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INTERNET RESOURCES FOR GOVERNMENT FINANCIAL MANAGERS

The Washington International Financial Management Forum was delighted to welcome as its key speaker for its June 4, 1997 session Mr. James Kaplan, Head of Internal Audit of Fairfax County, Virginia. His topic was "Internet Resources for Government Financial Managers." He was introduced to the meeting by Jim Hamilton, President of the International Consortium on Governmental Financial Management and Senior Auditor of the International Monetary Fund. Following is a transcript of Mr. Kaplan's remarks together with a resume of the question and response period which transpired.

Remarks of Mr. Kaplan

What I want to do today is to talk to you about the Internet. I would like to discuss problems with connecting with the Internet. As Jim has mentioned, there is a reluctance on the part of a lot of people to connect with the Internet. It's because they don't know what's out there and they are afraid of what's out there. I would like to use a prop I got from one of the IAI conferences and that is a pair of dice. Many times the Internet is like rolling a pair of dice. You never know what number is going to come up and you never know what is going to happen.

In terms of what I am going to talk to you today, I am going to give you a little background on the Internet. I am going to tell you some of the basics for searching and finding information and I am going to show you some of the resources. It is interesting to know that no one had registered the name White House Doc.Net and they wanted to have me register it and use it as an advertisement game.

What exactly is the Internet? It is a network of networks. Its connected by routers and what they do is that they use the same protocol. They are able to talk with to another. There is a common addressing scheme and a common language. You can be connected to a Sun(?) System or a McIntosh or an IBM. It doesn't matter. If you are connected to the Internet you can communicate with one another, you can talk to the other machines.

University, government and commercial organizations form networks and voluntarily link their computers to the Internet. The Internet is one big conglomeration, one big network of computers connected together. Originally it was set up like a web, a vast network of computers, so if one system went down you wouldn't notice the difference because the computers and lines would

reroute to the system through another computer. How large is the Internet? As of August 1995 there were 6.6 million host computers connected to the Internet. It was projected in 1995 that there would be 101 million within five years, by the year 2000. There were 106 countries connected and there has been exponential(?) growth in commercial domain. In other words, when the Internet was first founded back in the 60's, which was when it started with the Arpanet(?), but really in the 80's there was acceptable use policies because it was a government funded project with universities and you couldn't conduct any commercial activities on the Internet.

Now that all changed in the 90's when the worldwide web was developed and they allowed commercial domains on the Internet. All of a sudden things took off. Where before it was really the universities and government organizations that were using the Internet for communication, all of a sudden industry got involved, commerce got involved, people wanted to conduct business on the Internet, they wanted to market their products and there has been exponential(?) growth. Right now when you talk about the number of host computers, 6.6 million, you are probably looking at the neighborhood of ten to fifteen million host computers right now and that's a little misleading because depending on how you are connected to the Internet will determine how many users are actually out there. There have been estimates of anywhere from 40 to 60 million people, upwards of 100 million people, connected to the Internet worldwide. But when you talk about how many people are connected it is difficult keeping count because of the way that some people access the Internet. Some of the people access it through America On Line. In America On Line you are using a gateway system which means that you are dialing into American On Line's computers and then you are using their computer to connect to the Internet. When you dial into America On Line, America On Line might have seven or eight million users. If everybody dialed

into America On Line that would be considered one connection in terms of the way of connecting with the Internet whereas a lot of people are connecting through their own system on the Internet so the numbers are fluctuating and they are going up and down, but its definitely a trend where there's more people that are connecting and more organizations that are getting connected to the Internet.

Virtually all the world will be connected to the Internet in one way or another.. How did it start? It started out as the Advanced Research Projects Agency back in the 1960s. It was originally a mechanism to set up a network that would facilitate communications between the research universities and the government. There are rumors flying around that it was because of the spread of nuclear war and they wanted to create a system whereby if one segment of the system was taken out by a nuclear attack or conventional warfare that the system could continue to operate. Recently that was put off by the original creators of the Internet who said that was not a part of their scheme. It was a Research Communications Network and they needed to develop a highly redundant system. They needed a system that would withstand failures, failures within the system. Networks and computers were not very reliable back in the 60s. As you know the power that I have in my computer, my lap-top 486, right now would have taken a whole building to fill up back in the 60s so things have changed a lot.

In the late 60s they developed a _____ protocol which is the basic protocol we use today to communicate on the Internet. That's the connection that allows one computer to talk to another regardless of what type of system they are on. That keeps the _____ protocol translation.

