STANDING COMMITTEE ON ILLINOIS STATE LEGAL TECHNOLOGY

The newsletter of the ISBA's Standing Committee on Legal Technology

Chair's column

By John T. Doyle

elcome to the Standing Committee on Legal Technology! If you are like most lawyers that I and other members of this Committee speak to on a regular basis, you may be fairly proficient at using your computer in your daily practice but you do not have the time to analyze what further technology changes you need to make in order to have your practice more effective and efficient. You also do not have the time to learn what you should be doing to enable yourself to offer services on a more competitive basis. We are going to help you address these issues this year.

Issues or opportunities that confront many of us include e-mail (e.g., discovery, encryption, and privilege issues), metadata (and the risk of others reading your earlier changes in Word documents without your knowledge), security, networking, firewalls, data protection (e.g., file backup), Internet research, Web site development, wireless Internet and communication, form generation and dictation software, and personal digital assistants (e.g., Blackberry, Palm, Trio), among other issues. We have covered some of these issues in the past several years, and we will continue to address these and other critically important issues this year. I invite you to contact our new newsletter editor, Peter Mierzwa, at pmierzwa@lbpc.com or me at jdoyle@doylelaw.com with other topics that you would like to see covered.

We have had the benefit of talented and dedicated Committee members over the years, including many who have served as Chairs of this Committee and/or newsletter editors. Adrienne Albrecht, Todd Flaming, Nerino Petro, and David Yavitz, among a number of others, have enthusiastically lectured and authored articles to make technology more relevant and understandable to Bar members. Our Vice Chair, David Clark, served for many years as the newsletter editor as well as the Bar's representative on government technology committees that impact the justice system. Adrienne has just completed a successful year as

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Chair, and she has just received an award for her dedicated service to this Committee. Additionally, Adrienne edits the Bar's Guide to the Illinois Statutes of Limitation, serves on the Family Law Section Council, and reviews many of the bills introduced into the Illinois legislature each year. Other Committee members regularly counsel Bar members on technology issues through participation on the Bar's listserv and at seminars held by Section Councils during the year.

Finally, we look forward to again working with the Bar's Doug Barringer this year, our Board of Governors Liaison, Steve Lane, and we welcome the Bar's new Director of Information Technology, Steve Dunn. Most of all, our Committee looks forward to providing you with continued guidance on the technology issues affecting you and your law practice.

Do a domain

By James Bumgarner

n the Standing Committee on Legal Technology newsletter, June 2004, Vol. 11. No.4, the article "How to Design a Simple Education-Based Web Site for an Individual Attorney" explains what a good law office Web page and its links should contain. With that information in mind, why not try to do the job yourself. Creating your own Web site is not difficult and will allow you to assess the value of Web page providers. If you don't already have a page, you should. Your

first step is to obtain a domain name. As a benefit you can use your domain name for your e-mail and never have to change your stationery or business cards.¹

Selecting a domain name

First, pick a domain name you would like to have. Then you need to see if it is available. Previously, you would go to "Whois?" address: <http://www.whois.com/>, and it would tell you, not only if it were

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available, but also the name and address of the entity who owned it.

But times have changed. Now, Whois tells you only whether the domain name is available. If it is not, the site will offer to buy it for you. A number of other sites will do the same, including:

<http://www.buydomains.com/>, <https://www.dollardomainname. com/domainadmin_frame.html>, <http://www.networksolutions.com>, and <http://www.domain.com/>.

Use one of these sites, find an available name, and pick the one you like.

Registering your domain name

Any of the sites listed in the paragraph above will register your domain name.² Costs for this service have come down.³ Look for one that will do it for \$10-15 per year. Once it is registered, it is yours, and, if you had the equivalent of two servers on the Internet, your computers could be your domain.⁴

Obtain an Internet server

I assume you don't have an Internet server, and need to find one. No problem. The outfit that registered your domain name will be pleased to host it for you for a few dollars per month. The fee also includes disk space on their computer. They will establish a directory for you (folder) that only you can access with a name and password. The service probably also includes a ready-made home page showing "Under Construction." When you visit your directory on your provider's hard disk, your home page could be named "index.html" or "home.html."

You will store all you Web pages in this directory, from which you can download files to your hard drive, as described below, for editing and then upload the revised file to your directory (folder) on your provider's hard drive. The file extension ".html" means "hypertext mark up language" that you will learn to use to edit your pages. Download and review the University of Illinois' primer, <http://archive.ncsa. uiuc.edu/General/Internet/WWW/ HTMLPrimer.html/>, and you will be ready to start editing.

