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Session 105TS Surfing and Searching on the Internet

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Summary: The instructors cover:

- *what the Internet is, and what it can do for you,*
- *how to connect to the Internet; what hardware and software are needed,*
- *an overview of Netscape Navigator software, one of two popular browsers,*
- *what a domain name is and how to decipher it,*
- *surfing a few sites of actuarial interest on the Internet, such as the A.M. Best and the National Association of Health Data Organization home pages,*
- *how the Internet can answer business-type questions such as “How competitive will our new variable annuity product be?” or “What direction is the National Association of Insurance Commissioners (NAIC) heading on the XYZ Model Regulation?”, and*
- *the future of the Internet and its eventual integration with the insurance business.*

Ms. Peggy J. Grillot: We are using Pointcast, which is actually a software package. It's push technology, so this is indeed the Internet. This is an example of what we'd like to show you. It pushes the information to Brad's system on a regular basis. He

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Note: Contact Debbie Jay at the Society office at (847)706-3539 to obtain a copy of *Internet Savvy*, an SOA publication.

can put this as a screen saver on his system, and look at it occasionally during the day.

I'm online systems manager for the Society of Actuaries (SOA). I'm in charge of the local area network (LAN) and the web site, which are two areas that are very volatile on a regular basis. It's a very lively job, to say the least.

Debbie Jay is webmaster for the SOA. Her official title is online development coordinator. She is really the person behind the web site. If you have a question or a problem and click on "webmaster" on the SOA home page, you would get Debbie. J. Bradley Murray, an actuary, will give you a glimpse of how actuaries are using the Internet or the worldwide web to get information and data and how to use the search engines. That's his forte.

I just want to get a show of hands to see why you're here. I want to get a feel for the type of audience that we have. First, do you want to know what is the Internet and why all the hype? Some of you raised your hands. Do you want to know what you need to know before you get connected? We're hoping to cover that too. How about general questions about browser software? The whole audience. We should be hitting that as well. How about a domain name? A handful. Are you familiar with that terminology? A domain name is basically the address system on the Internet. For the most part, the addresses can be numeric, but it seems like the ones that are alphabetic are easier to remember, such as *www.soa.org*. Do you want to know how to read those error messages when you try to go to a web site and you get a 404 error or a 505 error? Yes. We've all done that, right? I have the same problems as everybody else. It happens to us all. How about when you're using the search engines, and you get a hundred thousand hits, and you only have five minutes to get to the site. Yes. Good, you're in the right place. How about where's the data? I think people seem to find that the entertainment aspect is easier to get to than to the business aspect. You want to know where are the numbers out there? Where can I get some statistics? Maybe you need information from the Pension Benefit Guaranty Corporation (PBGC), or interest rates or federal reserve information, etc. That's Brad's job. I'm setting the stage for him.

The Internet itself was born November 21, 1969. The Internet was really set up as a way to protect transmission should there be a nuclear strike. The good news is we've never had to use it in that fashion. As far as who was behind it, it was really the Advanced Research Projects Agency (ARPANET). It was established to protect military communications. In its simplest term, it's really a network of networks. In the SOA office, we have a LAN that connects all the computers around the office so we can send e-mail. Then we can have our LAN connect to maybe the LAN

at Brad's office. Now you can send e-mail, not only around the office but over to Brad's office as well. That's just a smaller piece of what the Internet really looks like.

I have to give you some statistics so you can see how fast this technology is growing. In 1980, there were only 200 computers connected. In 1991, when President Bush opened the Internet up to commercial and business traffic, there were 300,000 computers connected. That's when the big jump to get on the Internet started. At the present, (1997), there are 20 million computers connected, and in 2001 there are going to be 40 million U.S. households connected. So you can see how fast it's growing.

For most intents and purposes people, including me, use the word *Internet* interchangeably with the word *web*. The web is a different subset of the Internet. The Web was born in 1993 with the release of graphical user interface (GUI), which is that graphical user interface, or the pictures and icons that you're used to seeing when you move around the windows environment. The web is really just a small subset of the Internet itself. When most people talk about the Internet, they seem to be talking more about the web aspect, and I do it all the time as well. The web is user friendly. You can see the pictures and click on the icons. It's much easier to deal with than it has been in the past. In the past, it was really more or less like a DOS environment—menu driven and not slick at all.

Who is the typical user? It is a 35 year old; last year it was a 33 year old. Sixty percent of business users log on daily, and three out of the four are so dependent on the Internet, that there has been a displacement in TV, print, and radio. You'll see that when you go out on the Internet. All the advertisers hover around the search engines because they know that you need to find the information there. So what they're doing is, instead of buying their print ad in the newspaper or putting a commercial on TV, they're going to try to catch you out on the Internet. Believe it or not, most U.S. Internet users pay for their own access.

Who really pays for the Internet? Actually it's the National Science Foundation (NSF). It actually supports the infrastructure and the communication networks—the backbone of the Internet, which would be the Sprint and MCI pieces of it. Indirectly the U.S. taxpayers are paying for it. I believe that you'll see more of it, if the government gets its way. The government would like to see the Internet service providers paying a surcharge, which of course, means you'll be paying again.

