REMOTE COMPUTING: COMMUNICATION OPTIONS

By Randolph P. Johnston and William C. Fleenor, CPA

This is the first in a series of four articles on remote computing.

Are you tired of having the speed of your remote access reduce your productivity when you try to work out of the office? Would you like faster, more reliable remote access for your mobile, telecommuting, or remote staff members? There are ways to get this done that won’t break your budget or bank account. The techniques discussed in this series will work in most parts of the country, with slight regional variations. You can implement these techniques in a few short weeks and recognize the gains shortly thereafter.

What’s the business goal?

The first step in designing any remote computing solution is to consider the business goals you want to accomplish. Here are some choices.

- **Enable work from home.** Consider how frequently the staff member will want to be at home—for part- or full-time telecommuting, requiring occasional or permanent access. Determine which applications will be needed, such as e-mail, file access and transfer, and business applications, such as tax return preparation or accounting software.

- **Enable work from on the road.** This includes from client sites, hotels, and airport clubs.

For an example, let’s say that you want to enable everyone in the office to work from anywhere around the country as if they are sitting in the office. You want them to be able to run all applications securely. You cannot predict where they will be working. Sometimes they will be working at home, sometimes traveling, sometimes at a client site. You want to use the Internet to minimize your communications cost. Because the Internet is to be the communications medium, you are concerned about security, speed, and access.
To develop a solution to this or any remote computing scenario, there are four primary components to be considered. These components are:

1. **Communications.** This means the type of Internet access, such as dial-up or on demand, wireless or roaming, or permanent.
2. **Security.** This includes firewalls and virtual private networking.
3. **Software required.** This means thin-bandwidth client and remote-control client.
4. **Hardware required.** This includes communications hardware and PC hardware options.

The whole solution for the scenario described here contains the following parts: access to the Internet through a national-class dial-up provider or permanent Internet connection, remote computer loaded with Citrix MetaFrame as well as a modern and network interface, a Citrix MetaFrame server in the office on the outside of your firewall, and a hardware firewall.

Although decisions about any one of the components is frequently related to decisions about one or more of the other components, this article deals only with communications options. Future articles will deal with security, software requirements, and hardware requirements.

**Communications options for mobile staff**

Mobile staff members have two practical communications options available: a dial-up connection to an Internet service provider (ISP) or a wireless connection.

**Standard telephone connection.** For a remote staff member, a national ISP, such as CompuServe, AT&T, and Microsoft Network can provide dial-up access. The average charge for this service is between $20 and $50 per month. The idea is to have local numbers that can be accessed in many different geographical locations. Further, these vendors all have toll-free capability if all local access options fail. The cost for the toll-free dial-up access is approximately $6 per hour. With this type of access, most users will have a safety net that they can use anywhere in the United States and, in some cases, in other countries.

On the other hand, if your staff members are working from a limited number of known locations, you may want to contact your local ISP and find out if it has reciprocal arrangements with local ISPs in those areas that would allow staff to use local numbers when they are traveling.

You could also build a pool of modems that can be used for dial-in purposes by your remote staff members. So, why use a national ISP instead of building and supporting your own dial-up facility? The easy answer is cost. First, there would be the cost of hardware and personnel to manage a private system. Also, paying for a national class Internet account can eliminate most of your long-distance communications cost for dial-up purposes. If you build a dial-in facility for your office, a key question becomes: How many lines do we need at one time? We could use the ISP rule of thumb—one phone line for every 16 users—but we believe that any formula you choose to use will cause you to not have enough lines at one time or another. If you are generous enough with the number of lines available, you will have extra ongoing costs that will be hidden in the business communication costs after a period of time. Unless special circumstances exist, this approach is generally not a cost-effective solution.

**Wireless connection.** Wireless Internet access is another solution that is coming of age and should be considered in some areas of the country. Today there are competing wireless service providers in addition to digital cell phone connections that can give mobile staff members good quality Internet access. The primary competitors are Mobinet (major U.S. cities at 9.6K), CDPD (3,000 cities at 19.2K), and Ricochet (13 major cities at 128K). Check the coverage maps at [http://www.compaq.com/products/wireless/wwan/ipaqnet_cov.shtml](http://www.compaq.com/products/wireless/wwan/ipaqnet_cov.shtml) to see if coverage exists in your market. Both AT&T and Sprint offer nationwide digital service that can be used for low-speed wireless connection. Other third-party products, such as OmniSky, are also providing this technology. Some communities have high-speed metropolitan area access at reasonable speeds and rates.
Hotels have discovered a new revenue opportunity by providing both wireless and high-speed, broadband access at their properties. Upscale properties frequently have the service today, and the daily charge of $9.95 is quite justifiable if the mobile staff member is online for some period of time. These services can also be contracted on an annual basis. When a mobile staff member is connected at the hotel, the service will usually be connected in one of several ways: Ethernet network, USB, or Firewire. The most common connection method today is using the computer's Ethernet adapter.