Creating and editing your Web pages

Now, all you need to do is compose

some files that will meet the hypertext protocol (http) requirements. All sorts of word processing and other applications have programs that can make this as simple as typing. I recommend working from scratch in the "raw" html code. Within a short time you can master the protocol code. To keep it simple, save your files in ASCII with html extensions⁵ and use jpeg for your graphics.

Create your home page

Keep it simple. As mentioned previously, it may be that you are editing a home page that already exists on your server. Additional pages can be accessed through hypertext from the home pages and from each other. Since they are on one directory (folder) on your server, you only need to insert a html path in one file leading to the other file. Clicking on such paths will immediately show the linked page (file).

Here's a small example:

<center>

<h1> James McNabb Bumgarner </h1> </center> <a HREF="http://www.ivnet.com/~

 AIR FORCE RETIRED JUDGE ADVOCATES ASSO-CIATION

The code inserted in < > doesn't show on the monitor. Thus the only text that you will see are "James McNabb Bumgarner" and "AIR FORCE RETIRED JUDGE ADVOCATES ASSO-CIATION." The former name shows on the monitor because it is a title. The latter, in addition to displaying the text on the monitor is a hypertext link. Clicking on "Air Force Retired Judge Advocate Association" sends you to page 25, which could be a separate file on the same directory. But in this case it is not. When you examine:

 AIR FORCE RETIRED JUDGE ADVOCATES ASSO-CIATION

you can see that the path leads to an "ivynet" server where page 25 resides. If it were in your directory on your provider's hard drive, you would only need use:

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The following symbols:

<center>

<h1> James McNabb Bumgarner </h1>

</center>

mean in order "center," "a heading in a certain large font," "get and display a smiley face file, smiley.gif, with a certain width and height," "show the text 'James McNabb Bumgarner' on the monitor," "get and display another smiley.gif file,""end the heading font," and "end the centering." The smiley face graphic will be followed by the name and another smiley face graphic, all on the same line and centered. Note that the graphic file is a gif file which is is similar to jpeg files. The "<code>" starts a call and the "</code>" ends it.

Save the home page and all other pages and graphics as separate files in a single directory (folder) on your computer's hard drive.⁶ It will be much easier to find them and upload them to your directory on the host server. Any name for the subdirectory (sub-folder) will do. I use "Netpages."

While on the Internet, you may like the page you are viewing. If you use either Netscape or Internet Explorer, just select "View" and, on the dropdown menu, select either "Page Source" or "Source." The monitor will show the html construction of the page. You can't edit it while on the Internet, but you can copy and paste it, to use as a sample.

Transferring pages to and from the server

Up-and downloading is governed by a number of Internet protocols that are analogous to languages that its computers recognize.⁷ File transfer protocol is the best for us, although your host may have other programs that will let you publish to your site easily after you log on. I believe the ftp programs give more independence.

As for ftp, I suggest using WS_FTP software that you can try free at <http://www.wsftp.com/>. It divides the screen vertically into two parts, one side shows the directory on your hard drive with your pages and graphics. The other side displays the directory on your service provider's computer. First, you must browse the directories on your computer to find your Internet files to display them on the left half of the screen. You also must log onto your provider's directory, which displays on the right side.⁸ Your provider will give you the ftp address, a user ID, and a password. You upload and download files highlighting and clicking files on one side, which copies them to the other side. This split screen lets you see which files have been copied.

Upload your files and your're "live." To review your page, you must use the domain name of your provider directed to the directory that they have assigned you.⁹ Specifically, my bumgarner.org in reality resides on Mediacom and has an address of <http://home.mchsi.com/~j. bumgarner/>. Of course, I can move it to another provider whenever I want to.

The service that registered your domain can offer you a forwarding service that will allow the visitors to your site to use your domain name as an address. The least expensive service forwards your domain name to the section of their hard disk which holds your files. But when your visitor gets there, they see the provider's address, not your own domain name address. You can avoid this by registering for the more expensive forwarding service that sends a visitor to your page and also shows your domain name in the address.

You can use other providers for your forwarding service. For example, I am using Dolardomainname for afrjaa.org, afvvba.org, and isbatech.org; but I use outfitters.com for bumgarner.org. When a potential visitor enters your address on his browser, the call immediately translates to IP address or domain number and travels to that service location. The service then uses a robot to send that demand to the server where your page is located. And up it comes.

Email service set-up

As previously referred to, you should use your domain name for your e-mail also. Just pick something you like to put in front of the "@" sign. I use jimbum@bumgarner.org. You must set up forwarding for this in the same way you did for your page. The e-mail is a simple mail transfer protocol (smpt) or similar e-mail protocol. Again, you can change providers any time you wish, and never have to change your stationery or business cards. In conclusion, now, you are a certified, self-educated Webmaster! Get going.