What do you need before you get connected? Besides knowing where the on/off switch is on your personal computer (PC) and how to point and click with your mouse, you have to be able to navigate around to find files. In Windows 95, that

would be using Windows Explorer. In Windows 3.1, it would be the file manager. The reason you need to know that is because sometimes you'll have to download or take files off the Internet so you can use them on your workstation. You can store these files somewhere. You'll need to figure out where it is before you can use it again. That's why you need to be able to maneuver around your workstation.

You'll also need browser software. That's the software that allows you to interface with the Internet. The two most popular ones are Microsoft Internet Explorer and Netscape. You should really have an antiviral package on your workstation. Not everybody is a nice guy on the Internet. We encourage you to always get downloaded information or files from the source, as opposed to getting it from another site. But just to be safe, it's always good to have something running on your workstation as a protective shield.

What hardware do I need? If anybody is planning to purchase a new PC in the near future, you've got the best of the world because you can actually buy the latest out there. If you're going to buy a new computer, you can go ahead and get something with at least a 166 megahertz, and you might even want to go higher. Take a good look at the processing speed. Thirty-two megabytes of ram is also recommended. The worldwide web, with its graphical user interface, really chews up the memory. The sites that have all the graphics and the animation will slow down your system if you don't have a reasonable amount of memory. Sixteen megabytes is decent but 32 is better. A 33.6 baud modem is decent, but if you can get a 56 kilobyte modem, that's even better. Some of the modems that are now installed on PCs are upgradeable through software. So that might be another option. If you purchase one, check to see if it has the ability to be upgraded.

What else do I need to get connected? You need, the in-between person, which is the Internet Service Provider (ISP). They're the ones that actually have the pipes going into the Internet. So you want to get from your house to them. One way is through an ISP. They charge about \$20 a month for unlimited service. America Online or CompuServe also offers that service. I think America Online is \$20 a month, and CompuServe is \$25 a month for unlimited service. Either one would do it. The advantage of going to CompuServe, for example, would be that CompuServe has phone numbers around the U.S. So if you travel a lot, and it is important for you to connect to the Internet from wherever you are at, this aspect might be an important consideration to you. There are also some ISPs that have connections around the world. I think Netcom is global. There are some other ones out there as well.

What are other questions to ask the Internet service provider? If you don't choose to go with America Online or CompuServe, you're going to be looking around. If

you're going to be asking neighbors or friends or other business associates how they're getting on the Internet in your area, ask what ISP they recommend and what type of line that they have going into the facility. T3 lines are the best. They're the biggest and the best right now. T1 is decent. Obviously, the faster the line, the faster the access to the Internet. Ask about the number of modems per user. Eight users to one modem is the standard. Some offer 20 to 1, so you may get more timed out or busy signals if they don't have a lower ratio. See if they have 24-hour service. If you really happen to be working on a project in the middle of the night, and you need help, such as you're having problems connecting and you want to know if the lines are down or whatever, it would be good to be able to punch them up and see if you can talk to a human.

If you don't currently have a browser, and if you selected one of the top two browsers you'd be fine. The Netscape Navigator should have a 55% market share at the end of this year compared to Microsoft Internet Explorer's 40%. Other small browsers make up the other 5%.

Viruses are computer programs (executable code) that must be run to multiply and spread. These are the types of items that you may encounter while you're on the Internet. I know that one individual told us that he actually downloaded a page from what he felt was a reliable site, and he ended up with a virus in that particular package. So it pays to be protected. Viruses can be relatively benign. One might just pop up a message on your screen and say, hey, I'm a virus and I got you. They could be pretty nasty. They could worm their way into the boot sector of your PC and cause it to fail. So the best advice I can give you is to get an antiviral package. McAfee and Norton both offer packages and they are relatively inexpensive, around \$50. Once you buy the software though you really need to make sure you update the antiviral package. It does no good to install it and a year from now assume that it has the latest protection. It doesn't. Thousands of viruses are created daily. You need to constantly update your software and that's usually free of charge. You'll have to go to a site on the Internet or on CompuServe or America Online and download the updates so you can make sure your protection is up to date.

From The Floor: Most of your PC user groups will have a free antiviral. You just sign up for your particular local group. They put one out every month.

Ms. Grillot: You're talking about the updates.

From The Floor: The updates, right. They are free through the local users group.

Ms. Grillot: That's good advice. The whole key is to get the update and to make sure you install it or update the files on your workstation.

Two other pieces of software that you're going to want to become familiar with, particularly if you are using the SOA web site, is the Adobe Acrobat Reader, which is freeware, which means you don't have to pay for it. It's readily available on the Internet. If I were looking for the Adobe Acrobat Reader software, I would go to the Adobe.com web site to get it. Again, as I mentioned before, it's good to know where you're getting the stuff from. I would go to the manufacturer of the package I was looking for to download it. We do provide links on our web site for this Adobe software as well. If you click on the link, it takes you over to the Adobe site. The reason why we use this particular software is because it allows us to create files in WordPerfect 6.1 for example. The *Record* files may have tables and charts included in them and we can save them as an Adobe .pdf file, which means that when you go out to the web site, you can download it, and you can view the file just the way it was intended to be seen with the tables and charts. The spacing is fine; it looks just like the printed copy. You can view it if you have a Mac machine or if you have Windows. It crosses the platforms. So we're using it as a distribution tool. It's quite predominant out there. Not only do we use it, but we know that the other actuarial associations are using it as well.

