

**E-COMMERCE: THE BENEFITS AND PITFALLS OF
CONDUCTING BUSINESS OVER THE INTERNET**

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ELECTRONIC COMMERCE: THE BENEFITS AND PITFALLS OF CONDUCTING BUSINESS OVER THE INTERNET

WEDNESDAY, MAY 26, 1999

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The Committee met, pursuant to call, at 10 a.m., in Room 2361, Rayburn House Office Building, Hon. Jim Talent (chair of the Committee) presiding.

Present: Representatives Talent, LoBiondo, Kelly, Pitts, Forbes, Sweeney, Thune, Velazquez, Pascrell, Christensen, Brady, Moore, Napolitano, Baird, and Mark Udall.

Chairman TALENT. I will convene the hearing. I am informed that the ranking member, Ms. Velazquez, is in a markup in the Banking Committee. So I will go ahead without her and when she comes, we will suspend the hearing so she can make her opening statement then if she prefers.

Electronic commerce, commonly referred to as e-commerce, is altering the way we conduct many of our business and personal transactions.

E-commerce is simply the ability to conduct many of our business and personal transactions over the Internet. Some of the most familiar forms of e-commerce are business-to-consumer transactions where a company sells its product to a consumer over the Internet in a way that is similar to traditional mail order catalogs.

Some popular examples of this type of e-commerce are Barnes and Nobles.com, Amazon.com and CDNow.com.

While consumer purchasing is the most popular notion of e-commerce, business-to-business sales actually comprise the majority of e-commerce transactions. This is important because many small businesses have not yet embraced the notion of e-commerce.

According to eMarketer, less than 2 percent of the 7 million U.S. small businesses with fewer than 100 employees conduct on-line transactions. Of the 340,000 U.S. business Web sites, 145,000 sell products and services on-line. Most of these businesses are big companies. In fact, 40 percent of companies with over 1,000 or more employees conduct on-line transactions.

These numbers mean that small businesses face the potential of losing market share to companies that are staying ahead of this technological wave. Indeed, a recent study by Merrill Lynch shows that only companies that attain market share on-line will survive.

The Merrill Lynch study points to the growth of Internet banking, brokerages, and publishers as a direct threat to their brick and mortar counterparts.

The study concluded that, quote, the Internet tends to cannibalize retail sales away from store-based retailers, end quote.

E-commerce has attracted many businesses because it has the ability to make them more efficient. Additionally, many consumers find that computer-based purchasing is easier and quicker than fighting traffic and crowds at their local shopping mall. A website has the ability to turn a local operation into a nationwide or global operation because the Internet can reach consumers at the far corners of the Earth.

Another important benefit of e-commerce is its ability to enable employees to handle multiple tasks, since they do not have to spend all of their time taking orders over the telephone. Additionally, e-commerce has the potential to eliminate points in the supply chain and enable manufacturers to offer products directly related to the consumer, with the aid and expense of traditional distribution in retail chains.

Finally, the Internet is an easy place for a business to obtain its customers' demographics and preferences through simple point and click inquiries of those who visit its website.

Although e-commerce has the potential to be a powerful force and change the way companies conduct businesses, there are some concerns. Many are fearful of transmitting their credit card numbers and home addresses over the Internet because of the pervasive threat of hackers who can bypass supposedly secure networks and later commit fraudulent transactions.

There are also many complaints about the poor return in exchange services offered by on-line retailers when their customers are not satisfied with their purchases.

The theft of intellectual property over the Internet has also become a pervasive problem. The music industry, to use one high profile example, has had difficulty maintaining control of its product due to illegal, free downloads that are available on thousands of electronic bulletin boards.

This is the first time that this Committee is tackling the issue of e-commerce, and I am sure we will have an interesting discussion about its positive aspects and its drawbacks. We will hear testimony from Daniel Hill, the Assistant Administrator for Technology of the Small Business Administration; Harris Miller, who is President of the Information Technology Association of America; Professor Andrew Whinston, the Director of the Center for Research and Electronic Commerce at the University of Texas at Austin; Alan Anderson, the Senior Vice President of the American Institute of Certified Public Accountants; and Brian Hanson the founder of Hanson Brothers Fresh Seafood in Portland, Maine.

The Internet is an exciting and still developing medium for companies to use to conduct businesses. I am looking forward to the testimony of our witnesses.

[Mr. Talent's statement may be found in the appendix.]

Chairman TALENT. When Ms. Velazquez comes, I will be happy to recognize her for any comments that she may wish to make. And we will go to the witnesses after we have a demonstration of how

e-commerce operates. So I am going to ask our Committee counsel, Mr. Andrews, to proceed with a mock electronic-commerce transaction.

Mr. ANDREWS. Yes.

Chairman TALENT. We are not actually going to purchase lobster from Hanson Brothers Fresh Seafood today, but we are going to show everybody how it would work if we did indeed want to do that.

I will note that today's mock transaction is with the business of one of our witnesses today, Mr. Hanson, who we will hear from later.

Mr. ANDREWS. Thank you, Mr. Chairman. What we are going to do is, as you said, go to the website of the Hanson Brother Fresh Seafood Company. The website is www.SeafoodNow.com. We are going to operate all the way up until we actually have to put in a credit card number.

Chairman TALENT. The Committee counsel asked if he could use my credit card number to make the transaction a reality, and I said no. So that is as far as we are going to go towards verity here. but perhaps I will be the Dr. Watson of this whole drama, and on behalf of everybody here who is computer illiterate, as the chairman is, ask the questions that everybody else might be thinking.

The e-commerce, is it usually done over the website or is there a separate Internet location?

Mr. ANDREWS. Well, once you place your order, most websites take you to a secure website where the information is encrypted.

Encryption is basically just a way to transform the information into a complex array of algorithms similar to nuclear launch codes.

Now, what I am going to do is move down the website, to select an item. and today with your credit card number, sir, we are going to purchase blue claw crab.

As you can see, the website has a description of blue claw crab. It is number 251. It is \$9.99 per pound with a five-pound minimum order. And it is a popular item so it is unavailable. So we shall select another one.

Chairman TALENT. Mr. Baird wants to know how you get the crab through the telephone wire. It is questions like that that show why we desperately need this hearing.

Mr. FORBES. It is called virtual reality.

Chairman TALENT. Now, do most of these websites have a list perhaps of commonly asked questions, I mean, if you have a question about the product, can you do that through the Internet?

Mr. ANDREWS. Most good websites will have a FAQ section, a frequently asked questions section, where many basic questions can be answered right at the website.

Chairman TALENT. Okay.

Mr. ANDREWS. So now what we are going to do is order 10 lobster dinners for \$400.95. Each lobster is approximately one and a half pounds. We would enter the number we want in quantity box and just click here to hook this item for your order.

I haven't put in the credit card yet. So right now we are at a screen, commonly called the shipping cart screen, which is an electronic version of what you would have in your regular grocery store, a shopping cart. Right now, If we look at our shopping cart

we have Cold Bay's Downeast Lobster Feed for 10, quantity one, and the price. So I can either recalculate, check out, or stop shopping, and I want the check our because that is all that I want to order

On the screen, you have a security alert: You are about to view pages over a secure connection. Any information you exchange with this website cannot be viewed by anyone else on the Web.

Chairman TALENT. It is at the point at the end of the order sequence that you go to the secure website?

Mr. ANDREWS. Yes, sir, that is correct.

Chairman TALENT. We can ask witnesses today if we want to about how secure this is or what steps have been taken to make sure they are secure, what concerns there are in this area, et cetera?

Mr. ANDREWS. Yes, sir. that will be apart of some of the testimony that we will be given today.

Chairman TALENT. Okay. Do any Committee Members have questions before we end the demonstration Here?

All right. Thank you, Mr. Andrews. We will go to the witnesses.

If we could have the lights please.

The ranking member has come and I am pleased to recognize her for her opening statement

Ms. VELAZQUEZ. Thank you, Mr. Chairman, and thank you for holding the hearing on e-commerce. This is a very important topic for our Nation's small businesses and I look forward to hearing the witness testimony.

The Internet revolution is rapidly transforming the way the Nation communicates with information and perhaps most importantly the way it does business. In 1997, Internet commerce accounted for \$1.3 billion in retail sales in the United States, and though this represents only a small fraction of the total, the number is expected to increase to \$25 billion by the year 2000.

Furthermore, because the Internet allows small businesses to expand more rapidly, it is now possible for entrepreneur to reach new customer across the country and around the world with a few strokes of the keyboard. The low start-up costs of e-commerce also enables a greater number of people to start a business by removing many of the traditional barriers, and a further advantage is that a small business can be open the 24 hours a day, 7 days a week.

As these facts indicate e-commerce offers a great deal of promise to the future of this Nation's small businesses and, in all likelihood, it is only going to grow. Despite all the possibilities of success, however, e-commerce also carries with it a number of potential pitfalls for the small business community.

There is a great deal of uncertainty about the issue of taxes. Although there is currently a moratorium on new taxes, many brick and mortar stores, which chart sales tax, are losing customers. Additionally, studies have shown that many consumers are comparison shopping at traditional stores and buying over the Internet.

As a result, traditional stores, which pay salespeople and need to have showrooms, are also losing out. This also ties in with the lack of intimacy on which many small businesses rely for their customers. The growth of e-commerce has provided consumers with unprecedented information about products and prices. Some enter-

prises worry that if they lose intimacy with their customers, they will not longer know their needs, a key element in remaining competitive with larger, more impersonal competitors.

These are obviously issues that need to be addressed if small businesses are to remain competitive. As such, e-commerce is the double-edged sword for small businesses. It offers them the chance to reach out to new customers and provides greater flexibility.

At the same time, however, the loss of interaction with the consumers and lower costs on the Internet represent a substantial threat that needs to be addressed. I am glad that the Chairman has called today's hearing because it is still early enough to study the potential problems small businesses may face and work to address these issues. I remain confident that our Nation's entrepreneurs will continue to thrive. They have faced numerous challenges in the past and one can see from the unprecedented economic growth we are experiencing that small businesses have met those challenges.

Once again, thank you Mr. Chairman, for holding this hearing. [Ms. Velazquez' statement may be found in the appendix.]

Chairman TALENT. I thank the gentlelady, as always. We will go right to the witnesses.

The gentleman from New Jersey has asked about more opening statements. It is the general practice of the Committee, unless there is some special interest or history of one of the members with it, just to go with the opening statements from me and the ranking member but if you want to put one in the record that would be fine.

I will tell you what, Mr. Pascrell, your interest and involvement in the Committee is such that with everybody's indulgence, go right ahead. I will recognize you for a few minutes.

Mr. PASCRELL. Thank you, Mr. Chairman.

I will not read my entire statement. I will put it into the record.

I am very concerned, Mr. Chairman, about something you have spoken about and the ranking member have spoken about, and that is the issue of taxes and the Web.

I can remember, as a mayor of a city, Mr. Chairman, having to deal with many trucks that rolled into my fairly large community, set up base on a street and sold out of the back of the truck furniture, to you name it, and in the city you name it. Those folks who came up from different parts of the South to sell their wares made decent products. They not only put at disadvantage those folks within the community who sold those same products, similar products, but they also, since they were mobile, they also paid no taxes whatsoever to the community where taxes were called for.

I know we have put a moratorium on this, but as this grows and as the Internet grows, we need to be very aware and very sensitive, and I thank you for having this hearing, to what this is going to mean in terms of local revenues. If this is a way to skirt the issue, to skirt taxes, as that truck that wheeled into Patterson, New Jersey, so many times, I think this is a lot more serious than we think. This is happening all across the United States of America.

To me, there is no difference between selling things on the Internet and whelling a truck into town from another state; there is

none whatsoever. I think we need to understand what's at stake here and move accordingly.

I thank you for allowing me to make an opening statement.

Chairman TALENT. Of course. I appreciate the gentleman's point. It is a very serious one. Not only is this a potential threat to the revenue base of municipalities and States but, it introduced a potentially unfair note of competition with the retailers who do have to collect sales taxes. We have all struggled with this in other contexts with catalog sales, and the gentleman mentions another instance, these roving retailers, if you will, and this is one of the major issues we have to confront with regard to Internet sales.

I don't think anybody in principle wants to prevent people from doing e-commerce, but the question is whether, and to what extent, we should insist upon equality in tax treatment. That is a major issue that only the Congress can deal with and I appreciate the gentleman's opening statement. I am sure he will want to follow up with questions on that issue.

Our first witness is Mr. Daniel Hill, the Assistant Administrator for Technology of the U.S. Small Business Administration. Mr. Hill.

STATEMENT OF MR. DANIEL O. HILL, ASSISTANT ADMINISTRATOR FOR TECHNOLOGY, UNITED STATES SMALL BUSINESS ADMINISTRATION

Mr. HILL. Thank you, Mr. Chairman. Good morning, Mr. Chairman, and members of the Committee. I will keep my remarks brief and with your permission ask that my full written statement be incorporated into the record.

Chairman TALENT. Without objection, and we appreciate your brevity. Thank you.

Mr. HILL. Thank you for inviting the U.S. Small Business Administration to appear before you to discuss our current activities in the area of electronic commerce, otherwise known as e-commerce. My name is Daniel Hill and I am the Assistant Administrator for Technology at the SBA.

It is indeed the age of electronic commerce. Twenty-seven million purchases are now made on the world Wide Web every day. At the beginning of 1993, there were just 50 sites on the Web and now the number is estimated to be over one billion. The number of small firms engaged in electronic commerce is growing rapidly. Global electronic commerce is expected to grow to more than \$300 billion annually in just a few years.

The percentage of small businesses with access to the Internet nearly doubled in the past 2 years from under 22 percent in 1996 to over 41 percent in 1998. But there remain significant obstacles to small business involvement in this new medium. The SBA is working and committed to help small businesses overcome these obstacles and take advantage of the many opportunities afforded by electronic commerce.

What is electronic commerce? Electronic commerce refers to more than just the buying and selling of goods over the Internet. It is using the power of computers, the Internet and shared software to send and receive product specifications, drawings, bids, purchase orders and invoices, and any other type of data that needs to be communicated to customers, suppliers or employees.

Electronic commerce is a new way to conduct business, affecting not only internal business activities within a firm but also requiring new kinds of coordination with other clients and other institutions.

In most industries, this requires the adoption of new business models involving new organizational structures and business strategies.

The potential opportunities that electronic commerce and the Internet afford small business are staggering. The smallest companies now can have instant access to customers and suppliers worldwide in ways that only the largest multinational corporations have had in the past, and, many small businesses are being formed on the basis of this new-found opportunity.

At the same time, small firms that do not adopt electronic techniques run the risk of losing market share and customers from missed opportunities. At the SBA, we are working hard to encourage small business involvement in electronic commerce both as users and as developers and innovators of this new technology.

Many small firms do not have access to the Internet and do not understand the need for it. These firms are in danger of missing the competitive opportunities made possible by electronic commerce. The SBA can and does play an important role in helping such firms by providing technical assistance, training and information.

At the other end of the spectrum of small firms are the new high-tech start-ups that are formed with advanced computer and information technology expertise. Many of these firms are in the business of developing and adapting the information, telecommunications and computer technologies that make electronic commerce possible. They are at the cutting edge of the Internet and electronic computer technologies. These firms do not need assistance or training, but they do need to have a fair legal and regulatory environment to foster innovation.

The SBA is working hard on the various electronic commerce related projects, which I have included in my full written testimony. We will be introducing very shortly an e-commerce course on our on-line classroom. We are working with other government agencies. We are working with credit card companies. We are part of the digital economy working, that is being chaired by the White House.

We have created a number of Internet-based systems, PRO-NET and ACE-NET, and we are about to unveil TECH-NET. I have attached complete descriptions of those projects in my written testimony.

Our ongoing activities are consistent with President Clinton's directive on electronic commerce and policy which was issued November 30, 1998. This statement directed the U.S. Department of Commerce and the Small Business Administration to develop strategies to help small businesses overcome barriers to the use of the Internet and electronic commerce.

In response, we are planning a series of activities and working closely with the Department of Commerce, and other agencies as well, to implement a broad-based effort to identify specific areas of need and to provide outreach, extension and technical assistance to small firms.

Some of our plans include working in partnership with the private sector and other Federal agencies. We have already talked with the ITAA, whom you will hear from shortly. We are going to target small, minority and women-owned businesses, educating them about electronic commerce. We want to develop a framework for understanding the ways electronic commerce and the Internet affect small business activities, including marketing, network production and innovation. We are also developing improved means of measuring and analyzing this impact.

We have a tremendous website already on-line. We intend to expand on that. We want to reach out to every small business to make them aware of the benefits of Internet and EDI, electronic data interchange.