1. When you have your own domain name, even if you change providers, you simply transfer the domain name to the new provider; thus preserving your e-mail address.

2. You will recall that presently more than .com,.org,..gov.,.net, etc. can be used. Internet Corporation for Assigned Names and Numbers (Icann) is responsible for setting policies on what names can be registered. They also determine what registrars can parcel them out. Originally that was mainly Network Solution's VeriSign. Presently, many more registrars are authorized do it.

3. I paid \$50 when I first registered with the monolopy InterNik.

4. The reason that you would need the equivalent of two Internet computer servers is that each would have an Internet Protocol address, called an IP address. Each IP address is a unique number, e.g., 206.157.193.68 (www.wsj.com). There also is a system that enables the use of names such as "ija" called the Domain Name System (DNS) to indicate locations on the Internet. These Domain Name Servers (DNS) keep a database that lists the domain names along with their unique numbers (IP). In addition there are root servers that list all domain names currently in use, so that the DNS servers can consult them when routing Internet traffic. In effect, typing a domain name in the address line of your browser immediately gets translated to the IP number and sent to the Internet server hosting that domain.

5. If you can't use an html extension, try htm. It will work, but must be accessed as such and may require you to edit extensions on the server. With WS_ftp you can call for an automatic conversion.

6. The home page file is the first accessed. In it, you will have items to click which will lead to others of your pages. I mistakenly named mine by numbers; i.e., Page 1.html, etc. That made it difficult to remember what the page contained. It would be better to name the pages with a descriptive identify; i.e., "bio.html."

7. There are the Hypertext Transfer of the World Wide Web (www); the File Transfer (ftp); the Email (smtp); some others; and now, Voice over Internet (voip).

8. That address for Mediacom is: <ftp://upload.mchsi.com/~j. bumgarner/afrjaa> assuming afrjaa is the directory (folder) you want.

9. Caveat: remember the "/" directs movement around the Interest directory hierarchy. Just the opposite of the "\" sign that is used with the computer operating system.

What's all the fuss about VoIP? Money! A CoLT primer

By Peter Mierzwa

oIP or Voice Over Internet Protocol is the technology that allows you to make telephone calls using a broadband Internet connection instead of a regular, analog phone line. VoIP is not new technology; in fact, corporations have been using IP to transmit voice on their private network, and there was a big consumer push with big promises that went unfulfilled. Early VoIP was mired in complaints of poor voice quality. The latest iterations of VoIP have solved many of the quality issues and, combined with attractive pricing, are poised to be adopted by the legal community. Because VoIP is a way for carriers to reduce traffic costs on domestic and international long-distance calls, and as carriers convert to IP-based fiber optic networks, VoIP will likely replace the public switched telephone network (PSTN) for voice communications.

This primer will define VoIP and explain how it works. It will outline the features and benefits, as well as the drawbacks. Learn what equipment you will need. Get a brief review of major service providers. Hear from one of our own who has gone through the conversion to VoIP with positive results.

How does VoIP work?

VoIP allows you to make telephone calls using a computer network. VoIP uses an analog telephone adapter (ATA) to convert the voice signal from your telephone into a digital signal that travels over your high-speed Internet connection, and then converts it back at the other end so you can speak to anyone with a regular phone number.

Voice (source)—ATA— Internet—ATA—Voice (destination)

Some VoIP services allow you to call only other people using the same service. Others permit you to call anyone who has a telephone number, including local, long distance, mobile, and international numbers. Also, some services only work over your computer or special VoIP phone; other services allow you to use a traditional phone through an ATA.

How you make a call varies depending on your service. One way is to use your standard phone to dial the number, which is transmitted through the adapter. The call goes through your local telephone company to a VoIP provider, then over the Internet to the called party's local telephone company for the completion of the call. Another way to call is to use a microphone headset plugged into your computer.

VoIP has a number of advantages over standard phone services. With many VoIP plans you can talk for as long as you want with any person in the world, provided that person has an Internet connection. You can also talk with multiple parties at the same time without any additional cost. If you have a broadband Internet connection, you need not maintain and pay for a line just to make a phone call. You can even use your computer while you are talking on the phone. Many VoIP services offer CallerID features, call waiting, domestic call forwarding, call logs, programmable "do not disturb" to route callers directly to voicemail, personal teleconferencing, "locate me" services that will route calls to other numbers if you don't answer, computerized speed dialing, and online call management. You can also pick your own area code; thus, if you place many long distance calls to a certain area code you may want to select that as your own to avoid future long distance charges to that area.