In terms of the Internet time line, it has grown from the 1960s to today. There's a lot of growth that has taken place. First connected in 1969, four research sites, the National Science Foundation has maintained that backbone. They recently have turned that over and they still maintain some of the system, but it is being turned over to private enterprise as well. They are trying to privatize a lot of connections to the Internet right now. The Federal government is still involved, but they are trying to push that to private industry and get Commerce to support it. The financial growth in the 1990s is mainly due to the industrial sites. From 1990 to 1994 the growth has been astounding. By the year 2008 it was anticipated that there would be 40,000 servers and 40,000 hosts on the Internet. Right now we have surpassed that and by 1997 we will probably have close to 60 million hosts and more than 100 million users on the Internet.

The Internet Society is really the organization that has purview, when we talk about the Internet, who really runs it. Each individual computer that connects with it sets their own standards. The Internet Society has some purview in terms of oversight, but they are a volunteer organization. They were started in 1992 when the Internet had been around for a number of years before that. They tried to set standards to promote cooperation among the different organizations and types of computers that were connected. They are a nonprofit organization headquartered right here in Reston, Virginia. Members of the organization are the individuals, corporations, nonprofit and government agencies. And it is run by a Board of Trustees. There are eighteen Board members and those trustees come up for reelection periodically.

As I said before, no one really owns the Internet. It is really an anarchy(?). It is the largest, best organized anarchy in the world. It is completely decentralized. No single organization owns

it, runs it and it is not funded by any one organization. Each organization establishes its own connection to the Internet. The only organization that has some purview is Internet which is the organization that hands out the domain name and you actually register with Internet. Internet used to be a government agency which is now a privatized organization. They privatized that out to a private company and I believe that the organization that is running it now has their contract up for renewal and there is talk about taking it back within the government, but I think it will remain a privatized entity.

The Internet is a labyrinth of information. I going to talk about how Internet is organized and some of the problems you have in terms of searching for information on the Internet. The common question that people ask is, how do I find something on the Internet? Where do I look for a particular document or what sort of document can I find out there? What tools are available to help me find that information? In terms of information facts there is more information out there than at any time in history. You talk about the type of information you can find on the Internet. I have said this before and I stand behind it. There is virtually nothing out there that you can't find the answer to on the Internet. The problem is where to look, how to find it. The quality of the information? That's subjective and the reason that it is subjective is because we have a lot of noninformation professionals now putting information out on the Internet. It's not like we have librarians putting information out there and they have it in a logical sequence and in a logical format. We have got everybody putting information out there. Anybody can create a web page. Once you create a web page that information goes out on the Internet. Is it correct information, is it accurate information? It is up to the individual to make that determination. There's no one out there with oversight to say this is good information and that is bad

information.

Timeliness. The information is changing regularly. You can go to a site today and that site can change 100 percent tomorrow. It can be gone tomorrow or it there could be four or five different sites to replace that. It is very, very timely. It is very time sensitive.

Location. Information is not easy to count on on the Internet. The thing I like to say about the Internet is like comparing it to the piano or comparing it to the Library of Congress. The Library of Congress, you can go into and find anything you want in the Library of Congress. It is very well indexed, it is very well organized, but you can't check anything out. You can't take anything out of the Library. But on the Internet you can take anything out. You just can't find it. Why can't you find it? Because it is large and dynamic environment. It is changing all the time. There is no Internet card catalog. You won't find a place on the Internet which says okay, here's an index of everything that's available on the Internet. Every different surcharge on it, every different index that is out there indexes information in a different way. And they don't have a comprehensive index so there's no comprehensive index of what information is out there. There is no uniform indexing system out there. As I said before, librarians are not doing this; individuals are doing this. Librarians right now are trying to come up with a methodology for indexing information on the Internet, but there is controversy and discussion among librarians as to the best way of doing that. As information is added and maintained by nonlibrarians, it is not user friendly for you to use. It is becoming more user friendly. There are some tools out there that I will tell you about, but it is still not a user friendly environment. And the last thing is the quality of the information that is out there. The quality of the information is suspect sometimes and you really

have to verify whether the information that you are getting off the Internet is accurate, is reliable, the old standards you would apply to information to make sure that you are getting the right information, that it is current information, that it has been verified by somebody else and there are ways you can do that.

Some of the methodologies I use to find information are basically that people can go out and hunt for information. That could be brazing or browsing, but everyone is out there surfing the Internet Surfing is more or less what they refer to as serendipity(?). In terms that you go to a site and you find some information and then you may find the information you are looking for but you will probably find some other information. You click on that site and you go to another site and all of a sudden you are completely off base. You are out there surfing the Internet basically going far afield from where you originally planned to go and it is not really an organized way of looking for information. You can look for information using the subject as a format, you can look using key words to find information. You can go from specific to general; a specific question down to a general area that you are looking information for.