The other piece you may want is a decompression program. If you would like to have a book and a program, then you may have to spend \$25 or \$30 for it. PKUNZIP for Windows does offer a decompression program. You can download snippets of that from the Internet. You don't necessarily get any documentation with it. If you spend the \$25 or \$30, you can get the whole kit and caboodle.

I think that's it for me. I'm going to turn it over to Debbie Jay now. She's going to pick up where I've left off. I wanted to lay a basis for you, and now Debbie is going to take you out on the Internet.

Ms. Debbie Jay: What is the Internet? Simply put, it's a network of telephone lines. What can it do for me? It will allow you to gather information. How can I go about doing that? One way of gathering information is to use search engines. In this segment of the teaching session, we're going to cover searches, as well as how to add sites to your bookmarks. I'll teach you how to read a uniform resource locator (URL). We'll touch on error messages you might receive while you're on the web, and discuss downloading of files and their extensions. Most of you hopefully have picked up the book, *Internet Savvy*, available through the SOA. This is a very useful book. Most of what we're going to talk about will be in this book. During this segment and also Brad's segment you may want to jot down some of the different sites that we're going to take you to.

Opening the site works well if you have a URL. If you don't, that's when you'll need a search engine. Let's talk a little bit about the URLs. We have up on the

screen right now the SOA web site URL (<http://www.soa.org>). The way you will read this is from right to left. The `.org` is the domain name. It's important to know what that stands for. The `.org` stands for nonprofit organization. Sometimes you might see `.edu` and that means education. The domain name will tell you what type of site you're going into. Another one would be `.gov` for government and still another is `.mil` which stands for military. *Internet Savvy* gives a list of domain names. In May 1997 seven more domain names were added because the web is getting so large.

To the left of the domain you see *soa*, and that is the acronym of the company or the company name. Then, of course, the *www* is the worldwide web. Sometimes you won't see a *www* up there, and that's because the Internet is more than just the worldwide web, like Peggy had discussed earlier. Then you get to the *http*, and that stands for, hypertext transfer protocol, and that's simply the language of the web.

Let's use a `.com` (<http://www.soa.com>). If Peg types in `.com` instead of `.org` you'll have the wrong domain name. You're going to wind up at Studsvick (another web site) rather than at the SOA. Many actuaries have actually tried to do this. They actually sent an e-mail and told us that they were going to link something to our site. So we have a hotlink and you can just flip there and get to the SOA web site. So be careful when you type in those domain names. You never know where you're going to wind up.

Now I'm going to go into the errors. If you get an error message in the 400s, that means you've mistyped the URL. If you get a 500 series message, that means it's the server's error. On the SOA web site, if you're going around and you click on a link, and you get this message, please write to the webmaster, which is me, because that means there's something wrong with our link and there's nothing that you did wrong. So you really need to be careful to when you type in those URLs.

Let's move on to downloading files. If you download a file, do so only if you need it. Don't clutter your hard drive with programs you really don't need or want. Be sure to screen any downloads for virus. On the SOA web site, you're allowed to contribute files into our library. And I want to show you that when you download any of those files, we get them before they're released. We check them for viruses, we unzip them, and we check them to make sure that they're working properly before we even put them out on the site. So you can be fairly sure that when you pick up something on our site, you are not going to get a virus.

Peggy had mentioned earlier that you need the McAfee Web Scan. This particular one will catch the virus automatically when you download a file. Let's click on libraries and go to education and exams. Sometimes you see the different

extensions, such as .zip. That's the compressed file. Other times you'll see .txt. That's a text file that you can view on screen automatically. You can also view the .html files. Sometimes you'll see a .exe for extension file. These are executable files. The .wk4 files are, of course, our Lotus files. The Excel files have an .xls extension. WordPerfect files have a .wpd extension and Microsoft Word files have a .doc extension.

Let's move on to search engines. Search engines are Internet librarians constantly indexing new materials for you to enjoy. Without them, finding a document on the net would be like searching the Library of Congress without a card catalog. When you use one of these technological wonders, you sometimes find every web site except for the one you're looking for. In many cases the answer lies in which engine you use and how you word your search queries. Before you begin, define what you're looking for. It may sound obvious, but it's important to have a clear idea of what you want before you can effectively search. For example, if you were going to take a cross country trip, you'd probably get some good maps, you'd plan out your routes that you were going to drive and the places that you are going to stay before you even get into the car. This would also allow you to take the side roads just to see where they go on your trip.

In the same ways this is very similar to what the Internet does. It will be more productive and more enjoyable if you plan ahead before you go out and cruise on the Internet. Here are five things that will help your search become more productive. Use what you know. This information can be extremely valuable in helping you define your key words, your search terms, and your search criteria. For example, you've heard that the computer trade magazine called, *Information Week* might have a web site. You also know that the publisher is CMP Publications. Now you have three good search terms. You have *Information Week*, CMP publications and computer magazine. With those key words you can go ahead and search and probably find what you're looking for.