Some of the drawbacks include: loss of service during a power loss; VoIP does not have the "plug and call" operability of traditional phone service and requires some additional set-up time; no information (411) service; 911 service may not function seamlessly to connect the dispatcher or identify the location of the 911 caller; and white pages listings may not be available.

Minimal equipment is necessary

A broadband (high-speed) Internet

connection is required. This can be through a cable modem, or high-speed services such as DSL or a local area network. When using a computer you will need a microphone to send your voice through a cable modem; otherwise you can connect a phone directly through a telephone adapter (ATA).

Sounds good, how much?

VoIP plans now offer all-inclusive calling—unlimited local, regional and long distance (within the U.S.) at flat rates starting as low as \$24.95 a month.¹ VoIP can save small firms an average of 30 percent on phone costs.² There are also usage-based plans and most plans provide inexpensive international per-minute rates. Below is a brief list of major service providers along with their plan features and costs as reviewed by *PC Magazine*³:

Service	Monthly price	Notable features
AT&T CallAdvantage	\$34.95	Best quality; most features available
Voicepulse	\$14.99 basic/ \$24.99 unlimited	Easy instal- lation; great basic fea- tures and voicemail options; call filtering
Vonage	\$14.99 to \$29.99	Customer support by telephone; Easy set-up; Fax and 800# options.

Just do it

Long-time member of the Committee on Legal Technology (CoLT) Jim Bumgarner, recently converted to VoIP and rates his experience highly. Jim selected the Vonage service. Once he got the hardware, "it was quite simple to remove the cable from the cable modem and insert it into the Vonage (ATA) Motorola modem." Next he hooked up his standard telephone and the system booted up to present an ordinary dial tone. "Everything is now the same as a land line," according to Jim, "except the necessity of dialing all area codes." Jim recommends connecting your Vonage modem into the incoming connector for your regular telephone service to make all the phones linked to the main box live on VoIP. Jim had high praise for the ability to select your service preferences online, including call forwarding options and a 911 service. And as for the cost, Jim indicated he will save a "minimum of \$30" a month, not to mention the lack of taxes which could account for another \$20 a month on his traditional phone service bill. "All told, good experience. Excellent service," said Jim.

Future: calling from laptops at Wi-Fi hot spots

The future of VoIP will likely integrate Internet voice with cellular and Wi-Fi technologies. Imagine a hybrid device that functions as a cell phone while you are out of the office and can recognize a Wi-Fi network to allow you to transmit calls via VoIP. These calls will contain both audio and video.

But the future of VoIP may also bring increased costs, which would eliminate perhaps its greatest benefit. While traditional phone calls are taxed, VoIP has been treated as an information service free of tax burdens. The FCC has not regulated the Internet or services provided over it, and on February 12, 2004, the FCC found that an entirely Internetbased VoIP service was an unregulated information service.⁴ However, on July 2, 2004, the IRS issued a notice for proposed rulemaking⁵ that would extend the 3 percent federal excise tax imposed on telecommunications services to "present technology," which would include VoIP. Another regulatory concern is the FCC's August 2004 5-0 decision to prohibit businesses from offering broadband or Internet phone services unless they provide police with backdoors for wiretapping.

1. For a good recent review of VoIP ser-

vice providers read this article in the August edition of PC Magazine: Ellison and Kaven, VoIP: Finally Worth a Look, PC Magazine, August 3, 2004, ."http://www.source=adwords".http://www.source=adwords>."http://www.source=adwords".http://www.source=adwords%."http://www.source=adwords%.http://www.source=adwords%.http://www.source=adwords%.http://www.source=adwords%.http:

2. While the exact amount varies, some cost saving is guaranteed. See, Wolter, *VoIP: The Right Call*, PC Magazine, June 22, 2004, http://www.pcmag.com/ print_article/0,1761,a=128110,00.asp> (offering an excellent analysis of the considerations for switching to VoIP).

3. Ibid., Ellison and Kaven (offering detailed reviews).

4. The FCC has organized an FCC Internet Policy Working Group to identify, evaluate and address policy issues that will arise as telecommunications services move to internet-based platforms. See <www. FCC.gov/ipwg> for more information.

⁵ See 69 Fed.Reg. 40345.

⁶ See Howe, Wiretap law to apply to Net calls, Boston Globe, August 5, 2004, <http://www.boston.com/business/ technology/articles/2004/08/05/wiretap_ law_to_apply_to_net_calls/>.