Of course, our traditional role is to provide the training, the consultation and, where possible, some technical support services in concert with our resource partners.

SBA's FY 2000 budget request to Congress includes \$2 million to help support some of these electronic commerce activities that I have spoken about. If approved, we propose to use these funds to carry out the presidential directive and work with private sector and other Federal agencies engaged in electronic commerce.

Thank you for the opportunity, Mr. Chairman, to discuss SBA's activities in the area of electronic commerce. I will be happy to answer any questions that you and the Committee might have. Thank you.

[Mr. Hill's statement may be found in the appendix.]

Chairman TALENT. Thank you, Mr. Hill.

Our next witness is Mr. Harris N. Miller, who is the President of the Information Technology Association of America in Arlington, Virginia. Mr. Miller.

STATEMENT OF MR. HARRIS N. MILLER, PRESIDENT, INFORMATION TECHNOLOGY ASSOCIATION OF AMERICA, ARLINGTON, VA

Mr. MILLER. Chairman Talent, thank you for having me back before the Committee. I appreciate the opportunity. I would like to have my full statement included in the record.

I also have a request whether counsel is going to serve us some of that lobster after the hearing as a reward for our appearing here before your Committee.

Chairman TALENT. If the Information Technology Association wants to use its credit card.

Mr. MILLER. I will have to check on that. Thank you.

Chairman Talent, I would like to thank you for the opportunity to appear before your Committee and address the benefits and challenges, I wouldn't use the word pitfalls, of electronic commerce for small businesses. As president of an association which represents over 11,000 companies in the IT sector, we believe that electronic commerce provides great opportunities to channel the entrepreneurial spirit of every small business person to grow his or her business and become an even more effective part of the electronic commerce digital age.

Today I will outline the dispel six myths which we find in talking to small businesses and then give you some sense of the benefits of electronic commerce among small businesses.

Number one, as Mr. Hill pointed out, there is the myth that e-commerce consists solely of buying and selling on the Internet. In fact, e-commerce is much more than that. It includes customer service, sending e-mails, marketing, advertising, transferring funds between business, doing on-line research. That is all part of e-commerce.

So any small business which is saying, how do I get into e-commerce, should realize it is more than just the physical transaction of ordering a book or ordering some lobster or ordering a sweater.

Secondly, many small businesses believe that to be successful in electronic commerce, all they need is to hook up to the Internet.

Ladies and gentlemen of the Committee, e-commerce success for a small business is much more than that. Even the smallest firms with the least complicated business models must plan their strategy carefully and recognize the potential challenges that may await them.

They need to factor into their entire business model how electronic commerce can help them. For example, if they don't hook into their ordering system, their supply system, their financial management system, their marketing system, the electronic commerce transactions and advertising they are doing, they are not taking full advantage of it. So we think this is a great opportunity for small businesses, and using the digital age they can be as effective and efficient and as productive as even the largest businesses.

A third myth is that people think that electronic commerce means solely selling products to consumers over the Internet. While the growth in consumer purchases on-line is certainly growing dramatically and is the stuff of front page stories in USA Today, the fact is that by most metrics over 80 percent of electronic transactions worldwide are business-to-business, not business-to-consumers.

Another great opportunity, therefore, for small businesses is that more and more large businesses in the supply chain expect that their suppliers will be able to conduct business on-line. You hear the phrase frequently, disintermediation. What that means is eliminating the middleman, creating new opportunities for small businesses to sell directly to large businesses.

For example, in the automotive world, the large automotive producers which used to only order from a very limited number of manufacturers and a limited number of small businesses, now because of the Internet order from hundred and thousands of suppliers, because it is so inexpensive to do business over the Internet.

A fourth myth is that there are no programs to help small and medium enterprises; this is primarily a big business opportunity. Well, as Mr. Hill outlined, there are many other opportunities. In fact, there are many opportunities for small business to learn about and to take advantage of electronic commerce. Large and small companies alike are providing technical assistance to small businesses, sometimes free of charge, sometimes with relatively minimal charges, because they want to get people into the e-business world.

The commercial service of the U.S. Department of Commerce has developed programs to reach out to small and medium enterprises, particularly to give them more advantages in export opportunities.

Mr. Hill outlined the numerous programs at the Small Business Administration. Even the Department of Defense has a program called the electronic commerce resource centers, which advise small businesses, often for free, on how to do business with the Federal Government electronically.

Of course, associations such as ours work with small businesses all the time to give them free advice on using the electronic commerce world.

Another myth is that every small business person has to become a computer geek in order to take advantage of the electronic commerce world. That is not true, Mr. Chairman. There are plenty of very good services out there where a person, as long as he or she knows his or her business and works with the information technology community, can easily become part of electronic commerce without becoming an expert in electronic commerce technology itself.

The last issue I want to address is that a lot of government intervention is going to be necessary here. On the contrary, we believe that industry is showing a great deal of leadership and self-regulation such as areas like the On-line Privacy Alliance which are protecting consumer privacy.

What does this mean in dollar terms? Well, electronic commerce solutions, to give you one example, can reduce the costs of a transaction of buying and selling business to business or business to consumer by over 90 percent; over 90 percent. Obviously, that can go right to the bottom line of a small business if it can take these transaction costs out of its sale.

It costs Ford Motor Company, for example, \$5,000 to get you a car, but using the Internet, in its Ford supplier network, it plans to reduce that distribution support cost to \$500 per car.

A survey of 500 large companies with sophisticated networks found out that 23 percent are using outside firms for installation, and they are primarily using small and medium enterprises.

Let me last introduce the issue that Mr. Pascrell and the Chairman and Ms. Velazquez raised about Internet taxation. The Internet community, the electronic commerce community, is not asking for different treatment that catalog orders, mail order orders, and other order that is being done across State lines. All that we are asking for is there not be special taxes put on the Internet.

If you read the legislation which this Congress passed, with the support of many of you, and the mandate given to the commission which Governor James Gilmore of Virginia is now heading, nowhere is it suggested that people ordering over the Internet or suppliers selling over the Internet should be allowed to escape taxes, but they are being asked to be taxed in the same way as if you ordered something over the telephone or ordered something in a written form through a mail order catalog. That is what is interesting to us and that is the challenge that the commission faces.

Thank you for allowing me to testify today, Mr. Chairman.

[Mr. Miller's statement may be found in the appendix.]

Chairman TALENT. Thank you, Mr. Miller.

Next, we are honored to have with us Professor Andrew B. Whinston. Here is a copy of his book, *The Economics of Electronic Commerce*, which I presume is available from bookstores or probably Amazon.com, for those wishing to order that way.

Professor Whinston is the Director of the Center for Research in Electronic Commerce at the University of Texas at Austin in Austin, Texas. Professor Whinston.

STATEMENT OF MR. ANDREW B. WHINSTON, DIRECTOR, CENTER FOR RESEARCH IN ELECTRONIC COMMERCE, UNIVERSITY OF TEXAS AT AUSTIN, AUSTIN, TX

Mr. WHINSTON. Thank you, Mr. Chairman, for inviting me here. I will be brief and dispel the myth that all professors are long winded.

First, I will point out that if you want to buy a copy of my book, which I recommend, you would get a much better price over the Internet. And then the question on taxation, if you buy it from Amazon and most other on-line bookstores you wouldn't pay any taxes on it because the would be—

Chairman TALENT. Professor Whinston, Mr. Pascrell was just beginning to calm down and now you have gotten him excited again.

Mr. WHINSTON. Well, unfortunately, I am going to come back to the taxation issue because I see his point, and we have raised that point in our book that taxation in a very broad sense is a real challenge.

Chairman TALENT. All right.

Mr. WHINSTON. There is this idea that you go on the Internet and you have the whole world as your potential market, and I think that is, from a practical point of view, a myth. I think there is also a lot of talk about the Internet being a great equalizer; that is, the large and small are all equal on the Internet, and I think that is also a myth.

The companies that we refer to, E-Bay, Amazon, Yahoo, they were all small businesses at one point, probably for 5 or 6 hours, until they exploded, and it will be interesting, I think, to look at why and how these small businesses became almost instant, huge businesses.

Let me mention some of the points that I think are critical in this area, which I think are a detriment to small business. One is the area of trust. Now, 99.99 percent of small businesses, I think, are very trustworthy but from the consumer's point of view, now I am going to talk about consumer to business, there is a recognition that there are more and more scams being developed on the Internet. The question then for consumer is should I go with a large recognized brand name or take a chance and go with a small business that is unknown to me? I don't have physical contact with that business, as you have in the traditional world where I can go down to the store, see the people in the store, look at them, look at their eyeballs, see how they appear and develop this sort of person-to-person trust.

On the Internet you have no contact with the people. so there is a serious problem of trust, a problem of authentication, where individuals are running scams, can run 50 scams with 50 different identities, have them close down and start up with 100 new identi-

ties. So these are things that result from the cryptographic technology.

There is a question of how you get identified if you are a small business. We have portals that lead people to a small business but portals, as money-making businesses, charge for having you listed and listed at a high level in the portals. So if somebody is searching for a lobster store, you as a lobster company want to get listed first, you may have to make a deal with the portal. So that is a deterrent.

Chairman TALENT. Professor Whinston, just a minute and tell us what a portal is, please.

Mr. WHINSTON. A portal is something like a mall in the physical world. So a portal is something where somebody is standing out in front of a store and everytime you go into the store, you pay them a dollar. So it is just somebody standing out there collecting a fee and they are collecting a fee because they are telling you, if you want to buy shoes or lobsters on-line this is the place to go to. So they are bringing you to that place.

We think of it as something like the equivalent of a mall. Yahoo, Excite, Lycos, these are all portals and they have power, especially for small business. Everybody who is in the Internet world knows about Amazon and all the other well-known brand names and they are marked on their browser. When it comes to finding something that is not a brand name, which may have a better price, the typical way is you would go to a portal. This is a problem, that portals are out to make money.

Another point, going back to the taxation issue, and of course as pointed out it really reflects the way we treat catalog companies, so Internet companies in some sense is an automation, a higher performance catalog company. So all catalog companies to survive would have to go on the Internet and thereby getting that type of tax treatment. But even from the point of view of small business, if you are on the Internet, and we have some way of changing the tax system to make it more uniform, there will be a heavy cost to small business in dealing with the taxes, in collecting taxes because they have to maintain information on taxes all over the country or indeed all over the world.

So the tax thing is really a multifaceted problem for small business as against large business, where they are able to handle this administrative burden more efficiently with the volume.

Let me just briefly mention some issues of open standards. This gets into the question of the Microsoft issue, the Justice Department complaint. Microsoft is obviously a large company, and the other point of view that is really emerging is to look at Linux. Now I am mentioning Linux because you hear about it in the news but Linux is really the way, I think, small business will exist in the digital version of electronic commerce. That is, Linux is an operating system which is really a collection of individuals, of small businesses, who prepare components. So each business has a competency and a certain facet of the operating system field.

Then as a buyer, you are buying a collection of components which are able to integrate. So the point for small business is that we have to ensure that as we move to the digital world of small business, entertainment, education, digital products, that we have open

standards. That is, that standards are set by a consortium of groups involved in that business, including small business. The government should be very vigilant at ensuring that no one company gets access to and controls a certain standard and thereby, in effect, a certain industry. So I think that is an important policy area.

There will be the growth of electronic money and that will raise issues of sovereign money versus electronic money. There will be a growth of cryptography, which will mean a basic problem of collecting taxes because transactions will be encrypted and you won't know whether somebody is sending a bill for a couple of million dollars for products or they are sending New Year's greetings to someone.

All the information will be encrypted and only the company will have the ability to decrypt it.

So finally I would make a pitch, as a professor, for more research in the area because research benefits small business. Large companies can, in effect, have Anderson Consulting or other large consulting firms do the work for them. The government should sponsor more research so we have a better understanding of how business on the Internet will operate so small business can draw upon that pool of information to be effective competitors in the Internet world.

Thank you very much.

[Mr. Whinston's statement may be found in the appendix.]

Chairman TALENT. Thank you, Professor Whinston.

Our next witness is Mr. Alan Anderson, who is a Senior Vice President of the American Institute of Certified Public Accountants. Mr. Anderson.

STATEMENT OF MR. ALAN ANDERSON, SENIOR VICE PRESIDENT, AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS, NEW YORK, NY

Mr. ANDERSON. Mr. Chairman and members of the Committee, it is an honor to be here today, and I would like to thank you for allowing the American Institute of Certified Public Accountants to make a presentation about a highly important and visible issue in the industry today, e-commerce.

I would request that my testimony which I submitted be made a part of the permanent record, and I will summarize that testimony right now.

First and foremost, Mr. Chairman, had SeafoodNow.com received the Web trust seal, you would have felt very comfortable and assured that you could have provided your credit card number over the Internet and the security of that credit card would have been maintained and, in fact, you would have received the product in high quality condition as well as fresh and very edible. I might say lobster is quite good.

Chairman TALENT. I should make myself clear, Mr. Anderson, candor requires me to say the reason I didn't supply my credit card was not that I was afraid of a lack of security but that I did not want to pay for the lobster.

Mr. ANDERSON. I fully understand that. Thank you very much.

Chairman TALENT. Please, go ahead.

Mr. ANDERSON. I am here today representing the 330,000 members of the American Institute of Certified Public Accountants, of which many are either employed in small businesses today or small CPA firms.

We believe that e-commerce provides a tremendous opportunity for small businesses today to grow and compete against their larger brothers and sisters in corporate America. We think that the WebTrust seal of approval and WebTrust assurance, if you will, is a vehicle which can provide for that competitive edge and competitive advantage.

Customers entering the World Wide Web or the Internet today are scared. They are uncertain as to what's happening. They ask questions, how do I know who I am conducting a transaction with? Will I receive what I ordered? Is this a reliable business? Is it a secure site? Will my privacy be protected and will I get scammed?

All of those questions are questions that every customer that goes on the Internet asks when they are pursuing and deciding whether they want to execute a transaction. In fact, 70 to 75 percent of those customers do not execute a transaction for those very reasons.

What we have done in the profession is to develop a service, CPA WebTrust, which is really a trust seal, which if you go to the Web, you see this seal, it provides you certain assurances. It follows the framework of that of an audit of financial statements. I think everybody could relate to an audit of financial statements. But what we do is audit that website for various pieces of information.

One is the business integrity of the company and the business practices of the company transacting business on the Internet. We also do an audit of the transaction integrity, that will the integrity of that transaction be maintained and assured so that that customer is protected and that the business is aboveboard, if you will?

It also provides an information protection piece of the equation, which ensures the consumer's privacy, which is important both for the small business owner as well as the customer.

We believe that CPA WebTrust is well positioned to help move the process forward, to help small businesses succeed in the marketplace.

It has been said that the Internet is a large company venue to conduct business. In fact, in Business Week of May 1999, Jeff Bezos, the CEO of Amazon.com was quoted as saying, I think this is one of the most misunderstood things about e-commerce. There aren't going to be a few winners. There are going to be tens of thousands of winners. This is a big, huge, complicated space, and it is going to be as complex, with as much variety and as many winners as the physical world.

We believe CPA WebTrust is there to help small businesses take advantage of the opportunities afforded them on the Internet.

CPA WebTrust is a program that is international in scope for that matter. We have our international societies around the world, the United Kingdom, Australia, Ireland, Scotland, et cetera, also providing this service. CPA WebTrust is a program where you get licensed to provide this service. A CPA firm will then go into a small business, once they are licensed to provide this service, and basically audit that website.

An interesting thing that we found as we have moved this process forward in CPA WebTrust is that many of the websites that have been put up in the rush to get on the Web, many websites have missed certain basic controls and control structures and processes which have prevented them from getting the seal.

If we want to enhance and improve the quality of e-commerce on the Internet, if we want to enhance and improve the business success of small businesses, CPA WebTrust, I think, is well positioned to satisfy that need.

Many people are always asking me, well, what is the cost of CPA WebTrust? This has got to be expensive because of the tremendous amount of assurances that CPA WebTrust provides.

Well, the first website that was placed was a company called Resource Marketing in Ohio. I know there are some Committee members from Ohio. Resource Marketing is a small company that it cost them \$1,400 to get the seal and about \$5,000 in CPA fees to do the work. Within 60 days of the seal being placed on that website, Resource Marketing maintains that their business grew by 300 percent and their cost structures went down by a tremendous amount, an amount to basically reduce their staffing levels or rechannel their staffing levels to that of one full-time equivalent.

We believe CPA WebTrust is a tremendous vehicle to help position small businesses to be successful and compete in today's growing e-commerce marketplace.