Second, decide what you need. Determine the type of information you're looking for. Is it a specific piece of data? For instance, are you looking for the score of the 1965 World Series? Or is it general information? Are you looking for travel destinations in Germany? Do you have a question that could be answered by another person? Is the town council meeting going to be on Wednesday? This will help you decide how to phrase your searches and which Internet engine to use that's going to be best for you.

Third, what is the nature of the information? Determine if it is a document? A photograph? A video? A computer program? These different types of information have different file formats as we discussed earlier. For example, if you were looking

for a photograph, it would probably be stored as a .tiff or .jpeg extension file. You can use some of the Internet search tools to locate specific file formats.

Next, define the subject of your search. Determine the general subject area. Is it art, business, government, education, science and so on? Make a list of the possible subject areas. For example, maybe you want to locate information about horse racing. You might want a subject that includes sports, horses and gambling. Now you can also use these three words as your key words for searching. If you run out of ideas, use a dictionary or a thesaurus to locate more words.

Let's go into the net search. We're going to talk just a little bit about some of the individual search engines that you're going to see when you go to net search. It's helpful to know the difference between a search engine that has staff produced subject indexes and those such as Excite and Alta Vista that include millions of pages by relying on automatic indexing programs called spiders. The creators of a search engine write a special program that basically searches the net by itself and stores the text of what it finds in the database. Spiders catalog every new web page they find and are much faster than relying on humans to gather the same data, like Yahoo does, for example. Even the fastest spiders can't keep up with the changes in millions of documents in the web. To make sure your search results contain the latest pages, search engine spiders routinely return to the web sites to update their database, so your search results will include the latest pages. Remember that it will also include irrelevant pages as well.

Yahoo is a subject index and it's a good starting point for somebody who has never searched before. It contains sites that have been submitted and then placed in a subject index by Yahoo staff.

Another one is Excite, and that's a key word subject index. It has recently been organized into what's called channels. It's very similar to subject indexing, but it's on a more selective scale. For example, if you use the key word *entertainment*, you get tons of information, and you really wouldn't have to go any farther than that. All your information would be there. Alta Vista is another good searching tool. This is a key word search. Alta Vista searches a very large database of web sites and news groups very quickly. Web sites are added to the database automatically by an indexing program, so you find most of the recent sites on there.

One of the hottest ones out right now is called, Hotbot; it's one of the newer key word searches. Now this one claims to have the quickest, most up-to-date search of the Web documents. It supposedly gathers up to ten million documents a day. There is also something called, search.com. This is a search engine that searches other search engines. It specializes in business or education.

Now you see all this and you think this is wonderful. I'm getting all this information, but who pays for it? Search engines make their money by selling advertising. Here's an interesting fact. In the second quarter of 1997, Yahoo reported selling banner space to over 900 advertisers with ad sales totaling over \$13 million.

When you go out to the search engine, pick your site and learn to use it. All of them have search fields, but each site works differently, so use the help menu. Every single one of them has a help menu. Every single one of them searches differently. It's in your own best interest to go into these help menus and read what they have to tell you. You can actually ask this one a full question. It also uses what's called, Boolean and we'll discuss that in a few minutes. It also uses wild cards. Use capital letters with care. Search terms entered in lower case are generally case sensitive. Those entered with capital letters generally make the search engine case sensitive. For instance, if you use the word *Rose* in initial caps, you may find everything from the famous Kennedy matriarch to the popular comedian Roseanne. But if you changed it to lower case, then your hits are probably going to be on the flower, the rose.

Use singular words rather than plural words. Most searchers will search on substrings. Use wild cards. This is what Alta Vista does. It uses the dot asterisk. For example, if you're using Alta Vista to search for information about immigration, you might type in the word *immigrant**. If you do that, the wild card would cover immigrants, immigrant, and immigration. Use accented letters in key word searching if you are looking for hits in a language other than English. For example, if you were going to use the word, *Québec*, if you put the accents in, you're more likely to get hits in French than you would in English.

Narrow your searchers by using the Boolean operation. Alta Vista and some other engines use symbols in place of words, such as the plus sign or the minus sign. You can also use the word *and* or *not* in between the different words.

Now when you're searching on these engines, you might start to wonder if anything is going on. Always scroll down. Usually the ones that come up first are the most popular ones. If you find a site that you really like and you want to get back to it again in a couple of days or a week from now, bookmark it. You would click up on the top and choose "add to bookmark." If you were using Internet Explorer it would be called, "favorites". If you wanted to go back in a couple of days, you just choose, "go to bookmark," and there it is. You would highlight it, double click it, and you're right back into the site. You don't have to sit there and write down those URLs.

When you're using older browsers like the Netscape 2.0, it caches your pages. Sometimes, in order to get the most recent updates on the web pages, you have to remove your cache. People are afraid that when they do that they will be removing their bookmarks at the same time. That's not true. You are the only one that can remove your bookmark. So don't be concerned about that. As you begin to search on the Internet, you'll quickly realize that more than one resource or database has relevant information.