Product review: Citrix Metaframe XP

By Trent Bush

f your firm is like mine, you tend to procrastinate when it comes to making technology-related decisions. When our IT consultants warned over the last several years of impending problems with our network of aging PCs, we did what I would venture to guess most firms probably do: put it off for a little while. After all, if it's not *totally* broke, why fix it? However, as time went by and PCs started to fail, we finally faced up to reality and decided to take a hard look at our options.

Usage environment. Our firm has 18 attorneys with about an equal number of support staff in two locations— Sterling and Dixon, Illinois. In early 2003, we switched from a Novell network to a Windows 2000 server. Most of our PCs dated back to the mid-1990s. As a PC would fail, we would replace it with a new PC, which typically would have a newer operating system and software. Thus, by 2003, we had machines with operating systems ranging from Windows 95 to 2000 and a gamut of software versions. Maintenance of the system became more time-consuming and difficult as we had to replace and reconfigure PCs. In addition, the various operating systems and versions of software increasingly had communication and conflict problems.

Considering our options. Because our strategy of replace-them-as-theyfail was no longer viable, we considered two options from our IT consultant. The first option was to replace our PCs. At a cost of approximately \$1,500 for purchasing and configuring each unit, this amounted to around \$60,000. The second option we considered was Citrix MetaFrame XP.

Citrix is "access infrastructure" software that runs on top of Microsoft Terminal Server. For technologically challenged readers (such as myself), think of a hub and spoke, with the hub being the server with the PC at the end of the spoke. With a traditional network, PCs are connected to the server and the server stores information, but the PCs do the "thinking" (i.e., the CPU runs the applications). With Citrix, the server at the hub runs the applications and publishes out the programs to users. In other words, this system moves the intelligence from the PC to the server. The PC (or dedicated terminal, discussed below) becomes only a means to connect to the server. (For a more technical explanation of Citrix products and how they work, visit <www.citrix.com>).

There are several potential cost savings with this centralized approach. From an equipment standpoint, Citrix lowers the overall cost of system ownership because when a PC fails, rather than replace it with another \$1500 PC, you can replace it with a \$300-400 dedicated terminal. Again, this is because with Citrix, the server rather than the PC runs the applications. A dedicated terminal is a device into which you plug your network connection, monitor, keyboard and mouse; it does not process any information.

There are also potential savings in maintenance and administrative costs. With Citrix, the administrator has the ability to manage (and troubleshoot) software from the server rather than each PC, which saves time. In addition, there is faster set up time when PCs fail because, rather than replacing and reconfiguring a new PC, the administrator only needs to connect the user to the server via a new dedicated terminal.

There are also potential cost savings on software. With Citrix, you only need to buy as many software licenses as you think you will need at any given time. For example, if of your 40 users only 20 ever use a particular program and only 10 of those use it regularly, you may be able to buy a dozen licenses rather than 20 because chances are no more than a dozen would need to use the program at one time. As a corollary, more people can have access to more programs. Using the example above, all 40 users have the capability to access the program on the Citrix server (if the administrator has set up their profile accordingly) because usage is limited only by the number of licenses, not on whether the application is on any particular machine.

Making the Change. After considering our options, the firm decided to go with Citrix. In addition, because we didn't want to load down our existing server, we purchased a new server running Windows 2003 to run Citrix. The total cost for the software, hardware, and installation was approximately \$27,500.

We began the installation process in late summer of 2003. Our IT consultant performed various tests and security checks to determine if various applications were compatible and to see how they ran with the new version of Windows. The system also had to be configured to allow remote access (e.g., reconfiguring our firewall). Finally, we set up user accounts and user profiles, which define who can have access to the system and what programs they can use. We decided to follow an incremental approach in introducing users to Citrix, starting out with a small group

of users and gradually adding more. This allowed us to identify snags and (usually) correct them.

How it's Working—a User's Perspective. Overall, our experience with Citrix over the past year has been positive. From a user's perspective, the interface with the applications is generally the same through Citrix as it was on the PC. Programs are noticeably faster through Citrix than when they ran on my old PC. Perhaps my favorite aspect of Citrix is the easy and fast remote access. After an easy initial software download, I can log onto our system from home and the interface and performance is like I'm sitting at my desk at the office.

[']However, there have been some bumps in the road. We initially had problems losing our personal settings (e.g., personalized toolbars) each time we logged off the system. Some of our older programs had compatibility issues with the new server software that required some configuration changes. We also had problems with macros because macro security under Citrix is much higher than on some of our older software. Perhaps the biggest frustration was printing problems that apparently were caused by different drivers.

Of course, people are naturally resistant to change. However, after the initial grumbling about the change, our users have found Citrix pretty easy to get used to. The firm has also found the savings of using Citrix easy to get used to.





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