Thank you very much.

[Mr. Anderson's statement may be found in the appendix.]

Chairman TALENT. Thank you. Our next witness, Mr. Brian Hanson, is the founder and owner of Hanson Brothers Fresh Seafood, in Portland, Maine. Mr. Hanson.

**STATEMENT OF MR. BRIAN HANSON, FOUNDER AND OWNER,
HANSON BROS. FRESH SEAFOOD, PORTLAND, ME**

Mr. HANSON. Thank you, Mr. Chairman and members of the Committee, for inviting me. I think I sit alone in a way that I represent the most basic of Internet businesses. I am a very small business that got on the Internet, and I am selling directly to consumers. So I am really running the most basic Internet model that you see on the Internet.

Hanson Brothers Fresh Seafood, it is privately-owned by myself and my family. We have an extensive history in seafood, wholesaling, shipping, processing, but this is really our first real venture on our own into seafood retailing.

Seafood selling is not the easiest business. The industry is fragmented. The product is highly perishable and it is competitive because it is so locally based.

Because of our perishable products, we need to look at as many channels to distribute our products as possible so when we opened our retail we saw the Internet as probably the newest channel that we could use to sell our product in.

We are fishermen. We don't know very much about the Internet, although I did have e-mail when I was in college. So I started doing some research, and I would really like to talk about the nuts and bolts of Internet retailing because I have gone through the process

of choosing to go on the Internet and then actually going out and doing it.

I really noticed three problems that small businesses have when they enter the Internet, and they touch on a lot of things that the other witnesses have talked about.

The first problem is a poorly designed website. Unfortunately, every business out there is scrambling to get on the net, and that does not necessarily mean that they are making the right decisions to do so. There is an equal number of Internet providers that will offer you Web design capabilities. That does not mean that they can do that well. We see this in any industry. You are approached by vendors all the time offering services and products, but some providers are good and some are bad.

Having a good website is inherently critical to being successful on the Web. You need to have a website that is friendly and attractive and easy to use. So we needed to address that problem.

The second, and I think probably the most important, is lack of traffic or exposure. You can build the best website on the Internet but that doesn't mean that anybody is going to come to it, and this is the problem that small businesses really have.

I didn't have a \$40 million budget to advertise during the Super Bowl to brand my product. Up until recently, I didn't get a whole lot of media attention.

There is really two basic methods that people get traffic to their Internet site. One is a branding campaign using traditional media and the other is getting on the portals or the search engines. That, too, requires an expertise that most small businesses do not have. So we need to address that problem.

The third obstacle that most Internet businesses have to confront is a lack of functionality. As I said, a lot of small businesses are jumping on the Web but they have never asked themselves why they are doing that. They just say, I think the phrase was, you either have to play or pay. But unfortunately, few people actually are conceiving strategies to get on the Internet. Are they selling something? Are they offering product support? Are they offering information about their company? There are a variety of things you can do. The Internet and e-commerce is not just selling but you have to say to yourself what am I doing this for? Am I spending money without a strategy now where later on I will have to tear this all down and start all over again? The Internet is moving too fast to make errors like this.

Those three problems are mutually exclusive. All three need to be addressed, and I did that. Unfortunately, I didn't have the resources, the skills or the time to do that myself and I was lucky to be approached by a company, Global Store, which had the search engine teams that could put me on the search engines, which had the website teams that could make in effect a website and had the capital that they were willing to build my website for me.

Now, as a small business, I can honestly say I wouldn't have been as successful or maybe even successful at all had I not had that help. I don't have the economies of scale to do such things and I do not have the skills. I am not going out on a limb and saying most small businesses don't have the capabilities to truly be successful on the Internet without a lot of luck, and when I say small

business I am going to say businesses such as mine that are doing a million dollars in sales and are locally based in a small community.

To actually create our site took us almost three or four months, and again we wanted to make sure that our site was effective, it was functional, it was usable and it was without errors. So I missed an important holiday season.

I opened up my retail store 8 months ago and I opened up my Internet commerce about 3 months ago. Now I started with zero sales on the Internet and right now the Internet is accounting for 25 to 30 percent of my sales. This year alone I will probably do \$2 million just on my retail.

Chairman TALENT. I was going to ask you about sales volume. How much of an Internet volume do you have?

Mr. HANSON. This year we are looking at doing about \$600,000.

Chairman TALENT. Thank you.

Mr. HANSON. And that was business that I wouldn't normally have.

Now, besides addressing all the problems that I noted, I was also lucky enough to get in Time Magazine. So I am not going to tell you that it was all preparedness, and the Good Morning, America helped, too.

Chairman TALENT. We are all interested in your plan for getting such press. Several members of the Committee will be talking with you about it afterwards.

Mr. HANSON. What the Internet has done for me as a small business is created a very important sales venue to move a perishable product. That is probably the most important thing.

My inventory control is probably the single most important thing to the success of my business. I don't buy a lot of frozen product, which is typically the type of seafood sold at larger retail chains and grocery stores. I sell smaller, more specialized fresh seafood.

The Internet has allowed me to reach an international and national market. There isn't a day that goes by that I do not receive inquiries from out of the country on either brokering wholesale deals or just shipping out lobsters to other countries.

Thirdly, the Internet has provided me cash flows in slow months. January, February and March are not great months for any retail business. The Internet has provided me cash flows to really help a fledgling business survive and get through the first couple of years.

Finally, it is a new profit center and it is one that has lower distribution costs than perhaps anything else. I also take orders via telephone, but to take telephone orders requires me to place someone at a phone and answer and talk to a customer.

Now, the benefits of that are you can actually deal physically with a customer and talk to them, and I don't want to under emphasize how important that is. But unfortunately, I am a small business and if I can shift some of those telephone calls over to the Internet and also get new customers to the Internet, then it is better for me. It doesn't require the staffing.

My effort and costs for developing the website were paid for by Global Store, and the shipping costs are paid for by the customer.

So it is very low distribution. It is really opening another retail store without the start-up costs of one.

Chairman TALENT. Do you think if they called in on the phone, and you had a good person talking to them, they might buy more?

Mr. HANSON. There is always that possibility. You can always either upsale or you can create a relationship with a customer to create repeat business, but, you know, during the holidays that phone could be ringing off the hook all day long and it might take three people. And I would rather shift those three people to working with the true core of my business, which is over-the-counter retail sales.

We are firmly aware that competition is coming. I think that I have been lucky that I started in an Internet business that not a lot of people have jumped into. The perishable food Internet business is, they a few and far between. I think the only other one that is really, I think, doing any volume at all is probably one we all know, Omaha Steaks, but they have always had a national branding and they shifted to the Internet quite easily.

We are expecting a lot of competition so it is very important for us to establish ourselves first and foremost as oriented towards customer service, to having a good website and making our customers feel as though they can confidently order product through our website.

I think one of the things we talked about, seals of approval and all of that, but I know that if I don't service a customer well they won't come back, and ultimately that will be the death of my Internet business. So I have to go out of my way, even though I don't have that customer contact like I normally would, I have to go out of my way to make sure that every point of service is completed properly.

I have actually—it is probably fair to say that 20 percent of my business now is repeat customers. Thank You.

[Mr. Hanson's statement may be found in the appendix.]

Chairman TALENT. Thank you, Mr. Hanson. I am grateful to you for traveling so far.

I am going to defer my questions because I know, I can tell from the attendance, that the Committee is interested and I want them to be able to get to their questions.

In Ms. Velazquez' absence, I will yield to Mr. Brady.

Mr. BRADY. Thank you, Mr. Chairman.

My concern is more security. I was interviewed by a major TV station in the City of Philadelphia, and this reporter had said to me that over the Internet there was an advertisement you can order drugs. I guess that you may not be able to give me an answer but maybe you can help me answer her a little bit, or maybe somebody—I could jog you a little bit and come up with something that I could say or maybe even respond to.

What was happening was Ritalin, Viagra, Prozac were being ordered over the Internet, and they were being advertised as no prescriptions needed. This is a documented thing. It is right on TV, and it is playing every other day in my city.

What happened was they had one drug, I don't know the name, long name, not even approved in the United States of America, but it was ordered out of Sweden, and she received this.

The other three drugs, the Prozac, the Ritalin and the Viagra were ordered out of the State of Florida, and they were ordered from the city of Florida with a suite number. The suite number turned out to be a box number. And she received and was delivered to her, or to the person who was ordering them, these four drugs; one not even approved in the United States of America yet; and again, advertised no prescription necessary.

I don't know whether you can answer my question. I don't know if you can give me any insight. We went to the Federal authorities. Actually, I did because I needed some type of an answer. They are overwhelmed. They can't even begin to try to address this problem.

But the two main problems, again, no prescription necessary and it was ordered by her niece, who was 10 years old. So I have a problem with that. I have a major problem with ordering over the Internet, and I understand what you are doing here is CPA approval, you know, let's let people, consumers, know that you are interested, you watch and you monitor this, it is a good thing to do, but I just think we need to look at this real hard.

No disrespect to the business that is now becoming no more. You have got to go to another Committee, you don't come to Small Business anymore, you are going to be big business, hopefully. We don't want to hurt you, but there are some concerns, and this is my concern. I don't know if any of you can help me with any kind of direction to this.

Thank you, Mr. Chairman.

Chairman TALENT. Perhaps, Mr. Miller, would you like to take a crack at that, or Mr. Hill, maybe?

Mr. MILLER. Clearly, Mr. Brady, any kind of global commerce where people step outside the normal channels of ordering prescription drugs, they can do it through the telephone, they can do it by traveling outside the country, they can do it through mail order.

Mr. BRADY. A 10-year-old could do it by traveling outside the country?

Mr. MILLER. They could do it by telephone. It happens all the time.

Mr. BRADY. You can order a drug by a telephone?

Mr. MILLER. You can.

Mr. BRADY. With no prescription? A 10-year-old could do that?

Mr. MILLER. Yes, you can. I hate to tell you that, but as long as that 10-year-old has access to his or her parents' credit card—now, one hopes the parents don't give a 10-year-old access to a credit card. Obviously, when you are ordering something, sir, at the end of the day you have to pay for it. People don't send you drugs or any other product over the Internet on approval. They require you to pay in advance.

So I think the real critical question here is how a 10-year-old got his or her parents' credit card, because presumably he or she could have ordered all kinds of things that you wouldn't want a 10-year-old to order. So I think at some point or another there has to be some personal responsibility here, because the same things you just detailed can be ordered through all kinds of ways if you have a means of paying for it. That is the critical issue.

Mr. BRADY. So what you are telling me is that it is okay to order Prozac?

Mr. MILLER. I don't think it is okay at all.

Mr. BRADY. It is okay to order Ritalin, it is okay to order Viagra?

Mr. MILLER. Absolutely not.

Mr. BRADY. As long as your parents give you the credit card? You are 10 years old, and she stumbled on the Internet by using a computer, so that is okay?

Mr. MILLER. Mr. Brady, obviously I am not saying that. I am saying that—

Mr. BRADY. That is what I heard.

Mr. MILLER. Absolutely not. If you are going to try to stop international commerce, you have to stop the ability of people who do not have the age of responsibility to make those kinds of decisions. You can't cut off telephone service to those countries. You can't cut off Internet services. You can't cut off mail service to those countries.

So what I am saying is the problem you are trying to identify is not unique to the Internet. What I am concerned with is you are portraying it as if this is somehow unique to the Internet.

Mr. BRADY. I wish you would answer that TV reporter like that and see what would happen.

Mr. MILLER. I would be glad to. I get those questions all the time.

Mr. BRADY. I am sure you would be.

Mr. MILLER. Okay.

Mr. BRADY. What I am saying to you is that a kid is on the Internet.

Mr. MILLER. Right.

Mr. BRADY. And they are playing around and they are doing their computers. They are all taught it in school, and here they bump into this no prescription necessary.

Mr. MILLER. Right.

Mr. BRADY. And here they bump into a chance to be able to order drugs that you need a prescription for, which is illegal to do already.

Mr. MILLER. Right.

Mr. BRADY. And now this person who is receiving this order doesn't know who they are receiving an order form, it is a post office box, and a 10-year-old, what happened, as you all know, she went to her aunt who is a TV reporter, and she said, look, I will give you my credit card. Let's see how far we can get with this. And that is how far they got with it.

I just think there is something wrong with that. It is a little different from ordering over the telephone.

Mr. MILLER. I am not quite sure what the difference is, sir, with all due respect.

Chairman TALENT. Does the gentleman have any further questions?

Mr. BRADY. No, I am finished.

Chairman TALENT. Okay. Mr. Hill, your questions lead me to think that maybe we should have had somebody from the Department of Justice here to talk about these kinds of concerns.

Mr. Hill, have you, on behalf of the agency, networked at all with the law enforcement people? Mr. Brady's comments certainly disturb me, since it seems by saying we are overwhelmed; we are throwing up our hands and not doing anything about this. I mean, that is really a source of concern. Do you have anything you want to add?

Mr. HILL. Well, just very quickly. You know, personally I share many of the same concerns. I have an 11-year-old daughter who can operate my personal computer on the Internet in ways that just amaze me, and every time she get on, about every other time I go in an remind her, don't give your name out, don't use my credit card. I keep working on that over and over again, because there is a real problem.

In addition to working at the SBA, I engage in what I considered a small business activity. I fish professionally in bass tournaments. I do want to assure you I am not leaving the SBA any time soon. My wife tells me I have bankrupted the firm several times. But I am currently selling my boat on the Internet, and I am getting inquiries from literally all over the country, but because they are over the Internet I don't know where they are coming from. I don't know who they are. I don't know if they are serious, if they are pranksters. We all read not too long ago about the E-Bay sale, that there was a youngster who got on who was buying cars, and he almost bought a resort island.

There are a lot of concerns like this.

I think what Professor Whinston said earlier is what the SBA thinks is very important. We need to do a lot more research. Part of our emphasis at the SBA begins with focus groups that we hope to run this summer with the Department of Commerce, where we need to actually explore all of these issues and understand them.

This is a brand new world. It is moving very fast. Technology is going a million miles an hour, and we need to catch up and see where we can be helpful. But there are a lot of concerns like that that we need to work on.

Mr. MILLER. Mr. Chairman, maybe just two more general points to Mr. Brady's specific point. One is the issue of security, and I think in terms of security on the Internet, most people when they send their credit cards over the Internet can feel fairly secure because of what is called the secure socket layer of the security issues.

There is a second issue, which is authentication, which Professor Whinston referred to, which is you are who you say you are. To some extent that may address Mr. Brady's concern that at least when you are filling these questionnaires out, if you say 18 years old, how do they really know you are 18 years old?

Then these is a third question about consumer fraud and scams, which Professor Whinston also talked about, which the AICPA program, BBB On-line, Trustee and other programs, but I don't agree with—don't know who responded to Mr. Brady from the government, but I don't agree that the government isn't able to deal with consumer fraud or other opportunities.

I talk to the FTC all the time. They recently had a meeting. They have another one coming up June 8th and 9th. We talk to the Department of Justice all the time. We talk to state attorneys general.

Number one, they tell us the numbers of consumer fraud on the Internet compared to general consumer fraud is still infinitesimal. People doing fraud still use the old fashioned way, by and large. But that is not to say it is not important because obviously it reflects badly on the industry.

So what we are trying to do is work with organizations like the AICPA, with BBB On-line, with Trustee, to be able to deal with that challenge so that there is a general answer. I can't deal with every specific problem that comes up because obviously no matter how good you try to set it up there are always going to be scam artists that are always going to out scam the system.

The last point I would make is that most of the access to the Internet providers, AOL being the most prominent but it is also true with others, are trying to put parental control systems built into the system. I think that that is important. It is becoming a market differentiator because they want to know that if I as a parent turn the Internet over to my 11-year-old or 10-year-old, my kids are now 15 and 17, then I am able to set that setting on the computer so that they cannot access certain websites that contain sex, violence; they cannot order any materials unless I explicitly come on. So those settings are very, very important. I think that is a market differentiator when parents are out there buying software or deciding which Internet access provider to use, and the Internet providers are advertising that to parents, come and use our website or use our portal or use our access because we can offer those protections to try to minimize, I am not going to say eliminate but try to minimize the kind of situations that Mr. Brady was talking about.

Chairman TALENT. Well, thank you. I appreciate Mr. Brady's questions. I think we can expect the market on its own to take pretty effective steps to protect people against pilfering of their credit cards because if they don't, any company that isn't doing that is going to lose business. So there is a tremendous incentive, and Mr. Anderson talked about them.

