CoSession Remote mainly because of LapLink's features but also because it was easier to use. Keep in mind that the

testers were telecommuters who had never used remote control software before. pcAnywhere and CoSession Remote both support more networking protocols than LapLink, which would definitely be an important factor in making a decision. As Patrick Marshall pointed out in his article, pcAnywhere and Reach Out have features that LapLink lacks, such as printer redirection, drive mapping, and session recording. Wayne

Kawamoto and Rich Schwerin recommended LapLink for simple tasks and pcAnywhere for a variety of network types. There are many possible applications for remote control software and a vast array of products to choose from. Eventually, remote capabilities will probably be a part of every user's operating system and we may all be controlling our files, as well as our water sprinklers, from halfway across the country. **IT**

CALENDAR OF EVENTS

December:

Fall Internet World 97 presented by Mecklermedia will be held **December 8-12, 1997** at the Jacob K. Javits Convention Center in New York, NY; for further information call (800) 632-5537 or see their website at www.internet.com.

Year 2000 Issues and Answers Conference and Expo presented by Digital Consulting Inc. (DCI) will be held **December 9-11,**

1997 in Chicago, IL; for further information call (508) 470-3880 or see their website at www.dciexpo.com.

January 1998:

RSA Data Security Conference presented by RSA Data Security, Inc. will be held **January 13-16, 1998** in San Francisco, CA; for further information call (415) 595-7703 or see their website at www.rsa.com/conf98/.

ComNet '98 presented by International Data Group (IDG) will be held **January 26-29, 1998** at the Renaissance Washington D.C. Hotel in Washington D.C.; for further information call (800) 545-EXPO or see their website at www.comnetexpo.com. **IT**

VISIT OUR WEBSITE!
www.aicpa.org

"LOOKING FOR A FEW GOOD INNOVATIVE USERS OF TECHNOLOGY"

AICPA and State Societies Now Accepting Applications for the 1998 INNOVATIVE USER OF TECHNOLOGY AWARD

NEW YORK, NY, November 1, 1997 — The American Institute of Certified Public Accountants (AICPA) is now accepting applications for the Innovative User of Technology Award.

The award program is an initiative developed by the AICPA's Information Technology Executive Committee to recognize the outstanding achievements of CPAs in technology who are helping businesses adapt to a changing technological environment.

The award will be presented at the AICPA's TECH '98 Conference to the CPA who best demonstrates the applica-

tion of information technology in developing business solutions.

Each state society is being asked to conduct their own award program on a local level. One winner will be selected by each state that participates, and he or she will be eligible to be selected for the national award, as will the applicants from non-participating states. Special awards will also be presented to individuals for lifetime technical contribution to the profession.

Applicants must be members of the AICPA or their state society employed in

public practice, business and industry, government, or education. In addition, the applicant must have made a significant contribution to the technological growth and success of his/her organization or client's organization.

The recipient of this award will be selected by an independent panel of distinguished individuals knowledgeable of technology and the accounting profession. The winner will receive an all-expense-paid trip — including air travel, hotel accommodations and free registration — to the AICPA's TECH

continued on back cover



Innovative User of Technology Award

continued from page 13

'98 Conference, scheduled for June 14-17, 1998, in New Orleans, Louisiana.


Application materials for each applicant must include the following:

- ❖ Completed application form
- ❖ Description of the business solution achieved through information technology

- ❖ Two letters of recommendation
- ❖ Current resume or biography of the applicant

Applications may be sent directly to the AICPA, but we ask members that they encourage their state society to participate in the program. Submissions are due at the AICPA by March 1, 1998, and should be sent to the AICPA at: AICPA Innovative User of Technology Award Program, Information Technology Team, 1211

Avenue of the Americas, New York, NY 10036-8775. Note that state deadlines vary.

Nomination forms and instructions can be obtained from participating State Societies and from AICPA Online at <http://www.aicpa.org/members/div/infotech/98award.htm>. Another option is to call 212-596-6211 and leave a message with your name and mailing address stating that you wish to receive an Award application form. 



Information Technology Membership Section
1211 Avenue of the Americas
New York, NY 10036-8775
ADDRESS SERVICE REQUESTED

BULK RATE
ZIP + 4 BARCODED
U.S. POSTAGE PAID
Paterson, N.J.
Permit No. 630