What I'd like to do now is take you to a search engine that I happened to come across when I was putting this speech together. It's called Ask Jeeves. You may want to write this one down. It's kind of cute. In fact, I have a story to tell about this. I was talking to my husband the other night, and I was explaining to him that I found this really cute little search engine where you can ask questions. I didn't think he was paying any attention to me. Most of the time I tend to babble and he's not listening to half of what I say anyway. He went to work the next day, and this girl at work said, "My ten-year-old daughter has to go out on the web, and she has to find out why the sky is blue? We've been on the Internet. We have looked all over. We can't figure it out, we don't know what to do." So my husband rattles off this URL (<http://www.askjeeves.com>) to this woman. I didn't even know my husband knew what an URL was. The woman came in the next day and she said they used the URL and typed in, "why is the sky blue?" Ask Jeeves came up with all the answers that this little girl needed for school.

Let's try it. We're going to ask, who was the 16th president? We'll see what he has to say. This is a real nice tool for the kids. It's also nice for adults too. He knew it was Abraham Lincoln, if you click on the side there and you scroll up, you will see all the other presidents listed. And if we go in and we click on the ask on the side, you'll go right to information about Abraham Lincoln. On this same page, there's information that you can hot link to Mary Todd Lincoln. And if you scroll down a little bit, it comes up with all types of information. I think it's a wonderful educational tool. Earlier we asked, what is the PBGC?, and it did come up with answers for us. So it will work for actuaries, high school students or ten year olds.

Mr. J. Bradley Murray: Somebody asked what the PBGC rates are. It actually came out with a good answer.

Ms. Jay: Let me give you a couple more that you might want to write down that you'll probably want to go out to. Another different type of searching engine is called, <http://nt.excite.com>. This particular search engine searches for news stories. So if there's a top breaking news story that you want to read or a new story that took place a couple of weeks ago that you want to try to find, you'll go to this particular search engine.

Mr. Murray: There is something that everyone should keep in mind. I get overwhelmed when I hear these sites and people start rattling off www and all this "dot" stuff. Suffice it to say that you can just know the index. You can just enter, deja news or ask jeeves. If you just type that into these search engines, you can quickly get right at these sites. There's not a need to always know exactly what it is and worry about getting it down right. Just remember a few things about it.

Ms. Jay: This next one will get you into news groups (<http://www.dejanews.com>). It's actually quite interesting because it is categorized. You can look up business, sports, health, cars, and all different types of things. If we click on sports it would break it down to baseball, basketball, and so on. It also allows you to get involved with the news groups. Somebody asked me earlier if I knew of any actuarial news groups, and I'm sorry I really don't. I haven't seen anything out there.

There is another one that we just found. You might want to jot this one down too. It's <http://www.searchenginewatch.com>. This one gives you descriptions of the different search engines. I think it may rate them too. It might be nice to look at it, if you're still confused about what the different search engines do.

In conclusion, what I'd like to say to you is be persistent and creative. Don't get stuck using only one search engine. Search tools are wonderful, and they can be fun, but their usefulness depends on you and the way you use them.

Mr. Murray: I picture both America Online (AOL) and CompuServe as proprietary with entrances on to the web. Think of the web as the U.S. with highways connecting everything which are addresses. CompuServe and AOL are like little home towns with gates. If AOL members want to go in there and do some things, AOL has proprietary information within that little "town" that only AOL members can use. If you want to know something, AOL will list both sites in their own proprietary town, as well as sites that are out in the web to go to.

From The Floor: Would you use AOL similar to the ways you have shown? In a sense is it identical? Would you use AOL in the way that you've been demonstrating at this session or would you use it differently?

Mr. Murray: Oh yes. It's a very user friendly interface. If anything what we're discussing here is more vigorous than maybe what AOL would do.

From The Floor: Are there any disadvantages to using AOL for searches?

Mr. Murray: The only disadvantage to AOL, and you've heard of this in the news, is the bottlenecking because AOL pipes everybody through their certain servers. I

think AOL used to have only two sites—one over here and one over in Europe—where all the members were cranked through. I think they've changed that now. If you go right into the net, you're able to do things much quicker.

From The Floor: Sometimes I'm getting on to a web page, and I see something and it looks like an error message on the screen. It has to do with a cookie, and I don't know whether I should click OK or cancel.

Ms. Grillot: We cover it in our book, *Internet Savvy*. You really do not need to be alarmed. The cookies reside on your workstation. Cookies do not know your social security number, your age, your height, or any of that personal information, unless you type it in when you visit that site. The whole key would be, when you're going to the SOA site or whatever, we use cookies so you can basically bookmark your place in the discussion forums. The next time you can come in and see new messages posted the last time you visited. I would say that they're basically innocuous. It has more to do with how the web is set up. It's a little bit different than CompuServe or America Online, where the software resides on your workstation, and they have stuff on the servers. On the Internet most of the stuff resides on the servers. In order to keep your place in the tree, they have to send a little piece to your workstation. So they are really innocuous. Just be wary about what you're typing in. Don't put any personal information that you really wouldn't want anybody to have.

From The Floor: Is there a simple rule on whether you single click, double click or triple click?

Ms. Jay: That's a very good question. You kind of play with it. Most of the time when you're out on the web, you need to just single click when you see something that is hot linked (which is anything underlined). You will see a hand come up with a little finger and then you know that's also a hot link. You usually use a single click on the web.

From the Floor: Are you going to discuss setting up an address?

Mr. Murray: When you say setting up an address, are you just talking about getting on the Internet and having an e-mail address?