I expect that the market will respond pretty well on its own to that, but the issue where the person is not being defrauded, they are getting what they ordered and the problem is it is a kid ordering, I mean, there is much less incentive for the market to respond to that on its own, and that is an area where I do think the government needs to be involved, and I think Mr. Brady made some excellent points.

Bob, if you will let us know who in the DOJ threw up their hands and said that we are overwhelmed, I would be interested in knowing that because they ought to be letting us know that.

Mr. BRADY. We followed that up and they went and they found out that the suite was a post office box; they confiscated it and they shut that down.

Chairman TALENT. Good.

Mr. BRADY. But the initial person said that, and I didn't follow up with that. No question.

Chairman TALENT. Okay.

Mr. BRADY. I didn't mean to be argumentative with you.

The 10-year-old was probably done—no disrespect to reporters but you all know how you are—was probably done for effect. I am

sure that she stumbled on it and let the 10-year-old now actually do the manipulation of the ordering so it can be effective when she does her TV show. But the reality of it is that it was done with no prescription, advertised and no prescription needed. Thanks.

Chairman TALENT. I thank the gentleman. I will recognize Mr. Forbes.

Mr. FORBES. Thank you, Mr. Chairman. I sincerely appreciate you conducting this hearing today.

For me, I think this is a tremendously exciting opportunity for America's small businesses. Probably no opportunity like it has ever come before small businesses in the last century, and I think there are great things ahead.

I respect Mr. Brady's concerns. I absolutely share them. I would just make this one note, though, and I think it is in line with what has been said here by Mr. Miller and others, is there are Federal agencies who are charged with the responsibility of making sure that kind of fraud does not happen, and we need to give them the tools to extend that kind of oversight on the Internet as well.

As was mentioned, telephone solicitation, telephone sales, this is an area that obviously has gone on for decades and it is a tremendous concern, I think with the ease of the Internet and we are talking about ease, notwithstanding parental controls that many of the major search engines are providing, that it is an area that I think it is rightful that the government take some sensitivity to.

The United States Postal Service, frankly, has jurisdiction there and it is a violation to order internationally without a prescription. So there are some violations of law here that exist that our Federal Government and its various agencies need to be sensitive to, and to the extent that this Committee can help provide some guidance on that as we move into this brave new world—we all know over the last 5 years exponentially the growth here has been phenomenal. My wife, my children, our family, are active users of the Internet and of this e-commerce. Frankly, we have found it to be just phenomenal.

If you come from an area like I do in eastern Long Island, which is largely rural, which is a seasonal economy, this tremendous opportunity, as Mr. Hanson has suggested, provides you a marketplace that you would never, ever have access to. It provides for an expanded local economy, and there are only great upsides, I think, to the growth of this, understanding that we do have to be mindful. As my good friend from New Jersey, Mr. Pascrell alluded to, you do not want to create an atmosphere where frankly those who are smart enough to get into the Internet world and e-commerce are somehow advantaged over those who have made investments in a physical plant, who are paying business fees, who are paying local taxes. I think that as much as I ran on and believe very much in a strong tax reduction policy, I think we have got to keep the playing field level and make sure that we don't advantage a firm like Amazon.com while we are putting others who sell books who are not on the Internet to a disadvantage.

So I think there are some areas here we have to deal with.

Let me, if I might, Mr. Anderson, you talked about something that I found extremely exciting and, frankly, gets to the issue of trust, as has been raised here, the whole idea of CPA WebTrust.

Now, are you saying to me that the American Institute of Certified Public Accountants has the technical expertise to not only certify, if you will, the financial health of the entities that you go in and you give the seal of approval to, but you also have the technical expertise to certify the technological security of these websites?

In other words, for example, you go to Mr. Hanson's firm and you basically give him the seal of approval because you have certified that he has the financial health, he is not some guy working out of the back of a truck that is leaving town and he takes orders and never fulfills them, but in fact you have certified that he has a secure website where you can use a credit card, where you don't have to worry about whether your credit card has all of a sudden been copied by a thousand other hackers with access to that website, who take that credit card and use it for other things?

Mr. ANDERSON. Actually, yes, we do. We have 330,000 members, and not all 330,000 members have the technical expertise.

We license firms, small firms and large firms, to provide this service. What happens is, it usually will take a team of people to certify the website, one with a technical skill set.

One firm that is licensed is a firm out in California and it is a one-person firm, and this CPA has the full complement of skills to do the technological piece of the equation, as well as the examination of the balance of the business principles that the company is saying are in place. We provide the training. You have to have training in order to get the license, and so we are building the technical infrastructure to support this seal program.

Mr. FORBES. I just want to make crystal clear in here, because much like a consumer might see the good seal—the seal of approval of Good Housekeeping, or whatever they call it, and it gets consumers frankly to go to some of those businesses, what you are saying to me is when your seal is placed on a business, that the consumer knows that technologically there is no fear that somehow encryption can be violated; that there is a hacker who can get in there and steal those credit card numbers that are in the process of being filed with perhaps a seafood company or Amazon.com or any other?

Mr. ANDERSON. I would say that there is no fear.

Mr. FORBES. Well, that is I think a great advance, and I appreciate that on the private side that the private sector, frankly, has moved in this direction because that is really what we need.

I was going to ask Mr. Miller about that a little bit and how his industry feels about that, but that is probably the single most—and Mr. Hanson, if you could comment on this in a second, but it is probably the single most concern about all of us who see a great opportunity on the Internet, something we want to buy, you go through the whole process and then it says, click, you know, to send that credit card number, and I will admit that I am one of those who has said, you know what, I think I will print this out and then I will call on the telephone Mr. Hanson and order those lobsters, just to make sure that my credit card is not going in this vast netherworld out there for others to take advantage of.

Mr. Hanson, could you just perhaps, and I apologize for the TV that is separating us here, but could you comment? Do you find that there are perhaps a majority, or close to a majority of your

customers, that are going the full menu, seeing what you have to offer and then picking up the phone, again because they had that last remaining concern about security?

Mr. HANSON. No, that absolutely happens. I would say probably 10 or 15 percent of our customers will either put their order through and then call us to make sure it actually was processed, just to be sure.

Mr. FORBES. Do you have one of these seals of approval that the CPA Web masters talked about?

Mr. HANSON. Actually, this is the first time I have heard about it, but it sounds like a great idea. We use VeriSign, which is one of the industry standards for credit and encryption, ordering encryption. So we feel comfortable with our security, but obviously any other approvals, we can get, a some sort of overview, we are going to look at.

But there are still a lot of customers out there that feel very comfortable surfing the Internet and looking at price comparison but still do not feel comfortable taking that final step of actually sending their credit care number over that. And we probably get 10 to 15 percent of our orders that will look at our website, print something out and then just call us and place the order that way. And then that is fine. It is going to take a while for people to feel comfortable.

I personally think the technology is there to make transactions safe. I do a lot of my purchasing on-line, but everybody is different.

Mr. FORBES. Mr. Miller, could you just comment, too, and maybe clarify for me, because I was not aware of what your industry, ITAA, does, again, to put build that trust that this is a secure transaction.

Mr. MILLER. It is absolutely critical. We don't have our own certification program because we do believe a lot of other products are already out there. And clearly, businesses doing business on-line have come to realize that, number one, privacy is a major concern, which is why the Georgetown survey, which was released approximately 2 weeks ago, Mr. Forbes, indicated the number of heavily traveled websites that now have a posted privacy policy is around 90 percent; whereas, last year it was around 15 or 20 percent. There has been that dramatic shift because the marketplace is responding to consumers' concern about privacy and now they have a privacy policy posted.

Mr. FORBES. If you would yield just for a second.

Mr. MILLER. Sure.

Mr. FORBES. But don't we run the risk, if we get into a lot of multicertification situations or we have upwards of dozens or even hundreds of different certifications, that the public gets very confused about really what certification is the real certification?

Mr. MILLER. I think that there are not going to be dozens or hundreds. I think you are going to see a relatively small number because there is going to have some heft behind the branding itself.

Mr. FORBES. Some standards set?

Mr. MILLER. Exactly.

Mr. FORBES. Would your industry set those standards?

Mr. MILLER. I don't think we would want to set them. I think we would want to work with our customers and with organizations like and AICPA. I don't think the IT industry itself wants to set them.

Mr. FORBES. Why wouldn't we want to have basic, basic standards that the public can say, well, if you are meeting these basic standards then I know I can feel assured that there is privacy and security in my transaction?

Mr. MILLER. We do have standards various technologies. For example, as Mr. Hanson said, VeriSign is a commercial industry product which is widely recognized as being secure in terms of protecting the financial transaction, which is one of the things you are very concerned about. That is a commercial product. It is not agreed to by industry. Industry has worked in the credit card area. You may have heard of the set process where MasterCard and Visa have been working to set up standards.

It has been widely adopted in Europe, not so widely adopted in the U.S., but I think the feeling of the industry is this is an industry of constant change. We don't want to be so pretentious or so obnoxious as an industry association to claim that we can dictate those standards.

Let the marketplace evolve. I think you are going to see very few—

Mr. FORBES. I do appreciate where you are coming from.

Mr. Chairman, I would suggest, as somebody who believes there should be as minimal government intrusion into this area as possible. I have already acknowledged that there are some rightful areas that the government should be involved in, and before the government actually decides what standards, because I think the escalating—it is exponentially growing as an opportunity but it is exponentially growing as a site of fraud and abuse. I think before the government is forced to set minimum standards I would think the industry would want to seriously look at setting their own core, basic standards. Thank you.

Mr. MILLER. I will take that back to my membership, Mr. Forbes. Thank you.

Mr. FORBES. Thank you, Mr. Chairman.

Chairman TALENT. I thank the gentleman for his interest. We only have a couple of other members, and I will certainly be happy to have a second round of questioning if he wants to stick around and ask some others. I am going to try to clean up on some issues but I would be happy to have him do it.

Next, Mrs. Napolitano.

Ms. NAPOLITANO. Thank you, Mr. Chair.

A lot of the questions that I would have, having been a small business woman myself and coming from local government, stem out of the fact that for a long time small businesses faced quite unfair competition from catalog sales. Now we have Internet sales.

Understand that in a small community that is using sales revenue for its base budget, that if there are no tax revenues coming in from the businesses that operate within its boundaries, things happen. There is just enough money flowing into the coffers for the local community to do its job for the community itself.

How would you think, because I do not believe that you pay any local taxes as yet because all of yours is done on the Internet, in

cyberspace, but how do we in all fairness to business, in all fairness to the communities that you reside in, deal with this issue of being able to pay into the coffers that small business that are physically located, do business face-to-face, have to pay to the local coffers? Anybody?

Mr. MILLER. I think the answer is a couple of fold, Mrs. Napolitano. I think, number one, the amount of growth of the Internet industry itself, and the way it is driving our economy, as has been documented by the Department of Commerce and others, has in itself given for the first time ever consistent Federal budget tax surpluses. States are now wealthier and have bigger surpluses than they ever have.

Ms. NAPOLITANO. Do you know what the problem, sir, is? And I hate to interrupt you. Having served as in the State legislature, the government takes from the local coffers to balance its budget and so the community really is crying for those extra dollars.

Mr. MILLER. I haven't gotten to the local government because I know that was your specific concern was the local government.

Ms. NAPOLITANO. That still is.

Mr. MILLER. I think at least at the Federal level and even at the State level, I know many of the governors were concerned about the Internet Tax Freedom Act passage and its potential negative impact on those States which have high sales taxes. I think the arguments have been somewhat undercut by the reality that they are just sitting on these huge budget surpluses.

The local governments, I think, have a couple of different issues they have to address. Number one, whether in the digital age, whether their traditional taxation models are going to continue to work. And I think that is what the Internet Commission that Governor Gilmore is heading up is going to have to examine. I wouldn't pretend to have an answer to that, but I think that that is one of the fundamental issues that is going to need to be addressed.

Number two is, there was a very important decision, Sunday, several years by the Supreme Court, the so-called Quill decision, which really determined the whole issue of taxation and site of your business. Whether the Internet came along or the Internet didn't come along, it is that Quill decision which allows catalog firms or other firms which do not have sites in a particular State or locality not to pay taxes. So I think that is the kind of more fundamental baseline issue which the Internet Commission is going to have to take a look at, whether that Supreme Court decision is underlying it.

Last but not least, the activity, I would contend, and again there can be disagreement, but our industry would contend that the economic activity generated in places like California, Virginia, North Carolina, Missouri, Pennsylvania, et cetera, this growth of the economy is generating so much economic activity that it has to be benefiting those localities, whether you talk about inner cities in New York, parts of New York, that were very run down a few years now, now it is called Silicon Alley, I believe; whether you are talking about inner cities which are now becoming wired and new technology brought into the schools; Cisco Academy now operating in 1,400 inner city schools across the United States.

That doesn't totally answer the specific question of well, what about my one dollar of taxes I was collecting before, but I think if you look at it in a larger context we would argue that the benefit to local government of the general activity of the Information Technology Age and the general benefit it brings to the community far outweighs maybe one dollar of taxes that a particular small business may not have gotten.

Last but not least, I would contend that if you get more businesses like Mr. Hanson, I think his example is—while it is exciting, it is not unique. In fact, there are tens of thousands of businesses doing this every day. He pays his employees; he pays more taxes locally on his business; and that generates economic activity. I think any community would love to have many more Mr. Hansons, who continues to have a retail operation, as I understand it, locally, as well as the Internet business. And that can only benefit the community, and that is the way to look at it, in my mind, in the digital age.

Ms. NAPOLITANO. Well, the first comment you had, we found out trickle down economy does not work. I mean, by the time it gets to the local communities, it just isn't there.

You are right, I think there are many, many ramifications to whether the business has an on-site, in addition to the cyberspace site, whether or not it is going to benefit the community, but I think the community itself needs to understand that there is an impact on the community. If it is totally just cyberspace, then something has to be done to be able to allow the community to benefit from that, if they are headquartered or if their business is located within the framework of that community.

There are many other things that I would like to ask. Do I have time?

Chairman TALENT. I would encourage the gentlelady to ask another question.

Ms. NAPOLITANO. Thank you.

Chairman TALENT. We may actually have a follow-up hearing on this because you have raised tax issues, and Mr. Miller has done an excellent job responding, but it might be interesting to have other witnesses on that and also on the law enforcement issues.

Members are interested in what you are asking about so please go ahead and ask.

Ms. NAPOLITANO. Thank you very much.

Professor Whinston, it appears you are not really particularly optimistic on small business will be able to compete in cyberspace. In your testimony, Phil Sisenbrand, a name familiar and already important, will be even more of a factor in driving economic decision-making. But do you have any suggestions that small business could follow to ensure their continued ability to compete and be able to be successful?

Mr. WHINSTON. Yes. As you indicated, what we have seen in the data, and we are collecting data about Internet activity, is that we see thousands of small businesses on-line, let's say, selling books or CDs, but very few of them do any significant business. The business is really concentrated in a few very large companies, and I think that is going to be a problem for small business.

So my suggestion, or the suggestions that we have considered, relate to this issue of research, meaning that we have a body of knowledge that small business can draw upon so it can become effective and in many cases may end up to be leaving the category of small business to medium or large business. So it may be that we are entering a world where being small, except if you have a very special niche market that people need, is not going to be sort of a viable, long run alternative. You are either small and then you grow to medium or large to handle all of the technological issues—even if we figure out a way of doing the taxation, I go back to my point that the costs of managing the payment of taxes, the recognition of what taxes should be charged, will become a major cost to small business as against a larger company that can really amortize that cost over a larger base.

So I see a big challenge for small business in this Internet world.

Ms. NAPOLITANO. Thank you, sir.

Thank you. I will hold for the next round. Thank you.

Chairman TALENT. Would any of the other gentlemen on the panel like to respond? It was another excellent question. Are the rest of you as pessimistic about the chances of small business? Well, let's jump in there.

Ms. MILLER. Obviously, I disagree with everything Professor Whinston said after he said "the."

Basically, I believe that the opportunities are incredible, as Congressman Forbes said. I mean, the fact that now virtually anybody who wants to sell to General Motors can sell to General Motors, for example, 5 years ago if you were a supplier and you wanted to sell to General Motors you had to become part of their electronic data interchange, private network. You had to go through all kinds of rigmarole and it was not worth it either to General Motors or to small business manufacturers who manufactured parts to try to go through that, because they had a very small cluster. The same with Ford, the same with Daimler Chrysler.

Now because of the Internet and the automotive exchange network, virtually anybody who wants to supply a part, a seat cover, a bumper or whatever it is you want to manufacture, now has the opportunity to sell to the largest car manufacturer in the world and become a regular supplier.