Communications options for telecommuting staff

Staff members working from home can not only choose from the dial-up and wireless options available to mobile staff members, but also have an additional dial-up connection option. ISDN (Integrated Services Digital Network), and a variety of permanent connections available, including DSL, cable, and satellite. Permanent type connections, such as dedicated and T1 connections, are also available for the home office. But, because these connections generally are too expensive and not very practical for a home office application, they are not discussed here.

ISDN connection. ISDN technology is fading in popularity, but if you cannot get DSL or cable service, it is significantly better than standard telephone line and is probably your best option. Basic Rate Interface (BRI) ISDN lines will provide a two-channel link (one voice and one data, two data, or two voice) to connect to the Internet. With ISDN, you can send data over the same line you are talking over, at the same time. Therefore, the cost of the ISDN line can be partially offset by the reduced cost of not needing a separate voice line.

ISDN service is offered in two primary forms: measured and unmeasured. Measured service usually provides a base number of service hours (typically five) and then the service is paid for by the hour (typically $6 per hour). If the user forgets to disconnect a measured service ISDN, the large bill can be an unpleasant surprise. We recommend you contract for unmeasured service wherever possible. Unmeasured ISDN typically has no limitation on the number of hours, for a flat rate. When ISDN is installed, there will be an initial installation fee. You will also have to buy an ISDN terminal adapter (modem) or router.

Cable connection. Cable modems can be very cost-effective for home-based staff members. The costs vary from $25 to $40 for home applications and $30 to $120 for business offerings around the United States. The speeds of cable modems, measured in megabits per second, vary by marketplace and provider, but commonly are 1Mbps, 2Mbps, 4Mbps, or 10Mbps. The disadvantage of most cable offerings is that static IP addressing is not available. However, for home-based usage connecting back to the office, a static IP address usually is not a concern. Commonly used vendors include AT&T (with its At-Home service) and TimeWarner (with its RoadRunner service).

DSL connection. DSL (Digital Subscriber Line) service provides as much as 10 times the speed for as little as one-third of the cost of ISDN. Generally we recommend using the local telephone operating company as a DSL provider, although there are several good competitive companies, such as Rhythms, offering DSL nationally.

DSL home service varies from $25 to $75 and DSL business service costs from $40 to $120. DSL speeds vary from 256K to 1.5Mbps with most of the offerings today. A common asymmetric DSL (aDSL) line speed would be 1.5Mbps download and 384K upload speed. Most of the time when DSL lines are discussed, asymmetric DSL is assumed. Symmetric DSL (sDSL) has the same upload and download speed and usually costs a premium.

For home applications, we do not recommend sDSL. DSL will often provide one or more static (fixed) IP address to allow configuration of certain types of Internet services, such as firewalls, VPNs, Lotus Notes servers, or Citrix servers. The availability of the IP addresses and the consistency of speed are key features of DSL.

Either DSL or Cable Modem is recommended for a permanent connection to the Internet. If both are available, DSL is generally a better business choice because of the availability of static IP addresses as well as superior support service coverage hours. Although this may vary from region to region, DSL providers are generally business-to-business organizations that have 24X7 support. Cable operators are business-to-consumer operations and are more difficult for businesses to deal with, particularly on weekends and at night.

Satellite connection. If neither of these two high-speed products is available, a third permanent connection to consider is two-way satellite. Satellite is much better for Web browsing, but it can be used for two-way remote communication as well. This has been commercially available since January 2001, and has been remarkably reliable. Satellite response will be better than dial-up in most cases, and the benefits will be noticeable when Internet access, such as Web browsing, is used.

Summary

The following table outlines the general costs and speeds for the different communication options mentioned in this article.