From The Floor: Yes.

Mr. Murray: A quick answer to it is, there are a ton of different ways you can do it. If you get an ISP and get on line, you will automatically be assigned an e-mail address. Once you have that, it is just like your mailing address.

From The Floor: What if all you wanted was e-mail and you don't care about that other stuff.

Mr. Murray: E-mail is free on some services, such as Excite, and Yahoo is going to have one that's free. That's expanding, that's a good point.

I'm going to try to add some perspective on this, and hopefully address a concern I think a lot of people have with the Internet. How many of you use the Internet in conjunction with your business or for work? I would venture to guess that a lot of you, like the general public, think that the Internet has got a lot of hype and a lot of sizzle, but when it comes down to practicality, there's really not much to it. That's really what I hope to address here. I'd like to discuss how it could be useful to us as actuaries and for the kinds of things that we do. I hope to give you a great appreciation for the kind of things that you're able to benefit from by using the Internet.

What I'm going to do is actually walk through some of the different sites, and show you some of the steps that Debbie and Peggy spoke about for finding sites. We're going to start with a search engine, and I'll show you how easy it is to find real good information out in the Internet.

Let me start off by saying that one of the common complaints that people have about the Internet is that, even with these search engines, they sometimes feel frustrated about getting at certain information. They either get so many hits or come back with 50,000 choices or some ridiculous number.

Everybody has different techniques. It's kind of like art. I start at Yahoo (www.yahoo.com), which is a topical search engine. It's organized hierarchically, somewhat like an encyclopedia, where it has topics. Let's try interest rates, which is usually a topic of interest to us actuaries or those of us in the stock market. This wasn't a great example, but, it will come back and say, "found zero category in 92 site matches." Zero category refers to the kind of topics that it came up with. In this case, it really didn't come up with any categories, but it came up with 92 actual sites themselves. Topics would be, for example, business and economy, companies, corporate services, consulting risk management. Under this topic, there is one site that has a match to this interest rate search that I've attempted.

The second point to note, which is a common issue that people face, is that many sites that are coming up as a cross-match are really not of interest in the kind of stuff that we'd be looking for. There's advertisements for companies that are either management consultants or asset managers or for mortgage rates. Obviously, this is

not what we're looking for. This is where people feel the frustration. I'm going to walk you through how you can narrow this down quickly and not feel so frustrated.

At the bottom of Yahoo, there are these other search engines, some of which Debbie spoke about. The way Yahoo operates is that if you want to go to a different search engine, you just hit that URL, and it takes you to that search engine and carries your criteria over to that new search engine. It carried over interest rates to the site, and now, as I click down, I see the site matches it came up with. I generally follow this kind of a procedure where I'll start at Yahoo. If I don't find what I'm looking for in the first 5–20 sites, I'll go to all the bottom stuff, I'll pick another site and so on. I'll see if I find what I'm looking for within the first five or ten. You're easily able to do this with Yahoo because it has everything right down below. You don't have to retype it in every time. I've now moved to Hotbot. Let me show you how to do that. You just hit the "back" button, and it brings us back to the prior page. All I do now is hit the next one and so on.

Let's just talk about a couple of characteristics of the browser that will allow you to quickly jump back and forth. Explorer has very similar features as well. If you hit "go here," you get a short history of the last 15 or so sites.

Also, if you go to "window" and "history," it keeps a running history and a file of all the various sites that you visited. Then you can just go to one of the sites, and you don't have to retype. You can go back and forth. So I'm going to go forward on Hotbot. Hotbot is my personal favorite. I think it's a fantastic site, and it is very current. One of the characteristics that Hotbot has is probability weighting. It is suppose to tell you how likely it is that your search criteria is contained in that article or in that web site. So they rank it from the most likely to the least likely.

Let's now integrate some of the techniques that Deb spoke of. Specifically, let's try to narrow this down. What other things might come to mind if we're looking for information on interest rates or yield curves. I could type in yield curves. I might want to just go to the source, the Federal Reserve, so I'll just type in Federal Reserve. As you add more words to your search, you're going to start narrowing down your results.

From The Floor: What would have been the difference if you looked for interest rates and put quotes around it?

Mr. Murray: The difference is when you put quotes around words, it will look for that exact phrase within the article. If I use "interest rates Federal Reserve" in quotation marks, it will only find articles that have that pattern of words. Whereas, if I use interest rates Federal Reserve with no quotes, it will look for each

occurrence of all those words somewhere in the article. They don't need to be together. I could put federal interest rates, or federal reserve interest rates, and it wouldn't matter. It's combinations.

From The Floor: What do the percentages next to the site mean?

Mr. Murray: That's a good question. That was asked earlier, and I don't think we know the method they use to come up with that calculation.

Ms. Grillot: It's a confidence rating. In some cases, there's a 99% probability that this is what you want. It's based on the number of occurrences and frequency of the search words in the document. The more often the word or words or the combination of the words together or the closer the proximity to the words, the higher the confidence rating. Brad has found out that it does hold true. When he goes to sites that have a 99%, it's usually something that he's interested in. When you find sites that have a 50% confidence rating, they may not be the ones that you have targeted.