Which is the best way for financial managers? Well, it depends. It depends on what type of information you are looking for. There are basically four places you can go to look for information on the Internet. The first place that you go to is the Pathfinder Page. The Pathfinder Page basically has specific topical information. The audit network resource list I have put together would be a Pathfinder Page because I took the time to go through and identify those resources that would be of interest to the financial profession. That would be one way of looking for information. Another way would be to go to the specific site, a site of specific resources.

That would be a source page. What do I mean by that? If you were looking for a GAO report there would be no point in going out there and using a generalized search. If you knew that there was a GAO report on a specific subject you would go directly to the GAO site and then using the GAO search engine you could find the information within the GAO site. If you were looking for a specific GAO report and knew the report number you could do a search based on the report number at the GAO site. Then you would go to a site specific research.

Then you can use what is called a subject catalog or topical based catalog. For those people that prefer Yahoo, Yahoo is a type of a subject based catalog and basically it is organized in alphabetical order by topic so A would be Accounting; B might be Business; C might be Corporations, but it is very specific in terms of what those topics are. The information that is added into those indexes is added by individuals. It is not added by any sort of software out there so basically if you want to get listed in one of those indexes you basically submit your side of the information you want to be listed so its only going to have the information in the index that people or individuals sitting down and looking for information and adding it to that index.

The other way of searching for information is to use Surcheck(?). Surcheck is something like Ultavista by Digital Equipment Corporation or Webcrawler which the same as Excite(?) basically run by America On Line. But with these they use a what is known as a robot or search _____(?). It goes out there and actually queries Websites and looks at the information that is on those Websites and adds it to their index. So it is not an individual, it is not a person that is actually going out there and getting the information. It is actually a piece of software that goes out there. You can submit your website into a search engine and they will periodically go out

there and update when they can change the website. So with a search engine you can basically go in and you can use Pretext(?). You can enter in a search term. I am looking for everything available on internal controls. I am looking for financial management guides. You can put that into the query into one of these search engines and the information you get back will vary depending on which search engine you use. No two search engines conduct the search in the same way. So basically those are the four things that you have in your search tool kit.

In terms of strategy, we will go through this relatively quickly so we can get to the resource itself, but you need to have a strategy for looking for information under the Internet. You can't just go out there and say I am just going to conduct a search looking for x, y and z. You really need to start out by identifying your objective, going through a logical sequence to come up with whether or not the information you found meets your initial objective.

Depending on what types of information you are looking for would determine which resource or which type of tool you would actually use. I just got an e-mail message this morning where somebody was looking for information on A-133 and they wanted to know whether A-133 had been updated recently. Basically if you go to an OMB site OMB will have that information. You could send an e-mail message to someone in OMB and ask where is it and hopefully they would answer that e-mail.

Select the proper tool for the question. That just goes back to if you are looking for GAO information why would you go to a site that's not a GAO site. You would go to the GAO site to find the GAO information.

Search area. What I like to say in terms of searching for information is important because you start out with upi can call a people based search. Baiscally you use the power of e-mail to go out there and either send an e-mail message to someone you know or use what are known as discussion lists or list serves which is an automated form of discussion groups on the Internet where you basically subscribe to a particular list. FinanceNet has about thirty or forty lists that are available and you would subscribe to a list. There is no cost to subscribe to a list, but what you do is you send in an e-mail to a particular list like AGA for internal financial audits. You would send in an e-mail for that particular list and you would subscribe to that list and then you would start participating in e-mail discussions. Everyone who subscribes to a particular list would get e-mail that was sent to that particular list and while it sounds a little confusing there are two different addresses that you use. One is an address that you use to subscribe or unsubscribe to a list and one is the actual address of the list so if you sent in a subscription to ListProp at FinanceNetDotco(?) and you said subscribe to Financial Audits you would be subscribing to the Financial Audits mailing list or discussion group. Then participating in a discussion or start receiving mail you would see mail coming from FinancialAudits@FinanceNetDotco. And it is important to know the difference between the list address and the list serve address. The list serve is where you basically send in your request. It is a piece of software that resides on FinanceNetServer and it is an automated routine that handles subscriptions or unsubscriptions to the list. It uses people who are using lists who don't save the instructions that come back to them when they first subscribe. The instructions tell you how to handle different transactions on that list and the thing that frequently happens is if someone wants to unsubscribe to the list and they send in an e-mail to the list address instead of the listserve address and what that means it goes to

all the 250, 300 or 500 people who subscribe to that list. People start getting upset when they see a message coming through saying I want to unsubscribe to the list and all of the people who are on the list are receiving it. So when you get something from an e-mail discussion list and you subscribe to the list and it says save this for future reference make sure you save that for future reference, don't delete it.