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A Talk with Judith Trepeck, Chief Operating Officer of the Global Credential Steering Committee

The Practicing CPA recently sat down with Judith Trepeck, CPA, Michigan, to talk about the developments in the proposed Global Business Credential. Trepeck is the chief operating officer (COO) of the Global Credential Steering Committee, spearheading the effort to develop the Global Institute that will administer and manage the new credential. She also is a member of the AICPA Strategic Planning Committee, the Consulting Services Executive Committee, and a former member of the MAP and CPE Executive Committee. She spoke with us about the credential’s beginnings, where it is headed, and how it will affect the CPA profession.

Q: As the COO of the Global Credential Steering Committee, can you give us an update on what is happening with the global credential both in the United States and around the world?

JT: As many of your member firms may know, the Spring Council authorized the AICPA to develop a Member Information and Response Program that is being rolled out as we speak. The results of that campaign will be presented at Fall Council. A member referendum will follow that meeting.

Other activities are going on in the countries participating in the Global Credential Steering Committee. Each member of the committee is carrying out information campaigns, but unlike the United States, those campaigns are mostly focused on the leadership level. Also, the committee is beginning to develop different aspects of the business plan that was presented at Spring Council. We are not implementing the plan at this point, but we are poised ourselves to be able to get into play should the member referendum pass.

Q: Tell us a bit about the history of the proposed Global Business Credential. How was it created and where did this idea come from?

JT: The Vision Project generated so many wonderful ideas for the profession. The future it painted represented extraordinary aspirations. The AICPA’s Strategic Planning Committee began serious discussions into what steps could be taken to start making those aspirations real. A lot of different possibilities surfaced in those discussions. One of the most challenging issues to surface was the market perceptions of the CPA brand and what it would take to stretch it to include first, what many CPAs are already doing today, and second, the range of competencies and services described in the Vision process. They finally settled on the possibility of creating a new credential that would be rooted in the CPA profession’s values and signify broader integrative competencies. This idea went to a global consortium that started meeting a few years ago and hence today we are discussing implementation of this credential.

Q: What are some of the key skills a global credential holder would have?

JT: Let me give you a few examples of what a global credential professional would look like. I think it’s someone...
who continually seeks new information and creates new ways to bring value to his or her clients or employers. It’s the kind of person who constantly believes that there is more information on a topic, who doesn’t settle with a first idea but brings a lot of ideas to the table. I also believe it’s the kind of professional who goes beyond what they see and helps to integrate issues from within and outside of the business to help make strategic decisions.

**Q: Don’t CPAs already have these competencies?**
**JT:** Absolutely. I believe many CPAs already exemplify these competencies. The problem is how do you tell the story? How do you prove that you mean what you say? Remember, today the CPA certificate is by definition a license to audit. We do a lot more, but that’s where we all begin. I believe that this credential is another way of telling the story and it validates the talents CPAs already have. Just the way “CPA” tells someone I know finance and they can trust my advice, the proposed credential would tell clients or employers that I bring a broad business perspective and can draw from a wide range of disciplines to address their needs.

**Q: What advantage does the Global Business Credential bring to the local practitioner?**
**JT:** Let me give you my perspective as a local practitioner in Michigan on what this global credential would mean to me. I have two examples that illustrate why this credential would be effective for me.

The first is that I do some business in Canada with law firms. In that endeavor, I am constantly trying to explain why a CPA is the same as a CA, why I can understand what goes on in Canada the same way I can in other markets. That has been difficult to overcome. The second is the competition in the United States for the work I do. As a sole practitioner, believe it or not, I bump up against what I call the Big Box consulting firms, particularly in the area of law firm management. The credential that I have as a CPA says a lot about me and goes a long way, but it does not answer the question about whether I have the integrative competencies and strategic insight that others have. CPA used to describe 85% of what I did and today it describes 25% of what I do. To compete with those Big Box consulting firms, I can use this credential with my CPA to show that I understand business from a financial and a business planning perspective.

**Q: That brings up my next point. Many CPAs are concerned that the credential will actually diminish the value of the CPA.**
**JT:** Some of the concerns that I hear when I speak to different groups across the country about the proposed global credential really fall into two major categories. One is that the new credential will diminish the meaning of the CPA. This concern hinges on the idea that someone who only has a CPA or who chooses not to pursue the new global credential would be seen as something less than someone who does. I don’t look at it that way. I personally look at it as a way to enhance the story that I as an individual want to tell about myself, if that is, I need to tell a bigger story. But for those who don’t need the credential, or don’t want it, I think they’ll be in just as prominent a place as they are today. No one wants to change that.