That also means, as Mr. Hanson suggested, if you don't do a good job once you get that opportunity, the word gets around the Internet pretty quickly and you are going to lose that contract. But thousands of manufacturers, mostly small businesses or medium-sized businesses, who never could have dreamed to selling to General Motors, now can do so.

The same thing with companies like Wal-Mart. Before, it was a relatively small number of middlemen, middle manufacturers, who could do business with Wal-Mart, because Wal-Mart had to touch you and feel you and see you and go through this whole big formalized process and you had to have a big private network.

Wal-Mart now is out there on the Internet. Anybody who produces goods and services they are looking for, salt and peppers shakers, skirts, shirts, tennis rackets, whatever it is, you can electronically deal with Wal-Mart. As long as they know you are a reliable supplier, you can suddenly do business with them.

I think the opportunities are what I focus on; not to minimize the challenges. Some of the ones that he identified, that Professor Whinston identified, are true but they are being dealt with in the marketplace, and they are being dealt with by appropriate government laws and regulations. But to sit here and talk about these problems as some kind of overwhelming obstacle to small businesses, I think, is just turning the glass not just half full or half empty, totally upside down.

I think if you have a hearing a year from now, you will have 10 Mr. Hansons here, and 2 years from now you will have 100 Mr. Hansons here. Now, maybe he doesn't want to have a hundred competitors on the Internet selling lobsters, but that is what is so exciting about the Internet.

One other thing that I don't think the Committee has heard about fully is again the power of communications. Yes, Amazon.com is a great company but Amazon.com didn't exist 3 years ago or 4 years ago.

I will tell you the other thing about Amazon.com, if they don't do a good job, they could be dead tomorrow because if you go to a restaurant and you get a bad meal, it happens once, maybe you tell a couple of friends but it is going to be years and years before the word gets around that that restaurant has kind of gone downhill.

You get bad delivery from Amazon.com from a few customers on the Internet and the word will spread like wildfire, and before you know it no one will be ordering anything from Amazon.com.

So their emphasis on quality and service and reliability to the customers has to be paramount, has to be at the top of their agenda, because if they can't have comfortable customers, the Internet which made them will be the Internet which kills them.

Mr. HILL. If I could just say, you know, I totally agree with Mr. Miller's assessment.

We have been focusing on some of the external challenges. We think there are a lot of internal challenges for small businesses to transform themselves to meet the challenges offered by electronic commerce. But one point I would like to leave you with, as you look at the Internet and you look at studies, we have talked today a number of times about our daughters. When that generation gets to be the consumer generation 10 years from now, the barriers that many people face now won't be there. The young people of today are growing up computer literate, and this is the way of the future. We think the opportunities for small business and the leveling of the playing field, both domestically and internationally, are just staggering. That is why we think this is going to be a major issue at the SBA for the near future.

Chairman TALENT. One more question, and Mrs. Kelly has been very, very patient. Mr. Hanson, you mentioned in your statement that you felt like the big players always have an advantage going in. Do you want to offer an opinion on this?

Mr. HANSON. I have got a lot of opinions on this, actually, if you will give me just a minute. I agree with what everybody is saying, to some extent. It is my belief that the ability for a traditional retailer, business-to-customer, as a stand-alone small business to succeed on the Internet is diminishing rapidly.

In real practical terms, to succeed on the Internet, the phrase we use is you have to bring the eyeballs in. It is all about traffic.

The first model of the Internet, and we are shifting that and you will see it in the valuation of stocks, the first way we valued stocks was how much traffic. Now we are looking at how much of that can be converted to business. But the very essence of it is traffic to your site, and a very small business that gets on the Internet, if it makes no alliances, has no capital and it doesn't have the technical expertise to get on to the search engines, will not get anybody to their site, except maybe a few local customers, and then they will just languish on the Internet.

The bigger sites, I mean, we see it, there is not a day that goes by that I do not hear on the radio or see on the TV a company, a brand new company, with millions of dollars, creating instant brand recognition. Go.com is doing right now, and every hour on TV you can see them. They are a brand new company. Amazon.com did the same thing.

I can't do that. So I had to align myself with a larger company that had the technical expertise and the ability to bring me the eyeballs, or I wouldn't have succeeded, either.

The Internet has so many different possibilities and so many different business models, not just business-to-customers. It is also the exchange of concepts, and there is so much to it. I mean, we are seeing now webcasting and the ability to transmit audio and video signal, that there is tremendous opportunity out there, I wouldn't disagree with that. But traditional, small business retailers, unless they can get traffic to their sites, won't be successful at all.

Chairman TALENT. All right. I will give Professor Whinston an opportunity to respond later, but right now I want to recognize Mrs. Kelly, who has been very patient, for any questions she may want to ask.

Mrs. KELLY. Thank you very much.

The first thing I want to say is I thank you, Mr. Miller, for recognizing Silicon Alley. It is my district. I represent the world headquarters of IBM.

When I came to Congress in 1994, we had 30 small high tech firms and less than four of them were Web focused. Today there are 113 small firms and, of these, 70 are Web focused. So we are growing very slowly but it is coming. It is a very exciting process for me to see that happen.

I wanted to ask Professor Whinston, you were talking in terms of the taxing issues about the issue of sovereign money. I wonder if you would be willing to develop that issue a little bit because I think it is a serious one that could be problematic.

Mr. WHINSTON. Yes. To do business on the Internet now the model is to use credit cards. As we move towards sort of a more mature movement in electronic commerce, there will be more and more interest in having electronic money that is in effect private money.

So, for example, Microsoft could issue money and that money would be used to settle transactions anywhere in the world; the money would, in effect, be international money. It would be technically a liability of Microsoft, but it would circulate so it could be

a liability that nobody would ever ask to get redeemed, and it, in effect, could become a very profitable business; in effect, a more profitable business than their current software business.

So electronic money is really a digital product. It involves encryption. It gives you anonymity that you have with cash. So, again, it raises the specter of the sovereign money being partially displayed. It raises broad issues on monetary policy.

The Federal Reserve is always very concerned about the growth in money supply and other issues related to that. If we introduce this new kind of money, it makes that issue confusing.

The Federal Government makes money on issuing money. It is a couple of billion dollars in contributions to our Federal budget, and that could be displaced.

With the electronic money, in effect, you could be doing cash transactions which are in the millions, which raises questions again about, as you have indicated, taxation, and that, again, would be a problem.

So as everybody has indicated here, there are great opportunities. I run a center at the University of Texas and, of course, I see tremendous opportunities in electronic commerce but on the other hand I think we have to understand there are great challenges. In those challenges, an opportunity mixture, we have to work it out so that the positive end of this whole revolution is where we are going and avoid the pitfalls.

I would also mention parenthetically, since I referred to cryptography, that it is not, in my judgment, possible to give guarantees about security. I think the AICPA or other organizations have to deal with reasonable care, and an indication that while nothing is absolute that companies have taken the kind of care which reflects a judgment that will, in most cases, protect security.

But, for example, in our research center, we have gotten destroyed by hackers. Hackers have broken into all the security features we have and have destroyed our files, have knocked us out of business for weeks, because you are dealing in an area where the people who are hackers are very creative people. They are sort of like the Dr. Moriarty in the Sherlock Holmes cases, usually very brilliant people who have a certain personality, I could say, that they like to exhibit in this way, and this becomes a real problem.

Chairman TALENT. Of course, Dr. Whinston, you are on a college campus, which makes you a special target probably.

Mr. WHINSTON. I would think just the opposite. I mean, we have, many people would say, nothing of any particular value. And yet these people, in fact sometimes they break in and just say, look, we have broken in and this time we are not going to destroy your stuff but we just want to let you know that with all your sophisticated protection it is not doing you much good.

Chairman TALENT. I mean that there are a lot of students around who probably are brilliant.

Mr. WHINSTON. But students can go anywhere on the Internet, and they could be students from India or Pakistan or China who just feel like roving the network and finding holes.

Also software companies announce. We had a case where the—

Chairman TALENT. The subject of the Chinese is probably one you should not have introduced.

Mr. WHINSTON. Okay. I will withdraw the Chinese mention.

Chairman TALENT. This hearing is not getting into that, I will tell you that.

Mr. WHINSTON. We saw a posting by Hewlett-Packard that they discovered a hole in their operating system, and they announced it at say, 10:00 at night. Maybe one of our people saw it at 6:00 in the morning, but the hackers had seen it probably at 10:01 and they were roving the world, finding Hewlett-Packard sites and breaking in and doing destruction.

So by the time we tried to use the patch that Hewlett-Packard suggested it was too late. We already were wiped out.

So I think the security issue and the whole issue of cryptography is a serious challenge that companies, organizations like the AICPA, will deal with, but we should not let people think that there is anything absolute in that realm that we can rely upon.

Mrs. KELLY. Thank you very much.

That kind of segues into the question I was going to ask Mr. Hanson, which was whether or not he feels his site is secure from hackers. How comfortable are you?

I can't even see you but I know you are there, Mr. Hanson; if you would be willing to respond.

Mr. HANSON. Well, we use VeriSign and, again, I don't—I feel very confident in that. I suspect that anybody that had an inclination to break into my seafood site could probably do so. I don't know of what benefit it would be; maybe to gain access to credit cards. But I haven't—

Mrs. KELLY. That is exactly what I am driving at, that they could pick up the credit cards.

Mr. HANSON. Well, I would like to flip this around, if I could have the indulgence of the Committee for a second because we have talked a lot about protecting consumers and in a lot of macro sense protecting the country from the Internet. But one of the concerns that I have as a small business owner, and maybe it can be addressed by other people here, is that people that use credit cards to order a product from me are not really liable to pay for it because there is no physical signature, and about 10 percent of my orders are disputed by customers who feel they just don't want to pay.

When they dispute it to their credit card company, the credit card company just wipes it off and takes the money back from me. Unless I have a signature from them, from a shipping company, from exactly the person that ordered it, not their wife, not their son, not their friend, then there is nothing I can do, except take them to civil court, which I don't have the resources to do every time; especially track people and drag them into my State or drag them into my country.

This is not a problem that I just have. This is a problem that everybody has, and that is why the professor here has raised a real issue about sovereign Internet cash, which we have been talked to about from a number of different companies that are exploring that, with some out of the country on-line banks.

It is a concern of ours, and I don't know what is being done to address that.

Chairman TALENT. In your case it is not like you can resell your merchandise.

Mr. HANSON. Well, it is gone. They will eat it and then they will just call the company and say I never received it. That is tough.

Mrs. KELLY. Thank you very much. There is one other question I would like to kind of throw out to the whole panel but specifically to Mr. Miller, Mr. Whinston and Mr. Anderson, I want to know what you think, just speaking for yourselves, what you would think of a Federal law that would require parental interaction on the Internet with regard to the purchase of products?

Mr. WHINSTON. Well, I could take a shot at it. I think there is a problem of jurisdiction. The Internet is a worldwide business, and we could pass laws in the U.S. that would, say, deal with on-line gambling or pornography.

Mrs. KELLY. I am sorry. I narrowed that, Professor, to the purchase of products.

Mr. WHINSTON. Okay. So what you mean by product is a physical product that is delivered by Federal Express?

Mrs. KELLY. I mean putting some kind of parental interaction required by Federal law for a child to order, for instance, as Mr. Brady was saying, drugs, pornography, even lobsters, on the Internet.

If a 7-year-old child—I have a 5-year-old granddaughter who is pretty sophisticated. She can do things on the Internet. What if my 5-year-old granddaughter picked up my credit card and ordered lobsters from Mr. Hanson? That is exactly Mr. Brady's point.

Perhaps there is a need here for some kind of legal structure for purchases, and that is what I am asking a question about.

Mr. WHINSTON. I would agree in principle. Again, there is this jurisdiction issue, which is an unfortunate problem, that companies, as soon as they see some regulation that they don't find attractive, they move out of the jurisdiction.

So a company could be selling drugs, and I think this was the—well, not the Florida case, but the drug company could move to some place that doesn't have a strong jurisdictional concern and operate from there.

Mrs. KELLY. But, Professor, if it required a parental interaction, in other words, a code number for the parent, some way of limiting the child's ability, that would translate around the globe. That is not something that—I mean that is just simply so that we could control it here, as I see it.

Mr. WHINSTON. Well, I would agree that we ought to consider such laws, and I think that the question I am trying to look at is how do we enforce it.

So let's suppose we have a company that was opening in Florida; there is a law and they decide to move to Cuba. The person making the order has no idea where or generally doesn't know where the site is located, and they put in an order. If the ISP, the local connector, such as an AOL or PSI or MCI or AT&T is not able itself to manage that control process, which is a lot of them are not interested in or not anxious to do because it leaves them open for liability issues, it becomes hard to practically enforce the law.

So I am in favor of the things that you are trying to achieve. And certainly myself as a parent or a grandparent would be very con-

cerned, but I am trying to look at the practical aspect of how we enforce laws which because of the Internet's ability to move these servers anywhere they feel like and still do business is a practical enforcement problem.

Chairman TALENT. Is the gentlelady finished?

Mrs. KELLY. Yes, Mr. Chairman.

Chairman TALENT. Okay.

Mrs. KELLY. Thank you.

Chairman TALENT. Next I will recognize a new member of the Committee and welcome him to the Committee as well, Mr. Udall.

Mr. MARK UDALL. Thank you, Mr. Chairman. I appreciate the opportunity to serve on the Committee with you and all my colleagues.

In my district in Colorado, the Second District, which is the northern Denver suburbs and the County of Boulder and the City of Boulder, there are a lot of small businesses and there are a lot of small businesses involved in electronic commerce and high tech pursuit. So this is a great opportunity for me. So I appreciate the welcome.

I had a couple of questions, and I apologize I was late from another Committee, but I hear a lot right now in my district about tax issues, and the moratorium. I imagine some of you have been asked the question already, but I would be very interested in the opinion of a couple of you as to what we eventually do with these tax issues.

There are a lot of small businesspeople who say to me, we are going to penalize Main Street in the long run. The businesses who have a physical location on Main Street provide more than just economic activity. They provide some of the strength of the community.

Mr. Hill, Mr. Miller, Mr. Whinston, I would be curious, without nailing you down, what you think some of the long range proposals on the table are for dealing with these tax issues, particularly as regards local and regional needs for infrastructure and schools and so on.

Mr. HILL. Well, as you know, the Internet Commission is looking at this issue and the administration members are Treasury, Commerce, and the U.S. Trade Representative's Office. From an SBA or a small business point of view, our concern will be to follow their debate and to ensure that as they continue down that road that whatever they enact is fair to all small businesses.

At this point I don't have an administration position on that. They are still studying it. I don't believe the commission has met yet. I am not confident of that. Someone just handed me a note. So I think we need to wait and see, but clearly it is going to have a major impact on small businesses, and we will follow that debate very closely.

Mr. MILLER. Mr. Udall, the information technology industry's position is that for the Internet itself, it doesn't want double taxation, and that is really what the Internet Tax Freedom Act says. The more fundamental question you are raising about companies in a local area selling only to local people versus companies selling out of State or out of the region really goes back to the Quill decision

the Supreme Court reached several years ago about location and taxation.

That issue is not addressed in the Internet Tax Freedom Act one way or another, but it may be an issue that emerges in a discussion of the Internet Commission, which will start meeting next month under Governor Gilmore's leadership.

We as an industry don't have a particular position on that one way or the other. All we are saying is it should be a level playing field. What you can do in ordering on-line should be no different than what you can do ordering through the mails or ordering telephonically.

The challenge, however, I was trying to suggest in response to an earlier question from Mrs. Napolitano, is that it is possible, and this may even go beyond the scope of this commission, that as we enter the 21st century and as we get to be a more global and mobile economy, that those economic taxation models built on a local sales tax model are going to have to be rethought fundamentally.

The Quill decision aside, the Internet aside, the whole idea that the average financial transaction involves me getting out of my house, walking down the street, buying something from a merchant and coming back, is becoming so outmoded, which was really developed basically in the 19th century, or if you want to go back actually hundreds of years into the earliest days, it just has to be rethought in the 21st century. But I think that is beyond this hearing, as Chairman Talent was suggesting earlier.

Mr. MARK UDALL. I think, was it Gertrude Stein who said, there is no there there, and I think that is the dynamic that is at play here.

Where are you when you purchase something on the Internet? You could say that about Washington, too, I think.

Chairman TALENT. Thank you.

Mr. WHINSTON. I would agree with Mr. Miller, and I would also follow up on your point that it is not even clear where the transaction, which I think is your point, where the transaction is taking place. Is it at the site, the server, so-called, or is it on your client, that is, your machine, where the copy is made of the information and then you are entering it and finally saying I commit to the transaction?