Mr. Murray: That's an excellent answer. I went down to the 13th site. I actually found that a lot of these sites are very relevant. There are sites on historical interest rates and an index chart. As actuaries, we really get into this kind of stuff.

So if we go to selected interest rates, you can see from the description it's selected interest rate Federal Reserve composite, publishes etc. It sounds interesting. We are now at the *Federal Reserve* home site, which has a tremendous amount of information, they call this the H15 statistical release, which contains the yield curve of on-the-money or on-the-run interest rates. It is right up to date. We can get the yield curve and other statistical interest rate information. In fact, if we go down to the bottom, it is very helpful. If you go to historical data, there is a .pdf file that contains historical rates going all the way back to the 1950s. I've used this many times by downloading it to a spreadsheet. You're able to use it in a lot of ways. Think of the effort that you'd have to go through before you have this kind of tool to get that kind of information. You'd have to go to your library and ask them to pull this information up, make copies, and get an electronic format. You can get there in seconds following this kind of a path.

Another example that I'm going to go through, by going back to Yahoo, is a topic that is very specific to us: asset/liability management. We see that there are a few interesting sites on insurance and asset management. Yahoo tends to have more companies that surface but aren't always of interest. This Wall Street Analytics is a very neat site. I'm not going to go into all of them. Again, follow my procedure. I go to Hotbot. Now this site is actually a newsletter of sorts. It's free, it's an online

newsletter, and it requires you to just sign up and give your personal information. That's kind of the rule on the Internet. If you give personal information, you can sign up for all this cool stuff.

The description says: contains interest rate, currency, risk management, financial engineering, technology, etc. This is really very useful information, not real fluffy kind of stuff. When the Internet first came on the scene, there was a deluge of a lot of sites that came on line trying to pretend to know a lot. That's something to consider. It's not like a newspaper where you can assume the information is true. In fact, newspapers aren't really always true either. The point is that you need to be a little more rigorous when you're reading some of this information. It's not necessarily as it is stated. In fact, I think I had read an article about an individual that had a site. He was saying that he was an expert in government affairs. People were going to this site, but it turned out that he really didn't know much about it. He was just kind of putting his guesses out there in a factual manner. In his interview he didn't really seem to care. That's the kind of stuff you need to be a little careful of. But again, with all the various sites out here, it's very easy to look at other sites to get confirmation on whether what you're looking at is useful or not.

Another example of some information that would be of interest is company ratings. Now the advantage of this on Yahoo is if you really are interested in gaining a lot of information, instead of diving down to a specific site, we clip this topic, and this topic will contain lots of sites with specific investment services, market information, and bond ratings such as Duff and Phelps, Moody, and Standard and Poor's (S&P). Again, this is very relevant information for the kind of work that we do. We can be on top of what's happening out in the marketplace, especially with regards to our industry.

Have any of you run into the problems that I described earlier about going out there and looking for something and just facing a lot of difficulty in doing so? Would anybody want to throw out something, and we'll see if it is out there and how efficiently we can get to it.

From The Floor: Can you bring up a Chinese mortality table?

Mr. Murray: There is information on global warming and Chinese mortality.

In my experience, Hotbot has tended to have very good hit rates for technical information. It tends to be very comprehensive in pulling up the hits or the sites that I'm looking to obtain quickly. In other search engines, I sometimes have to go down a couple of lists or do a more thorough search before I find something of relevance. There are other times we've gone to Hotbot, and I'd have to go to Alta

Vista or Excite to find something. Everything runs out of Yahoo. I tell people they can start with Yahoo. With these search engines you just type what you're looking for and at the bottom you have everything you need to search a lot of area. They have .dejanews there and all the various sites that we've spoken about. It has a very nice set up. I'm sure there are other search engines that have that as well. I'm just the most familiar with Yahoo.

Another common issue that you can come across is that the Internet has a lot of traffic and usage. Bottlenecks happen. There are certain times of the day when you'll try to get on to get to certain sites, and you almost think that your computer is broken because it just sits there for what seems like forever before anything comes up. If you imagine a highway system, a lot of traffic slows down or it might come to a crawl where little bits of information are getting to you.

From The Floor: What's the rush hour do you think?

Mr. Murray: I've found that for the kind of technical information that I need, you're fine up until about five o'clock. Certain fun sites, like ESPN, are harder to get onto. For technical things, the *Wall Street Journal* or things of that nature it's fine until five o'clock. Around six o'clock to eight o'clock are very high usage periods, and Sundays from eight to ten have high periods of traffic.

Ms. Jay: Here's a little tip for you. If you click on net search in the Netscape browser, and net search doesn't seem to be coming up perhaps because of the traffic or sometimes it is because the site shuts down for whatever reason, you can always go to the SOA Web Site, and use our links to get to other sites. We have several of the search engines already listed for you. All you have to do is click on them and they'll take you right to Alta Vista or Yahoo. So you wouldn't necessarily have to be stuck without a search engine.

Mr. Murray: We found mortality statistics for Singapore. That's amazing isn't it. I would guarantee you that going through these various sites, I would find Chinese mortality somewhere there. Now if I wanted Chinese mortality, I could put quotes around it.

From The Floor: Brad, what would happen if you put actuarial compensation in quotes?