The second concern I hear is that CPA associations will no longer support CPAs and the profession, that they will take their resources and support the new global credential instead. Nothing could be farther from the truth. The AICPA and state CPA societies are going to continue to support and enhance the CPA profession. The responsibility for supporting the new global credential would lie in the hands of the new global institute, which would have its own management and operations.

**Q: How will opening up membership to non-CPAs affect CPAs?**
**JT:** Another concern that we hear about is competition from non-CPA professionals who would pursue the new global credential—IT professionals, management consultants, and MBAs. We believe that we’ve answered that competitive question by creating a set of standards that those professionals may never have had to comply with before. Those standards include a code of ethics, self-assessment, recertification processes, and a commitment to continuing professional education. These standards are the foundation of the CPA. By applying them to the new global credential, we’re insuring the same level of quality that we’ve always been used to in the CPA profession.

**Q: What do you think are some of the most compelling features of the credential?**
**JT:** Let me share with you what I see to be the two real heroes of this global initiative. The first you may think is obvious, and that’s the credential itself.

The second hero, which most people overlook, is the body of knowledge. It’s the information that we’re going
to be able to have access to on a global level. It means people and resources. It means information and contacts. It means that I will have access to a global share group unlike anything that’s ever been created because no credential like this has been created before.

So not only is the proposed global credential going to give me the professional identity I need, it’s going to give me that resource and that backup so critical to my own success and the success of my clients and employers.

Q: Do you think the market will accept the proposed credential?
JT: After seeing the data gathered by the independent research firm Interpublic Group of Companies (IPG), I feel comfortable saying I think we have a great opportunity in the marketplace. That research showed that 83% of employers and 75% of clients would be more likely to hire someone holding the global credential for a senior strategic business planning position or hire a professional services firm that employs credential holders. About half of senior executives said they are willing to pay a premium—14% for an employee and 11% for a professional services firm—to holders of the credential. When IPG came to us with their findings, they told us that these were some of the strongest results they had ever seen for starting a new venture.

Q: What do you hope to see as the discussion about the credential goes forward in the next few months?
JT: What I hope to see over the next few months are members becoming better informed, seeking information, and really understanding all the aspects of this credential. When I speak to groups across the country, I see people who all of a sudden say, “I get it,” or “I understand what it’s trying to do,” or “I never knew that piece of it existed.”

This is a major opportunity for our profession. It is a way of realizing what came out of the Vision Project. We want to tell the marketplace about who we are, what we do, and what we’ve accomplished. I hope that our members will see that we cannot afford to let this opportunity pass us by.

I know I’m not alone when I say that as a profession we have to be able to tell our story in a different way and wrap our arms around those competencies and those talents that we exemplify on a regular basis. So we need to make an informed decision, and that’s the goal—to understand it enough to do what’s right for ourselves and for the profession.

“CPA used to describe 85% of what I did and today it describes 25% of what I do.”

At the AICPA Council Meeting in May, PCPS Executive Committee Chairman Bill Balhoff reported that the committee had voted to support the proposed new global business credential. The vote took place after the committee had received a full briefing on the credential including a presentation of independent research on the market demand for and student interest in the credential. The committee also heard arguments for and against the proposal. Here are the reasons the committee voted to endorse the global business credential:

1. The recent PCPS member survey shows that staffing is the number one practice management issue for more than 90% of its member firms. The research data on the credential indicates that the global designation could boost student enrollment in accounting programs. The credential not only measurably increases college student interest in entering the profession—by 28% in a recent survey—but also increases their interest in pursuing the CPA—by 11% in the same survey. These results show that students do not see the proposed credential as a substitute for the CPA. In fact, 83% said it complemented the CPA and 38% felt that both the CPA and global business credential would be worth pursuing.

2. Many PCPS member firms currently employ non-CPAs who provide consulting and other nontraditional services. After analyzing the advantages and disadvantages of the global credential, the committee concluded that these talented people and their firms would benefit from a broad-based interdisciplinary business credential that features many of the highly respected hallmarks of the CPA profession. These hallmarks include a code of ethics, self-assessment, recertification processes and a commitment to continuing professional education.

3. The credential could bring added value to member firms. The data has indicated significant market demand for an interdisciplinary global business cre-
dential like the one being proposed. In fact, research shows that 83% of employers and 75% of clients would be more likely to engage a professional services firm that employs credential holders or to hire someone holding a global business credential for a senior strategic business planning position. About half of senior executives expressed a willingness to pay a premium of 11% for a professional services firm employing credential holders. This perceived value could result in more engagements and increased fees for services for even the smallest firms.