We are not even clear legally where the transaction takes place. So I would agree with Mr. Miller that we have to rethink the tax system as we move towards electronic commerce. Of course, we could say let's just get rid of the catalog exemption and everybody should pay taxes wherever they buy, and that, of course, could take place but then I earlier raised the point that for a small company, the administrative costs, if they start dealing on the Internet with places in different parts of the U.S. and even overseas, keeping track of all the tax regime, the changes in the taxes and being able to properly collect it, will become a very big cost.

So to me, the directions you go in, still raises a lot of significant problems. I think we all go back to the point that maybe we have to rethink as we move towards the millennium; and with the continued growth of electronic commerce the way we look at taxes will have to be rethought.

Mr. MARK UDALL. Mr. Chairman, I know my time is up but if I could make one quick comment. I don't know how it is in other States but in Colorado our tax collection and tax allocation system is very Balkanized. There may be a silver lining in this that it provides us with an opportunity to streamline how we do that.

I hear from a lot of small businesspeople that I am very willing to make my contribution to the community but, boy, I go to Denver and it is 7.5 percent, I am in Louisville, it is 7.2, I am in Boulder, it is 6.8, this is local sales tax, for example, and it is a headache. The paperwork is an enormous burden for them, so maybe there is some silver lining in this. I thank you.

Chairman TALENT. I thank the gentleman.

Mr. Sweeney.

Mr. SWEENEY. Thank you, Mr. Chairman. Like my good friend Mr. Udall, I was at another Committee markup. I do apologize for coming late and I would ask that I may submit a statement to the record as well.

Chairman TALENT. Without objection.

[Mr. Sweeney's statement may be found in the appendix.]

Mr. SWEENEY. To the panelists, and more particularly to Mr. Hill, Mr. Miller has spoken at length about the great opportunities that e-commerce is going to present for the future, and Professor Whinston just spoke of the great challenges as well that are going to face us.

I know the Department of Commerce has estimated that more than \$70 billion in sales will be generated by 2000, and by 2002 it is around \$327 billion.

I would like to try to get a handle on our capacity for the present. How we are able to determine where we are at this point and how do we plan for the future? So I would like to ask Mr. Hill if the SBA has developed or do you have relevant data from this year to last or this year to some other marked period of time of how many new business opportunities have been created, how many more tax dollars have been generated, how many more people are paying taxes because it is directly tied to e-commerce?

Do we have any sense of the growth today?

Mr. HILL. In my testimony, I talk about a few statistics that we have pulled together. The number of small businesses using the Internet has doubled in the past 2 years, from 22 percent in 1996 to 41 percent in 1998. We estimate that electronic commerce is going to grow to more than \$300 billion annually in just a few years.

I don't have a table of statistics with me but I would be happy to provide that for you for the record, either from our Office of Advocacy or from other government sites that we have access to.

Mr. SWEENEY. In your testimony, you spoke of the SBA efforts thus far, developing a framework for understanding the ways e-commerce work, educating certain demographic groups, including small businesses. In my district, small business is a predominant employer and the predominant means of commerce and e-commerce will offer great opportunities and increasing certifications.

I have a concern about identifying what that market is and how we can more positively proactively, as a government entity, encourage that growth. Could you talk to me a little bit about how the

SBA, through the Office of Advocacy, is working to pull together that kind of information; what new jobs are being created and taxes, and how prepared are you, what do you need?

MR. HILL. Thank you for the opportunity. We are at the beginning of this process, as many people are. The presidential directive was issued last fall and we are working very closely with the Department of Commerce.

We intend to launch a campaign very similar to the one that we did on the Y2K outreach. We think it is really critical, and we have heard today over and over again that we begin that by conducting focus groups and doing research to try to clearly identify what are the issues and what are the impacts. Again, electronic commerce is more than just the buying and selling. It is really the transformation of a small business.

We think from there we need to move into the next phase, which would be an awareness phase, where we need to mount a national campaign and leverage our existing resource partners, as well as our friends in the industry.

We have been in consultation continually with ITAA and other groups that have pledged their support to us, to help get the word out about the opportunities. We have heard a lot about the external issues facing small businesses as they move into e-commerce.

There are a lot of internal issues, in our view, at the SBA, that also need to be thought through and explained.

MR. SWEENEY. On that note, I know that in the past the complaint has been, from both the SBA and the small business community, that the playing field hasn't been level in terms of accessing information on government business and contracts.

MR. HILL. Right.

MR. SWEENEY. What have you done in that respect and how are we using technology to get small businesses out? Do we have something going now? Is there something planned?

MR. HILL. Yes, sir, we do. At the SBA, we have enacted a system called PRO-NET, an Internet-based system that allows small businesses to go on and hotlink to the websites of government procurement offices as well as identify what goods and services they can sell.

The beauty of the system is that it was intended to be a tool for government contract officers to locate small businesses who could meet their specific mission needs, but it is wide open on the Internet. Small businesses can use it to find other small businesses to support them.

Large businesses can use it as well. We can look at it, and if we find that a certain agency may be lacking in their goals for small business procurement, we will go to the agency and say, have you used PRO-NET? The age-old, tired excuse that we hear over and over again, we just can't find those small businesses. Well, this is an Internet-based system. I will give you the absolute number but I believe it is over 180,000 small firms on the PRO-NET site today.

MR. SWEENEY. That is the kind of hits you had. That is great. If you could provide that information.

MR. HILL. I would be happy to.

[The information may be found in the appendix.]

Mr. SWEENEY. I would appreciate that. And either Mr. Anderson or Professor Whinston, we have talked about—it is ironic. My colleague, Mrs. Kelly, spoke of the potential problem with the use of children using credit cards to purchase goods through the Internet.

I had that experience about 5 weeks ago with my 8-year-old daughter, who purchased a very nice \$125 porcelain Princess Di statue. It looks very good in her room.

Chairman TALENT. The gentleman may have actually gotten off easily. Is that all she bought?

Mr. SWEENEY. At this point.

Chairman TALENT. It may be all she ever buys for the rest of her life.

Mr. SWEENEY. It may be.

I am interested in how we look at the issue of developing a sovereign Internet cash system and what the possible jurisdictional authorities are, and what they may be. How much work has been done and what would your recommendations be for us in the House to begin to look at that issue? Either for Mr. Anderson or Professor Whinston.

Mr. WHINSTON. So what you are saying is that we, besides the development of this sort of private industry money or private money, the government should look at developing an electronic surrogate for the U.S. dollar, \$10 and so forth?

Mr. SWEENEY. Not necessarily. But I am asking what are the options and what are the—

Mr. WHINSTON. Well, that would be an option, to have surrogate money that the banks would make available that would circulate electronically. I know the Federal Reserve has a study group, the Federal Reserve and some of the reserve banks together are studying this whole area of electronic money, whether it is private or sovereign; what are the legal issues of having private money.

Because again, Microsoft and some other well-known company, IBM, could start letting its liability circulate and not just call it money. So you could say the only legal tender in the U.S. is U.S. money, whether it is in the traditional form or the electronic surrogate, but there could be other forms which play that role.

Some people argue that frequent flier miles, which is moving more towards electronic form, is really a type of money that the airlines issue.

The concern about private money, and I just mentioned that, is that it may be over issued; that is, many people argue that frequent flier miles are over issued. It is hard to use it and so there is an incentive to—you have a good thing going. Why not just expand it?

So there are concerns about the development of private money. There is an historic precedent; 150 years ago we had private money in the U.S., and there were some failures of various types. So I think it is an area that has to be studied, but there is, I think, clearly an interest in creating—going beyond credit cards, creating money that people can use electronically; or the efficiency, the ability to buy things at very small prices, to buy ball scores, stock market quotes, and the desire of the public to have privacy.

Mr. SWEENEY. Will part of the solution exist in how we develop a tax structure and how we begin to look at the tax issues?

Mr. WHINSTON. Well, it relates to the tax issue, because to the extent that you have a cash-oriented economy, as it is recognized, it makes tax collection more challenging. So as we move towards electronic money, which is then encrypted and moves around the network, moves globally around the network, it presents a challenge for tax collection and also, of course, opens up opportunities for criminal elements to move huge sums of money around without any hope of detection.

Mr. SWEENEY. Mr. Chairman, one last question, and I am going to go back to Mr. Hill on the PRO-NET issue, I am wondering—you mentioned that you have 800,000 hits and that it is a new process that is available to both large and small businesses.

Have we asked or required that all government agencies participate in the posting of those notices?

Mr. HILL. What is posted on PRO-NET is information on individual small businesses. It is very similar to a small business registry.

We have strongly urged and suggested that the procurement officers in the Federal agencies use PRO-NET to help them attain the quality contractors and service providers they need to accomplish their mission needs. So it is not a matter of the government logging solicitations on PRO-NET. It is a registry of small businesses that are available to do work.

As a report card, we are paying attention to which agencies are using it and which are not using it.

Mr. SWEENEY. How many are and how many aren't?

Mr. HILL. I will get you the actual accurate number. I believe there are quite a few that are using it, but I will provide that information for the record.

Mr. SWEENEY. Thank you.

Ms. NAPOLITANO. I would like to have a copy of that.

Mr. HILL. Yes. We will provide it to the whole Committee.

[The information may be found in the appendix.]

Mr. SWEENEY. Thank you, Mr. Chairman.

Chairman TALENT. I thank the gentleman.

I have some questions. This has been very educational for me. Let me go on to this question of private money, because I just asked the staff, well, suppose Mr. Hanson wanted to set up his own private money, how would he do this? The answer that came back was that at least as far as we anticipate this now, he couldn't because he is not big enough.

Do you want to comment on that, Mr. Hanson?

Mr. HANSON. Yes, because I have actually talked to people about this.

Chairman TALENT. Yes, go ahead.

Mr. HANSON. We have a local bank that is moving on-line, Pepperall Trust Company. What they have suggested to us is connect their site to ours; allow people to make deposits through wire transfer from their own bank accounts and then they would settle out accounts through purchases at our site.

So, in effect, it is virtual cash or the first step towards it.

Chairman TALENT. Let me take this step-by-step because I do not get this stuff real fast so I have to take it slowly.

Mr. Miller, did you have a comment?

Mr. MILLER. That doesn't strike me as private money. That is still dealing with a federally licensed and regulated institution.

With all due respect to Professor Whinston, I think this is Esperanto.

Chairman TALENT. Esperanto, is that a kind of coffee?

Mr. MILLER. That is that language that everyone thinks is going to be the universal language that everybody is going to go to, that they have been talking about for 50 years. No one in the world speaks Esperanto, except the three people in the Esperanto Society. I mean, I think—

Chairman TALENT. Professor Whinston, Mr. Miller has been provocative with regard to several of your positions, and you are a professor and so, please—tell us why this is not Esperanto or why if it is Esperanto it is still okay.

Mr. WHINSTON. Well, I think Mr. Miller has a good point. Today we don't see electronic money. I am trying to look a bit into the future and ask the question, from a private sector point of view, is there money to be made; is there a demand for electronic money versus a credit card?

I think there is a demand. From the point of view of privacy, that is people are not that happy to use a credit card if they want to have privacy. The credit card provides others information. The credit card number provides an identity to where the transaction is going on. People like to not let everybody potentially know what they are doing. So there is a privacy issue, and then there will be an issue of selling things that are in small—the small priced items, ball scores, stock market quotes.

So I see where companies, as we move towards electronic commerce as a more pervasive form of business, will look towards trying to make money by creating electronic money. I mean, it is analogous to the Traveler's Checks that companies have found very profitable over the years.

So it will happen, and we shouldn't wait until it is suddenly there and then try to scramble to figure out what we are going to do, but to anticipate that that will happen.

The Federal Reserve, as I indicated, does have a study committee and Chairman Greenspan has made public statements about his view, or the Federal Reserve's view, on the development of private money and has indicated that as a free market advocate he sees that as a possible development to take place.

The seigniorage which the Treasury earns by being in the money business may be something that will be whittled down over the years. So I think it is something that we have to anticipate.

Chairman TALENT. Well, let me do what lawyers call a little laying of foundation here so I understand what it is we are talking about. We are not talking about a line of credit. That is a familiar concept. If I was a regular customer with you, Mr. Hanson, I might decide I am going to send you a certain amount of money to put in an account and I will draw on that when I purchase from you. This is beneficial to you because you would have a secured form of payment. That is something that we can all grasp.

That is not what we are talking about, right; just a line of credit?

Mr. WHINSTON. No.

Chairman TALENT. We are talking about a situation, if I understand it right, where a big company like Microsoft would say to you, that there must be a point at which you use the public money to buy the private money.

Mr. WHINSTON. That is correct.

Chairman TALENT. And probably they would require you to buy large amounts, although maybe it would get sophisticated so it wouldn't.

Mr. WHINSTON. Well, no.

Chairman TALENT. You would buy half million dollars maybe of Microsoft dollars, except that they would give you more in Microsoft dollars than the public dollars that you are offering. So for \$500,000 in United States dollars, you would get \$600,000 in Microsoft dollars; is there some premium that is necessarily involved in this?

Mr. WHINSTON. I wouldn't think so, especially when you refer to Microsoft. I think it could be on par; maybe a little better. Again, we are thinking of international money and if you recognize that many sovereign currencies outside the U.S. are not all that stable, you would find an instant demand. For example, in Russia, people would probably prefer to buy what you could call "Bills" or "Gates" or whatever you want to call it, rather than dealing with the ruble, and that would be an accepted—

Chairman TALENT. But why would an American consumer who is just getting an even exchange ever do that, as opposed to just establishing a line of credit of some kind through a bank or something with Microsoft? What would be the advantage to you as an American of trying to trade in Microsoft currency, unless you are getting some premium in it?

Mr. WHINSTON. Well, again, I think the currency can be configured. For example, Microsoft may sell you currency and they could sell you \$10 worth and you could use it to buy products that Microsoft had arranged to give you at a discount. They could work all sorts of clever—

Chairman TALENT. Premium I can understand, and then if they gave you some premium is the concern that they might oversell it so that if a whole bunch of people decided to spend a whole lot of the Microsoft dollars all at once there might not be enough Microsoft inventory?

That would be a nice problem for Microsoft, wouldn't it?

Mr. WHINSTON. Right. Well, Microsoft would be a hard example to look at because they are such a well-financed company. It is hard to conceive of them running into problems.

But various businesses, banks could start selling and there is then a question which the Federal Reserve is looking at, should there be reserve requirements for selling electronic money?

Should you somehow have backing in let's say, for every \$5 of electronic money you have out there, you have some Treasury bills for a dollar sitting in the bank to understand when is the money going to be redeemed?

In some cases, people may be using it for years; it is just circulating in the system.

Chairman TALENT. See, what I don't understand insofar as this relates to e-commerce, and I know Mr. Forbes wants to ask a ques-

tion, and I am going to yield to him so he can do it, is the only reason you do this in e-commerce that you all have identified is security concerns. One way to avoid a security concern is just set up some kind of an account, a wire account of some kind, so that you don't have to put some generalized credit card in; you just draw against the account. I have not understood from what anybody has said here today what the advantage is of doing that in a private monetary system as opposed to a public system.

You can always just set up a line of credit, if that is what you want. Why do you have to buy Microsoft or IBM dollars or Anheuser-Bush dollars to get a credit? They are headquartered in St. Louis, Missouri, by the way. So you are a regular purchaser of Bud Light and you decide to do that over the Internet, so why would you want AB dollars as opposed to American dollars from a security standpoint?

Mr. MILLER. What you are talking about, Mr. Chairman, already does exist. There are companies such as Cybercash where you give them a certain amount of good old greenback dollars or you use a credit card or write them a check, but anyhow plain old U.S. Treasury-backed dollars, and then you have electronic money, which to deal with the issue that Professor Whinston was talking about, where I want to buy something that only costs a dollar or something only costs a quarter over the Internet and the credit card charge makes it feasible for me and the credit card company and the merchant to allow me to pay a dollar for something using my credit card. Just as when you go into a normal retail establishment, they are not going to take a credit card in most cases for \$10. So the whole idea behind Cybercash, which by the way has not taken off. It is a local company based here in Reston; you can go visit with them, if you want, to see more about their product. But the idea was that when you wanted to do real small transactions and they wouldn't accept a credit card, or for the reason Professor Whinston was suggesting because the credit card, there is an easy trail with the credit card, whereas theoretically with the cash, cybercash is—

Chairman TALENT. Although a hacker could crack into your cybercash account, too, and deplete it.