Mr. Murray: I've done that. There is an amazing amount of information on that site. You can get information on salaries, surveys, and even job postings.

When I put mortality Chinese or Chinese mortality table in quotes, nothing came up. There is good point about this. When we're doing an international search, it's not going to always work due to the translation. They're not going to come back the way we might think of it. That's why it's always good to start broad and then narrow your search. Be a little fuzzy in your approach. If I left it at Chinese mortality, looked at that Singapore site, and dove down a little, I might have found a whole bunch of other URLs or references to other sites that would eventually get me to something that's very interesting. The top 20, or even top 40 sites are statistically a small number. The key is to try to find something closer to your area. When you dive down some and check around, you might find another one. Keep moving around. You might find a site that's a little closer to what you're looking for. If you find something that is a close match, you might look at that abstract and find some words that you can use in your search and that might get you even closer. It really helps to take those words and put them into your search. You're able to come real close to more sites that you'd like to see.

There's a very good site for actuaries called Internet Resources for Life Insurance Actuaries. This site is fantastic. To get to it all I did was go into Yahoo and typed actuary, and I came up with Internet Resources for Life Insurance. Michelle Smith, a consultant at Tillinghast, organized this site. It contains links to actual organizations, insurance organizations, life insurance product data, and so on. So if you go there, you're going to come up with quotes, databases, variable products, and so on. There are also company profiles. This one has a very good database called Edgar, which includes the Securities and Exchange Commission filings for companies. You can look at the reports for companies that have filed and find a lot of information there. There's another one called Hoover. That should give you a flavor for some of the business aspects that we can find on the web.

Now I'm going to go to Pointcast. Let me just tell you a little about Pointcast. Pointcast is what's called, push technology. I am demonstrating some software that I downloaded on my desktop. I do not need to be on the Internet. It has specific information on specific sites so that when I hit this update button, it updates all the newspapers and magazines that I've asked it to look for and they're fixed. So I don't need to do this every time I look at each publication. I just hit update, wait about ten minutes, and I have all the news right up the minute. You can also have this automatically update throughout the day for you. So, at slower times on the Internet, you might have it update for you. You might have it update at noon. It actually doesn't even matter if you go at a heavy time period because it's invisible to you. It updates and finishes without bothering you at all.

An advantage to this is you're able to get all your daily news without the newspapers. You can bring this to the airport, and you're able to sit there and flip

through all the various news items that you have asked to be tracked. As an example, we have the *Chicago Tribune* front page. When you're finished, you can go back and have all the various articles that it has picked up. It also keeps a running total of prior articles, so if you don't have an opportunity to see everything, then, at your leisure, you can go back even a few weeks later. It keeps track of all articles in quite a span of time.

From The Floor: Do you have to be connected through your modem to the Internet?

Mr. Murray: You have to be only connected to the service provider to do the updates. Once you do your update, it's done. It goes out there, grabs the information, cuts off line, and it's done. You can take your computer with you and read the information at your leisure.

One of the really good sections is the one that categorizes articles by industry. You can track news on an industry segment basis, such as finance or insurance. So all news stories having to do with insurance come up. It is a fantastic way to keep abreast of what's happening out there.

Again, imagine the effort that you have to go through to follow what's happening with regard to specific insurance issues. We can follow the newspapers easily, but what about getting specific information of interest to us. This is the kind of stuff that the Internet allows us to do in a very time-efficient fashion. You're also able to personalize the whole process. You can look at Internet weather, industry, CNN, Pathfinder, or even the *Tampa Tribune*.

From The Floor: Is this still done through Pointcast?

Mr. Murray: Yes, it is all done through Pointcast.

From The Floor: Are there any fees?

Mr. Murray: No, there are no fees. It's all funded from the advertisements we saw as we were flipping through. This has some real slick interface with advertisements that pop up all over the place. The advertisers pays for it. You don't pay anything other than your ISP fee. If you pay \$20 a month, it will cover everything we talked about. You can do all this stuff on an unlimited basis on the Internet.

From The Floor: Are you on the Internet right now?

Mr. Murray: I am, but I can get off. It has no bearing on what I'm doing right now. I uploaded it at the beginning of our session. There are two ways to get the software, and this is true for other software as well, including PKUNZIP, as Peggy talked about. You'll find that you can get software directly from the site. So you can go to PKUNZIP or just type Pointcast at Yahoo. There is no need to remember anything fancy. Even if you didn't remember Pointcast, you can just look through some cool news stuff that's scrolled. It is amazing how you can just put little pieces of information together and get to what you're looking at quickly, especially when you get proficient at using these search engines. You can go to the Pointcast site, and download it for free onto your desktop. It has easy directions on how you set it up on your computer. It has a wizard that does everything for you so you can be up and running. It has little buttons that say update and when you hit the button, it brings all the news in and you're up and running. The other way you can get it is to go to your computer retailer. You can buy it there for probably \$35. The reason that you get charged for it is because the retailer is distributing it and it comes with documentation. I'm a big fan of online documentation. All these things have online documentation, or they have documentation on their site. I find it more efficient to use online documentation because you're able to type a few words in the search area and get right to the issue at hand. If you have documentation in a book, you have to flip through the whole thing to figure out what you're looking for.