So people based is a good way to start out looking for information. When we are doing audits in Fairfax County, the first thing we do is to send out a general query on an e-mail discussion list related to State and local governments. It will ask for information. Right now we are doing an audit on golf course projects in the county.. I sent out a note, I have already gotten responses back from several discussion lists in terms of other jurisdictions that have built golf courses and the problems they had in building them. So e-mail discussion lists are a good way to start out doing research on a project. You can do that from a financial management discussion as well. There are financial management oriented lists on FinanceNet that you can participate in.

The next place you will go to is Web based information and then you can go to File Transfer protocol which is the ability to upload and download information on the Internet. These are different types of resources that are available out there. Then there is GoFor(?) which is basically a precursor to the WorldWide Web. GoFor was the mascot for the University of Minnesota and basically it was developed by people at the University of Minnesota as a tool to go out and organize information in a nongraphical format.

The last one that I have is COINS. That is my acronym for Commercial Online Information

Network Services. That's like AmericaOnline and CompuServe. And I use that acronym because at the time you would pay for the amount of time that you are connected with the Internet. So it would cost you more the longer you were connected.

Indexes and search engines. As I mentioned before subject based indexes like Yahoo are basically organized based on the specific topics. Single search engines like Altavista are search query tools that you have the ability to go in and enter in the text you have been searching for and depending on how you enter that text will determine what kind of response you get. If you put in internal control and altavista you will get all of the Web documents that have the word internal and all the Web documents that have the word control. So you may find something on bed wetting and things like that whereas if you put internal control in quotation marks you will get everything on internal control. It puts those two words together. So basically you have to understand how a search engine works when you are entering in a query. You can't just expect to go into a search engine like altavista, put in some text and expect to get a response. And the way that each search engine indexes information will determine the type of response that you get. So you will get a different response from webcrawler than you will get from altavista so you have to use a combination of tools.

The latest thing is multiple search engines. A multiple search engine basically goes out and queries out more than one search engine. So like Dogpile, which is the latest one, actually goes out there and looks at Yahoo, it looks at altavista and it gives you results. It sounds like a funny name, but it is a powerful tool. Basically it goes out and searches multiple search engines.

Some other search resources. The Scout Toolkit is something that is worth while. It basically lists all the new sites or worthwhile sites that are available. E-mail can be accessed on the Web and you can also subscribe to an e-mail listing for the Scout report and this is run by Internet, the organization that is responsible for getting out the domain names. But there are some researchers there that do a good job of going out and finding new sites and good information from a research perspective. Then there is the Internet Prospector which is another one for nonprofit organizations. They have some good information on ethics. They have a whole bunch of ethics policies on their site.

Then of course there are some books. The Auditors' Guide to Internet Resources. There is the Webster's Strategy by Bryan Pattenberger(?) which I have used and find it quite well organized and straight forward on how to search for information on the Internet. The alatvista search revolution tells me the ins and outs of altavista, how that works and how best to use that tool. There is an Internet Research Guide and then there is a CPA's Internet Reference Guide done by Pent Information Services, John Gray, and that will give you some information from the CPA's perspective.

Some tips for search _____ . Learn the dynamics of the search engine, learn how it handles information, know your subject area. It is very important to know what sort of information you are looking for in order to get the results back. It's like the old Alice in Wonderland scenario with the cheshire cat. Alice is down there at the fork in the road and asks the cheshire cat which road should I take and the cheshire cat asks where are you going? And Alice says I don't know and the cheshire cat comes back and says it really doesn't matter which

road you take. So basically it is the same thing. You have to know your subject area in order to end up with the information that you are looking for. You have to have realistic expectations. The Internet is not well organized. It may take you a while to find the information. Hopefully if you follow a strategy of a team to go through you will get that information quicker. I have always maintained that it's not that you can't find it, it's knowing where it is and how much time it takes you to find it. What you want to do is to cut down that time as much as possible. Try different approaches, use different tools. If one search engine doesn't give you the responses that you want try another one and you may get a different response, it may help you find the information right away. Ask questions, ask questions of other people. If there are other people you know who are on that Internet, if you know their e-mail address, basically send them a question. One other thing out there is there are frequently asked questions. In other words, people may have asked the same question over and over again and rather than keep posting them, people on the Internet put out what are called Faqs(?), frequently asked questions and they basically answer all of those dumb questions we all have and those are good resources to look for.