Mr. MILLER. It is not only the hacker. It is a privacy issue, that some people say I want to buy Mr. Hanson's lobster but I don't want to use my Visa card because I am a real private person and I want them to be able to trace that back to me through the Visa card or the MasterCard or the American Express card, but if I use this cybercash that I have bought through the Cybercash Company with money, that it is harder to trace. It is very easy to trace something through Visa or MasterCard because the law enforcement officials or the privacy people who are trying to intrude into my privacy, they just go to MasterCard or Visa and get that; whereas, if they go to Cybercash they can find out I got \$300 worth of cybercash.

Chairman TALENT. A money order, in other words?

Mr. MILLER. Right, exactly. But they can't show that I spent it at Mr. Hanson's location as opposed to Amazon.com as opposed to some other website. So I think that is the privacy issue, if I understand correctly, that Professor Whinston is talking about.

Chairman TALENT. Okay.

Mr. Forbes, did you have something you wanted to ask?

Mr. FORBES. Thank you, Mr. Chairman. On this whole issue, and I certainly can see in small denominations why there may be a need for something like Cybercash but I would suggest that you know, international commerce and the frequency of international commerce in today's world, even absent e-commerce, you know, we are exchanging currencies all the time and I am a little bit concerned that it might be distracting ourselves from the real issue, which is providing for the privacy and the security of using credit cards.

I know that I was reminded that the Banking Committee certainly has had extensive hearings on this issue, and the Treasury Department particularly has expressed a concern for its ability to track fraud and abuse, particularly if we are going to create a whole another, if you will, unregulated, outside the Federal money supply, source of funds.

So I hear where you are coming from, Professor, but I guess I do have some trepidation.

Mr. Miller, if you wouldn't mind, I hear you on Cybercash, which I think from a functional point of view low denominations might be valuable, but I was sensing, and correct me if I am wrong, that you had some concerns about this sovereign money issue as well.

Mr. MILLER. I just don't think it is an issue, with all due respect to Professor Whinston. I understand the Federal reserve is studying it. They need to study something to keep them busy over there, with the economy going so well.

We have something called international money. It is called a credit card. Yes, there is going to be competition with the credit card companies because people are going to try to get their fees down and as Professor Whinston said correctly, there is money to be made from being part of this transaction process, but at the end of the day we have come up with this transaction system. It is called a credit card.

When I go to France physically, or order something from France over the Internet, I don't have to worry about transacting that—or doing the transaction. I don't have to worry about converting it from francs to dollars. The credit card company does all that. They charge a fee. They charge a fee to me. They charge a fee to the merchant who sold it to me. That is how the process is working.

Maybe Professor Whinston is right, that there is going to be this sudden growth to this, or long-term growth to this, but I would be willing to bet one of Mr. Hanson's very nice lobster dinners with Professor Whinston that it is not going to be any time in our lifetimes.

Mr. FORBES. Thank you very much.

Chairman TALENT. I understand you have some more, and we will go back there in a minute.

Let me finish, if I can. Mr. Hanson, what you are saying your local bank is going to be willing to do is basically act as an intermediary and for some kind of premium guarantee the payments to you, is that it?

Mr. HANSON. That is right, but they are also looking at creating this relationship with hundreds of other websites, too. They are looking to acquire deposits at their bank.

Chairman TALENT. Yes. I can understand why it would be a useful service for small merchants.

Let me address the relative advantages or disadvantages to small merchants. I don't know that I have really heard anything that wouldn't be equally applicable to business life outside of e-commerce. Yes, it is harder for a small merchant to break this way into the consciousness of the consumer because he doesn't have the advertising dollars. Well, that exists outside of e-commerce. Although there may be different ways—for example, those services that will aggregate and direct customers to small businesses, that is kind of similar in the e-commerce or the digital world, isn't it, to the mall?

In other words, you have an anchor store at a mall and then that allows people like smaller businesses to get traffic that way? Is that channeling thing similar in the digital world to a small kind of concept?

Mr. MILLER. It is, and it isn't. One difference in the digital world, Mr. Chairman, from the real world is one of the reasons that malls have beaten up Main Street. When you talk about another challenge to small businesses on Main Street it is the mall, is because of the physical factor. You go in your car, you go to one location, and there are no costs to you because once you have driven there you don't have to get in your car and drive to another place to find the supporting goods store or drive to another place get to the candy store, et cetera. The cyber world is frictionless. I mean, you can go anywhere. One of the reasons the cybermalls, per se, have failed, and MCI and other companies tried to set up cybermalls, is because the anchor itself didn't work.

So instead, what is happening, as Professor Whinston suggested, is these portals are all trying to figure out what the secret is. AOL, in that context, is a portal. Any ISP can be a portal. They are all trying to figure out partnerships, and it is mutually beneficial because what draws you to Excite or Yahoo or AOL or Microsoft network, whatever those first ones are, is not just the content they have got on their own page but it is their ability to, in turn, reference you to, if you are looking for a lobster dinner to Mr. Hanson or from one of his competitors, or if you are looking for a new car, a good car site.

So I guess I share Mr. Hanson's concern that those who arrive late may be potentially at a disadvantage, but I don't think the marketplace is so fixed yet, and I don't think it is going to be fixed in the next, I would guess 5 years, maybe that is too long a time horizon, that it really is that exclusionary.

Let me draw a different analogy, which is the Yellow Pages. The Yellow Pages is sort of everybody but it is always just located in the geographical area, Washington, D.C., Northern Virginia, St. Louis, whatever it may be. The question is, how do you differentiate yourself in there? And the Yellow Pages has kind of figured it out by title. You are a baker or a candle stick maker or you are mother goods, whatever your particular store is.

The way we do that on the net is through the search engines. So the trick is to find those—get placed—I think Mr. Hanson is exactly right. If you can't get placed in a search engine, and again there are dozens of them out there right now, you are clearly going to be in trouble.

On the other hand, if you can get a decent place on a search engine and if you create the idea that you can buy fresh food, then Mr. Hanson's opportunities, or anybody who gets into this market, are much better than they would ever be in a normal business environment.

Chairman TALENT. Sure. It works in the other direction, too. The same disadvantages you may have as a small business outside of e-commerce exist in e-commerce, but the same advantages you have as well, flexibility, all the things I think that are moving the economy generally in the direction of smaller organizations because you are able to meet consumer demand more flexibility will exist. Then you are going to have, I would think, some advantages in terms of economies of scale as well because you can link up so much more easily.

For example, big businesses have huge distribution chains. You don't need that anymore, because you connect up directly. At least in some industries I would think that would be the case.

Now, is there a danger of these search engines, the number of them being small enough that they wouldn't be competitive and they would acquire too much leverage over the small businesses so there is one search engine, let's say, you have to be in, and they go to Mr. Hanson who doesn't have enough leverage because he is not big enough and say, now, you are going to have to pay this enormous premium? It seems to me what protects small businesses is if there are enough of them out there to hold the price down of access. Do you see a possible problem in that area?

Mr. MILLER. Clearly there is a potential problem, but let me give you a little more data on point. I visited Network Solutions on Monday out here in Herndon, which is where all the domain names for dot com and dot org and dot net are. You know how many new domain names they register each day? This is a new website. 30,000 a day; 30,000 a day go into the database.

I think with that many new Web pages out there, there is always going to be a chance for a new search engine or a new portal to come along. I mean, that is what is so exciting about this industry.

Let me go back to your distribution point. I met with a company three weeks ago. The CEO is 22 years old. This is his third company. He is distributing music over the net. He is taking on the largest music companies in the world because he believes that the new digital generation that Mr. Hill talked about doesn't want to be constrained to have to go to the record store and buy a physical record.

There is a big debate. Some people in the recording industry are very concerned about that, the same way that the video industry was very concerned when VCRs first came on-line.

Chairman TALENT. Yes. We are going to have a hearing, I hope, on this subject, Mr. Miller, with personalities that should be very attractive for the Committee.

Mr. MILLER. I am sure it will be.

Chairman TALENT. I feel like I am sort of announcing the exciting scene from next week's show.

Mr. MILLER. I will look forward to hearing it. But since I met with them and they became a member of my association three weeks ago, two of the largest music companies in the world which had said previously they were not going to sell music over the Web because of the concerns about copyright violations, et cetera, have turned 180 degrees.

I am not saying it is inevitable but it sure smells pretty close to inevitable. That, number one, I think the small companies are going to succeed and, number two, they have changed the whole marketplace almost overnight.

Chairman TALENT. With regard to music, Mr. Miller, then the question that begins arising and is arising in the minds of a number of artists, and we are going to explore this, is why do we need the companies?

Mr. MILLER. That is one of their selling points.

Chairman TALENT. And the companies, if we have this hearing, will have an opportunity to explain why the artists need the companies. But why not just go directly on-line? There are a lot of issues there.

Let's get to the tax issue, which is certainly one that the government is going to have to be involved in because it is our function to regulate interstate commerce and to resolve these kinds of issues.

Mr. Miller, with the greatest respect to you, and I see the point you are making about the overall benefits of this being so great as necessarily to outweigh the detriments to local governments, but Mrs. Napolitano was right. I was in the state legislature. I represent a number of municipalities now. This is their tax base that is at issue here. They are the ones providing the trash pickup and filling the potholes and doing the day-to-day things that are so absolutely vital, and we will hear from our constituents if those start going down because we are losing money from e-commerce sales.

So you said something that was interesting to me. You said all the e-commerce community wants is equality. You want to be treated the way the catalog companies are. In other words, you are willing to pay a use tax, for example, on a transaction like that. I mean, is that correct? Elaborate on that a little bit.

Mr. MILLER. What we mean by that, Mr. Chairman, is let's say that there were no Quill decision. Let's assume the Supreme Court had ruled differently, which means that if you ordered something by mail or telephone from L.L. Bean you had to automatically pay the Maine sales tax, or if I live in Virginia I automatically had to pay the sales tax.

Chairman TALENT. Did the Quill decision say that States can't tax catalog sales?

Mr. MILLER. It basically said, as I understand it, and I am not a legal expert but I think I have it fundamentally right, if a merchant doesn't have a physical location, does not have a site in the State where the customer purchases the product—

Chairman TALENT. In the State?

Mr. MILLER. In the State—that basically the customer has to pay on his or her own the sales tax. In other words, what I am sup-

posed to be technically, and I guess I shouldn't confess this. I may be confessing I am violating some tax law. If I order something from L.L. Bean and if L.L. Bean doesn't have a physical location in Virginia when I order this product, then I don't have to pay the sales tax. I am supposed to turn around at the end of the year, when I pay my Virginia State tax, and voluntarily say, well, I bought this many products outside the state.

Chairman TALENT. Sure. We all know what that means.

Mr. MILLER. Exactly. Which means that it doesn't get paid. So that is what the Quill issue said. It is a basic issue of what is called nexus.

Chairman TALENT. In fairness, though, Mr. Miller, the Quill decision, was it a constitutional decision?

Mr. MILLER. Yes.

Chairman TALENT. Okay.

So it wasn't based on a silent commerce clause type of thing? It is not something we can do anything about?

Mr. MILLER. You are beyond my pay grade in that area. I think you need some constitutional scholars to look at that. I am sure there is some disagreement.

Chairman TALENT. You serve so well as an expert in so many different areas already, Mr. Miller.

Mr. MILLER. Thank you, Mr. Chairman.

But I think that that kind—so I am saying—

Chairman TALENT. Let's forget about that for just a minute.

Mr. MILLER. So if you said that ordering something on-line were the same rules and regulations, that is fine. What we objected to is what was happening in many States, Mr. Chairman, where some State regulators, and in some cases some State legislators were saying that an ISP, an Internet Service Provider, whether you are talking about a large one, a portal like AOL, or whether you are talking about many of these local ones, not only would they have to pay their telecommunications taxes that they are normally paying because they are using telephone lines, in addition they would have to pay an additional telephone tax.

That is really what this debate was all about. It wasn't about whether you pay sales tax. That was already—what we would contend is that was already decided, for better or worse in terms of the outcome of the local governments, many years ago in the Quill decision. I think what happened when the bill went through Congress is some of the governors were coming to Congress and saying, overturn the Quill decision and then we won't object to what—and some of the mayors and other localities said, we don't care about this Internet Tax Freedom Act.

All we are saying is that is a different issue. If Congress wants to tackle, if they can legally, I am not sure they can, the Quill decision, fine, and say that L.L. Bean products whether they are sold telephonically, through the mail or on-line all require the consumer to pay a local tax, that is fine.

Chairman TALENT. The Quill decision couldn't have been a constitutional decision. It is not like a service of process or something. It had to deal with a commerce clause issue, because if Congress wished to, provided that you are dealing with a company that does

business in the United States, which the professor has mentioned that some of these are international, Congress could authorize this.

Mr. MILLER. Let me get back to you on that. I don't want to be definitive on that.

Chairman TALENT. I am not an expert on this either.

Mr. MILLER. But that is the defining decision about on-line catalog buying, and that is the same issue that applies here on the Internet. So again, do we disagree?

Chairman TALENT. Then we have the question of where is it sold. You would almost have to do it where the product or service is delivered, wouldn't you? Because the server is in one place and the business is in another. Mr. Hanson could use servers in places other than where he is at. So you would almost have to do it in the jurisdiction where it was delivered, right?

Mr. MILLER. That is right.

Chairman TALENT. Heck, you could order it on a laptop in an airplane. Not even delivery. You probably have to do it where the person ordering the service was domiciled, I would imagine.

Mr. MILLER. That is the challenge that they were trying to face, because obviously we have been talking mostly about sweaters and lobsters.

Chairman TALENT. Right.

Mr. MILLER. But, as you know, a lot of this is going to be digital. They are going to download a piece of software which is never going to be physically in a physical form, or you may be getting some technical advice. Let's say you get some advice from your accountant online, and then the accountant bills you for that. I mean, all kinds of questions about that. So even though it is relatively easy when you are talking about a Federal Express truck or a UPS truck dropping something off, Mr. Sweeney's doll that his daughter ordered, it gets much more complicated when you are talking about servers being in different locations, as Professor Whinston said, or services as opposed to hard goods.

Chairman TALENT. Professor, I understand that figuring out what tax you are to charge is difficult, and that is difficult in catalog sales today. But why couldn't we take advantage of the Internet to solve this problem? In other words, if Congress said to the States and the localities, if you want to charge your tax here is this certified kind of program about taxing schedules around the country. All right? You better make sure that you have entered your tax on this schedule so that when the business person has to figure out what they are going to pay in tax, they click on and they can do this very easily. If you are not on here, they are not liable. What is on there, by the way, better reflect what you are really taxing, because there will be penalties if you try and kick the tax up by saying it was bigger than it was. There are municipalities that might do that.

Couldn't we solve this through some kind of Internet?

Mr. WHINSTON. Yes, I think except for this jurisdictional issue where somebody just moves the server outside of the U.S. and then it is up to the Customs people to deal with it, but I agree with you and I think that is actually an interesting opportunity for a small business to go in to that whole area of saying to lots of companies, I am going to focus on the tax issue. So every time you have a cus-

tomers, when you need to compute the tax you jump to my server and I will provide that information and sell it to you on a per transaction basis or have a fee, a monthly or yearly fee. It would be specialized business where somebody would just focus on the whole question of taxation and keeping track of when things change and updating it and certifying it.

I think that could work, except of course for any jurisdictional problem.

Chairman TALENT. What we might have to do, though, is if this is going to be a legal consequence, if the business is going to be able to have as an absolute shield against further liability, and be able to say, look, we accessed and charged what was on this schedule, it probably would have to be some kind of standardized program, possibly federally supervised. You could outsource the work in doing this, but you would have to have some kind of government imprimatur to it to make that work. I think we could solve that problem.

I have just been informed by staff that he is leaving me to set up that business, so thank you very much, Professor Whinston.

Mr. MILLER. Mr. Chairman, could I suggest one other part of that, too?

Chairman TALENT. Sure.

Mr. MILLER. Which is, you could also do something close to what the AICPA is doing, again built this into the transaction, in terms of the quality of the merchant. I mean, in addition to the separate seal process, which the AICPA has set up through their CPA trust, you could, for example, have automatically built into the transaction a D&B. You know, a lot of times when you are doing business with a merchant for the first time, you do a Dunn & Bradstreet, or you go to some other independent rating organization and you get a rating back to make sure they are legitimate and pay their bills on time, et cetera, et cetera.

That can also be done, built into the electronic transaction. I know Dunn & Bradstreet is thinking about it, and other companies are thinking about it. So a lot of these things are very difficult for small businesses if they had to be done in a physical world, because they would require a lot of additional staff resources, done electronically for a relatively minimal fee could be built right into the transaction.