The PCPS Executive Committee sees the global credential as a long-term investment for the success of its member firms. That is why it chose to support the credential in advance of the AICPA Spring Council, when members voted in favor of a resolution presented by delegates from the California and Texas CPA Societies to launch a Member Information and Response program on the credential. The Council resolution also tentatively authorized a mail ballot of members to be sent out after the Fall Council meeting in October 2001. At that meeting, Council will discuss whether to proceed with a member referendum.

The committee believes the proposed global business credential is a step in the right direction for the future of the CPA profession. However, the committee also supports the continuation of the CPA image enhancement campaign that was recently approved at Spring Council. The AICPA allocated $1 million in matching funds for state societies to increase their 2000-2001 image enhancement spending by 25% or more. And the AICPA governing Council has approved a $25 million, five-year marketing effort to change high school and college students’ misconceptions about the CPA profession.

Many of our member firms have expressed concern about the funding of the credential. But the AICPA has assured us that the Global Institute will not be funded by AICPA member dues. The largest source of initial funding is projected to be approximately $70 million in royalty advances from strategic partners, who will provide curriculum-based education programs for the credential. Ongoing funding will come from dues from actual credential holders and from fees for services in which credential members choose to participate, such as exam assessment fees and publications. AICPA and state society members who do not wish to obtain the global business credential will not pay dues to the Global Institute.

Finally, as part of its Member Information and Response program, the Committee has encouraged the AICPA to inform CPA firms about the details of the global business credential and its development.

Look for more information on the credential in upcoming issues of the following:
- Journal of Accountancy
- CPA Letter
- Practicing CPA

To learn more about the global business credential or to submit questions or comments, visit the member information center at www.globalcredential.aicpa.org.

A Call for Response to the GAO Exposure Draft

The U.S. General Accounting Office (GAO) has recently proposed new auditor independence standards for the Government Accounting Standards "Yellow Book." The GAO proposal includes restrictions of nonaudit services, similar to the restrictions in the final Securities and Exchange Commission (SEC) auditor independence rule.

The proposed rule affects CPA firms of all sizes . . . and particularly local and regional firms! There is a complexity in the standards, an additional set of independence rules with respect to nonaudit services, that might cause confusion over the proposed restrictions on nonaudit services. For example, there are departures from AICPA independence standards involving bookkeeping and human resource services. Ultimately, both CPA firms and their Yellow Book clients would be unnecessarily burdened.

To help you understand the issue and its potentially negative effect on your firm, the AICPA has developed a GAO proposal fact sheet and a comparative analysis of the AICPA, SEC, and proposed GAO Independence rules. PCPS encourages all affected CPA firms to respond to the exposure draft. Please respond no later than Monday, July 30, 2001!

The exposure draft can be obtained from the GAO homepage, at www.gao.gov/bovaud/ybk01.htm.

The fact sheet and comparative analysis can be found at www.aicpa.org/members/div/ethics/index.htm.

Firm Practice Management and the new AICPA structure

As a result of recent restructuring, PCPS—along with the MAP Committee and Practice Group B Advisory Committee—is now part of a functional area at the AICPA known as Firm Practice Management. The new structure was designed and implemented to increase staff efficiency, improve productivity, and provide better services for member firms.

Within the organizational plan, Firm Practice Management falls under the auspices of the Member Innovation Team, headed by Tony Pugliese, vice president. The Firm Practice Management area is headed by Sheryl Martin, who has been appointed director, and reporting to Sheryl is Barbara Vigilante, who has been named senior technical manager. Dave Handrich, formerly senior tech-
As part of its student recruiting efforts, the AICPA released its *Takin' Care of Business* CPA Information Package (product no. 872530) last September. The award-winning package includes a 15-minute video, 25 career guides, a poster, and a presenter's outline.

The video, which features five young CPAs in exciting career paths ranging from an FBI Special Agent to Controller of the New York Jets, uses animation and a career day as the backdrop to explore career opportunities in accounting and as a CPA. To order, please call the member satisfaction hotline at (888) 777-7077. Also, as approved by Council this spring, the AICPA is working on a new multimillion dollar direct marketing campaign to students. More details to follow in an upcoming issue.

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**LETTERS TO THE EDITOR**

The Practicing CPA encourages its readers to write letters on practice management issues and on published articles. Please remember to include your name and your telephone and fax numbers. Send your letters by e-mail to pcpa@aicpa.org.