And then the last things to look for are _____ and logic. _____ and logic is basically using words like and, or, not, and if you combine them in most of the surtense(?) you would recognize _____ and logic. So if you are looking for a set of information on benchmarking and reengineering, you would put benchmarking and reengineering out there and you would get better response than if you put just benchmarking by itself and reengineering.

These are different websites that you can go to. The AuditNet Resource List is available on the Internet. FinanceNet and the Accountants Home Page are also sites at the Random University

which has some good financial management perspectives. From the Internet perspective the Internet Society is out there on the Internet. For those of you who do not know how to use the Internet there is a CatchPoint Two(?). In order to find these sites you have to be able to learn how to use the Internet. So that's basically the first thing you have to do -- learn the Internet itself. As far as books, there are at least four books that are out there now with another book that is being published by Rutgers University. It is Rutgers that has been involved in the Internet for a while. There is my book, The Auditor's Guide to Internet Resources, available from the AIA, the Financial Professionals Internet Guide by John Graves, there is an Accountants Guide to the Internet put out by Wiley(?) Publishing. Eric Cohen(?) is on that and he says that is the only book written by a practicing CPA. There is a CPA's Internet Reference Guide and then there is a 1997 Guide to Accounting Resources on the Internet which is put out by the publishers of the Practical Accountant.

Question and Response Period

Jim Wesberry of the World Bank inquired how you could speed up five to six hours of his life each day. This is the first time in twenty two years that I have had trouble with my marriage. I hardly ever see my kids any more except while they talk to me from behind my back when I am looking at the screen. Is there any way I can speed this hard life up before it drives me crazy? Do I need a different gateway? Mr. Kaplan responded that one of the biggest things that heats up resources on the Internet is graphics. And just by turning off the graphics you can usually speed things up. That would be the first thing to do. In Netscape it is very easy to do. You can go up and where it says autoload images you just clip on that and take it off and images will not be

loaded. The problem is that some sites are so tied in with images like you have maps that you need to get around that it will hamper your ability to connect with those sites. But other than that right now Bandwith(?) is a big issue in terms of Internet Speed, Modem Speed. What I would say about Bandwith is that right now there is such a demand for information and the lines that we have are that basically we are using telephone lines. What it is doing is it is trying to force information that is coming from a sewer into a straw. There is so much information out there that it hits that phone line which is like the straw and it slows things down. So until that is changed there isn't too much you can do except the ultimate option and that is turn off your computer and then you won't have to wait for it.

Jim Hamilton of the International Monetary Fund noted that the speaker had touched briefly on newsgroups. What are newsgroups? Mr. Kaplan said it would take a while to explain how a newsgroup worked, but basically its a matter of subscribing. You talk about newsgroups. There are two types of newsgroups. There's e-mail discussion groups where you subscribe to a discussion group and everything basically comes to you via e-mail. That's basically by sending in a subscription to an e-mail address. The subscription doesn't cost you anything, it is just a matter of a process you go through. A newsgroup is another form that is that available on the Internet. It is like the traditional bulletin board where information is posted and you would have to go out there and go to that newsgroup and read the information you wanted. So there are two different types of forms that are available. You can go to the library and get a basic book on the Internet and it will tell you the basic differences between those and how to use them.

Allyson Ugarte of the Inter-American Development Bank said someone ysterday put Pointcast

on my computer as a screen saver. What is that? Mr. Kaplan told her to take it off. The Pointcast is a news reporting system and it is a screensaver. Basically what it is is that it has the ability to keep you up to date on the news, weather, sports, any information you would want. You can customize it so that it will give you the information you want when you want it. The problem is that it takes up a lot of system resources and I would recommend taking it off. I had it on my computer for a while and it is a novelty at first. It is interesting to be able to see what the weather is in Dallas, Texas, and Denver, Colorado, or wherever you want, but after a while it comes up at the most inopportune times and it has a tendency to crash the system. Until we get better BandWith(?) so we aren't trying to force that sewer information through the straw I wouldn't recommend it.

Jim Wesberry said he had one more question he would like to ask. What about the FPC and the IFBM lines. What do you recommend? Mr. Kaplan said that was a good question, but he didn't know if the people here would understand it. Direct Lines or Satellite. He said he thought eventually that is the way it is going to go. But who is going to pay for it? You know it costs money to put those satellites up there. I think eventually it is going to be a wireless society that we will live in. IFBM is great, but it costs a lot of money to put those lines in. There is a lot of infrastructure. I would say as it gets cheaper and cheaper to put information up in space, satellites will all be operating with wireless.