So if a small business person is ordering from a new supplier for the first time and says, I am concerned, is this a legitimate supplier, I want an independent verification of that, that could literally be built into the transaction, where the small business person would pay some kind of automatic fee when getting that information and it would come flashing up red, saying don't order from this merchant; they have got a bad credit rating or they got a bad record of delivery.

So that could even go beyond the general kind of rating system that the CPA WebTrust has built up, which I think is excellent, to much more specific if the merchants wanted to pay for it.

Mr. ANDERSON. Mr. Chairman, actually we are working on the business-to-business end of that to do that exact piece. CPA WebTrust right now is business-to-consumer, but we are well aware of the business-to-business piece of the equation to

legitimatize those types of transactions so you know who you are dealing with and that you can be assured that you are entering into a secure transaction and that you are going to get and get paid for what you are buying.

Chairman TALENT. Focused on residence or domicile, you have to figure that out, too, because people, at least outside of the movie the Matrix, don't exist in cyberspace. They live some place.

Mr. FORBES. Most of them.

Chairman TALENT. I mean, they occupy space. This is matter we are talking about here. So you could tie it into that. It is not completely clean. But you know then, if you did that, forget about your privacy being protected by having some kind of separate money because every transaction that is taxed has to go to where you live, with everything else that you could access through that.

I don't want to think out loud when you all have important things to do.

I think I am basically done, but Mr. Forbes has some more questions and I would recognize him.

Mr. FORBES. I will be very quick, Mr. Chairman, because our panel has been very patient.

I do appreciate your presence here today. I have found this to be perhaps one of the most productive and informative hearings that I have been to in a long time. First of all, let me thank the AICPA and the ITAA, both of you, for the leadership that your trade associations, frankly, are bringing to this question. I mean that sincerely, because I am a great, great believer in what is taking place in the world of e-commerce.

I have two quick questions. The first one to Mr. Hill, if you would, sir. My sister-in-law owns a novelty business,, a very small business in Patchogue, Long Island, and she determines that it is to her advantage and the growth of her business to get into e-commerce. So she picks up the phone and calls the Office of Technology at the Small Business Administration and says, how do I do it? What do you folks do with that question?

Mr. HILL. At the SBA, we are developing our campaign now but currently what we would say is, as Mr. Hanson has said, we would start out by congratulating her. She is seeing the future. This is an important thing. We would reaffirm to her that this is something that she should be doing.

I think Mr. Hanson's testimony earlier was right on the mark. We had a long discussion about search engines and portals, but if you are a small business like your sister-in-law, the very first thing you have to do is get your own website. It has to be a good one, because you can have 12 search engines listing your commodities, goods or services, but if it is not done with a certain degree of expertise then you won't ever show up on a search, no matter how many times people look.

Mr. FORBES. Mr. Hill, does the SBA have the ability right now to tell her how to do that? It is a really easy yes or no.

Mr. HILL. The answer is no, but we are developing it and we intend to do that.

Mr. FORBES. I appreciate that. I have to say, as somebody who has great affection for the Small Business Administration, I think you folks have missed the boat completely. I don't think it took a

presidential directive to understand that this is the most aggressive, fastest growing area for small businesses and the Small Business Administration is really absent on this whole question.

I mean that in the most respect to you, Mr. Hill, but I think you need to go back to the agency and you need to sit down with those folks and you need to kind of sit down and figure out how this agency, which is charged with helping small businesses, can do a better job of helping educate and inform the small businesses across this country who want to get into this business, and I would hope that your involvement in the hearing today would suggest to you as well that this is a great void at the SBA.

SBA is doing some great things in cutting edge assistance to women-owned businesses and minority-owned businesses but I think that we have literally missed the boat on this thing, and it is not like we didn't see it coming. So I would just encourage you, Mr. Hill, to go back and send a wake-up call. It takes more than just a presidential edict to suggest that we need to do something in this area, and I thank you for being here today.

My final question, if I might, for either Mr. Miller or also Mr. Hanson, one of the areas that is of, I think, great confusion to those who are engaging in commerce on the Internet is the whole idea of advertising and the preponderance of spam and just what that is doing to run interference on qualified businesses, wonderful opportunities like Mr. Hanson's, people who don't have the opportunity to be on Good Morning, America or some national media outlet, how do they get their word out in the wake of what I think is one of probably the growing problems on how you get legitimate advertising on the Web versus, you know, all of this stuff that is being bombarded to people when they go on-line and they have got 435 unsolicited messages?

Mr. MILLER. Well, I think Chairman Talent hit it on the head a few minutes ago. In a sense, the challenge is no different in the cyber world in terms of advertising than it is in the analogue world, which is how do you differentiate yourself from everybody else.

It goes back to the point that Mr. Hanson made. Number one, it is the quality of your website. Number two, it is hooking up with the right search engines and making sure you are listed on all the right search engines.

Number three, it is looking for partnership opportunities. I can't speak specifically to Mr. Hanson's situation, but I can talk about a small golf shop that I know of that teamed up with a travel agency that promoted trips, on the theory that if they cross marketed across those websites, the travel agency sent a lot of people on golf trips and then they put a click on their website to this golf shop on the assumption that people would perhaps need some golfing equipment.

In fact, the theory behind some models, like the Pea Pod model, although the Pea Pod is primarily just in food, is you do exactly that; you would come to the website and there would be what is called an intelligent agent, and it would say, Mr. Miller, it is nice you signed up to go to Pinehurst. By the way, I know a golf shop that is having a special on clubs. Wouldn't you like to go there?

So you click over to that one and then you go to that site and they say, well, we know a place that has the newest books about golf. Wouldn't you like to do that?

This isn't all fantasy. This can be done today. The industry is trying to figure out exactly how that works because, as Mr. Hanson said correctly before, the early metrics were how many visitors do you have? But now people are talking about things like sticky websites, not just people coming to your website but actually staying, and then the ability to actually sell out the website and refer.

I don't have an answer yet, because we are still finding our way through it. So there is no simple answer, whether you are talking to General Motors or whether you are talking to a small business. We are all trying to figure out what it is that is going to separate the wheat from the chaff. When we figure that out, obviously you are going to have some separation of the successful business from the unsuccessful.

The early theory, Mr. Forbes, was just get out there early, just get out there early. But then the question—

Mr. FORBES. Which worked when there were not so many people doing it, right?

Mr. MILLER. Exactly. And Amazon.com, clearly their market cap today is a reflection of a belief among a lot of investors that that works. But with Barnes & Noble out there, too, and a lot of others, how long will that hold? I don't know the answer. The answer is the marketplace will determine that, and we just don't know yet.

Mr. FORBES. Thank you.

Mr. Hanson, could you quickly just comment on the difficulties or not, and maybe it is a little tougher for you since you have had a little notoriety, about advertising and getting the word out about your seafood business?

Mr. HANSON. Sure. Well, actually, I mean, I received attention from Time Magazine because I came up number one on the search engines, which is—

Mr. FORBES. That helps, too.

Mr. HANSON. Yes, absolutely. That is not easy to do. We have several different types of strategies. One is we link up with other websites that there is a synergy between the two. Number two, we own eleven different Web addresses so we come up under seafood now, but actually also come up under lobster on-line. We just basically buy up as many domain names as possible because there is a huge secondary market now in domain names, and that also allows us to come in and index higher on the search engine.

And then third, that the company that I work with, Global Store, has eight people, and I feel bad for them. All they do is sit around all day and do what is called "medicoding" and they go through and they retype in these key search words into all of these different indexes. It is very labor intensive. Some days we come in in the top 20. The next day I might come in all positions, 1 through 10, on a search engine. But it is something they have to do every single day. These are people that earn \$40,000 a year each because they are programmers and there are four of them working on it. I couldn't afford to do that myself or even hire these people, but Global Store was able to do that because they have the resources.

Mr. FORBES. Thank you very much.

Thank you, gentlemen, for being here. And thank you, Mr. Chairman.

Mr. MILLER. Mr. Chairman, just one more response to Mr. Forbes. Every IT company that is in the e-commerce world, which is virtually all of them, are doing as much as possible now to reach out to small business. To some extent the big business world, it is not saturated; they are constantly updating and learning new things, but if you look at IBM, Microsoft, Oracle, AOL, NetScape, you talk about any of them, in terms of what they are doing right now, they are doing everything possible to reach out to the small businesses because they see, as Mr. Hill pointed out earlier, while it is impressive that 41 percent of small businesses now have a website, that is 10 million businesses, something like that. If you assume there are 23 million, that still means there are 12 or 13 million that don't have a website.

So in terms of where you go to try to sell your product and service, the opportunities to sell a service to Ford, Ford already has websites and Web designers, et cetera. The opportunity to sell to the other 20 lobster people in Maine, or 40 or 50, is really where you are going to want to go.

Chairman TALENT. Mr. Thune wanted to ask a question or two or just to make a comment.

Mr. THUNE. Well, Mr. Chairman, I think probably every question that could be asked has been asked. I appreciate very much, though, your holding this hearing. I think this is an incredibly important subject and one with which we are going to have to grapple in the days ahead. I appreciate the fact that you have allowed our Committee to begin examination of what I think is a very important issue.

Some of you have probably seen, and maybe you made reference to it already, last week's Wall Street Journal story about stock transactions that are now conducted electronically and how we are going to at some point probably end up with a 24-hour market because there are so many companies out there that are making that service available.

It just points again to the dramatic changes that this is making in the way that we do business. I think for my state of South Dakota it presents enormous opportunities. We have traditionally been isolated by distance, and I think it is just incredible, in terms of if we are willing to make the investment that is necessary to have everybody wired and ready to go.

So on the other side of it, I think it also presents some enormous challenges. The South Dakota Retailer Association was in my office yesterday to talk about the question of equity and how we figure the tax burden in terms of Main Street business versus Internet and catalog businesses in a lot of the States. Our State is a sales tax State, and the competitive disadvantage that they are under relative to those that are doing business either through catalog sales or the Internet, and that has been an issue that has been visited here before, and I am sure will be again, but I think this is going to amplify in a bigger way this issue and how we address State and local government's needs to collect revenue, and address the equity argument as well with our retailers on Main Street.

So it is going to be a big subject, and I think as this thing continues to grow and the opportunities are out there, I hope that we, in particularly rural America, can take advantage of those, but I think at the same time we are going to have to figure out how best we accommodate that growth in a way that protects and respects the rights of States and local governments to collect revenues, as well as respects the rights of Main Street businesses.

So thank you for holding the hearing, and I look forward to further discussions on this subject.

Chairman TALENT. I thank the gentleman for his comments and I think they are probably as good a summation on the hearing as I could make. So I will thank the witnesses for your indulgence and adjourn the hearing.

[Whereupon, at 1:00 p.m., the Committee was adjourned.]

APPENDIX⁵⁷

SMALL BUSINESS COMMITTEE

Hearing on "Electronic Commerce: The Benefits and Pitfalls of Conducting Business Over the Internet"
May 26, 1999

CHAIRMAN JIM TALENT – STATEMENT

Electronic commerce, commonly referred to as e-commerce, has the potential to alter the way we conduct many of our business and personal transactions. E-commerce is simply the ability to conduct business digitally over the Internet. Some of the most familiar forms of e-commerce are business-to-consumer transactions where a company sells its product to a customer over the Internet in a way that is similar to traditional mail order catalogs. Some popular examples of this type of e-commerce are Barnes and Nobles.com, Amazon.com, and CDNow.com.

While consumer purchasing is the most popular notion of e-commerce, business-to-business sales actually comprise the majority of e-commerce transactions. This is important in light of the fact that many small businesses have not yet embraced the notion of e-commerce. According to eMarketer, less than 2 percent of the 7 million US small businesses with less than 100 employees conduct on-line transactions. Of the 340,000 US business web sites, 145,000 sell products and services on-line. Most of those businesses, though, are big companies, with 40 percent of the companies with 1,000 or more employees conducting on-line transactions. These numbers are of concern to this Committee because they mean

that small businesses face the potential of losing market share to companies that are staying ahead of this new technological wave. Indeed, a recent study by Merrill Lynch states that only companies that attain market size and share on-line will survive. The Merrill Lynch study points to the growth of Internet banking, brokerages, and publishers as a direct threat to their brick-and mortar counterparts. The study concluded that, "The Internet tends to cannibalize retail sales away from store-based retailers."

E-commerce is attractive to many businesses because it has the ability to make them more efficient. Additionally, many consumers find that computer-based purchasing is much easier and quicker than fighting traffic and crowds at their local shopping mall. A web site has the ability to turn a local mom-and-pop operation into a nationwide or global operation, because the Internet can reach consumers at the far corners of the earth. Another important benefit of e-commerce is its ability to enable employees to handle other tasks besides taking orders over the telephone. Additionally, e-commerce has the potential to eliminate points in the supply chain and enable manufacturers to offer products directly to the consumer, without the aid and expense of traditional distribution and retail chains. Finally, the Internet is an easy place for a business to obtain its customers' demographics and preferences through simple point and click inquiries of those who visit its web site.

Although e-commerce has the potential to be a powerful force and change the way companies conduct business, there are some concerns. Many people are fearful of transmitting their credit card numbers and home address over the Internet because of the pervasive threat of hackers who can bypass supposedly secure networks and later commit fraudulent transactions. There are also many complaints about the poor return and exchange services offered by online retailers when their customers are not satisfied with their purchases. The theft of intellectual property over the Internet has also become a pervasive problem. The music industry, to use one high-profile example, has had problems maintaining control of its product due to illegal free downloads that are available on thousands of electronic bulletin boards.

This is the first time that this Committee is tackling the issue of e-commerce and I am sure we will have an interesting discussion about its positive aspects and its drawbacks. We will hear testimony from Daniel Hill, the Assistant Administrator for Technology of the Small Business Administration; Harris Miller, who is President of the Information Technology Association of America; Professor Andrew Whinston, the Director of the Center for Research in Electronic Commerce at the University of Texas at Austin; Alan Anderson, the Senior Vice-President of the American Institute of Certified Public Accountants; and Brian Hanson, the Founder of Hanson Bros. Fresh Seafood in Portland, Maine.

The Internet is an exciting and still developing medium for companies to conduct business. I am looking forward to the testimony of our witnesses and I would like to recognize our distinguished ranking member, Ms. Velazquez, for any opening statement that she'd like to make.

Congresswoman Nydia M. Velazquez
Statement on E-Commerce
May 26, 1999

Thank you, Mr. Chairman, for holding today's hearing on E-commerce. This is a very important topic for our nation's small businesses, and I look forward to hearing the witness' testimony.

The Internet revolution is rapidly transforming the way the nation communicates, receives information and, perhaps most importantly, the way it does business. In 1997, Internet commerce accounted for \$1.3 billion in retail sales in the U.S. And though this represents only a small fraction of the total, the number is expected to increase to \$25 billion by the year 2000.

Furthermore, because the Internet allows small businesses to expand more rapidly, it is now possible for entrepreneurs to reach new customers across the country and around the world with a few strokes of the keyboard. The low start-up costs of E-commerce also enables a greater number of people to start a business by removing many of the traditional barriers. And a further advantage is that a small businesses can be "open" 24 hours a day, seven days a week.

As these facts indicate, E-commerce offers a great deal of promise to the future of this nation's small businesses, and in all likelihood, it is only going to grow.

Despite all of the possibilities of success, however, E-commerce also carries with it a number of potential pitfalls for the small business community. There is a great deal of uncertainty about the issue of taxes. Although there is currently a moratorium on new taxes, many brick-and-mortar stores which charge sales tax, are losing customers.

Additionally, studies have shown that many consumers are comparison shopping at traditional stores and buying over the Internet. As a result, traditional stores which pay salespeople and need to have showrooms are also losing out.

This also ties in with the lack of intimacy on which many small businesses rely for their customers. The growth of e-commerce has provided consumers with unprecedented information about products and prices. Some enterprises worry that if they lose intimacy with their customers, they will no longer know their needs- a key element in remaining competitive with larger, more impersonal competitors.

These are obviously issues that need to be addressed if small businesses are to remain competitive.

As such, E-commerce is a double-edged sword for small businesses. It offers them the chance to reach out to new customers and provides greater flexibility. At the same time, however, the loss of interaction with consumers and lower costs on the Internet represent a substantial threat that needs to be addressed.

I am glad that the Chairman has called today's hearing because it is still early enough to study the potential problems small businesses may face and work to address these issues.

I remain confident that our nation's entrepreneurs will continue to thrive. They have faced numerous challenges in the past. And one can see from the unprecedented economic growth we are experiencing that small businesses have met those challenges.

Once again, thank you Mr. Chairman for holding today's hearing.

Small Business Committee Hearing on

Electronic Commerce

May 26, 1999

STATEMENT

by: Congresswoman Carolyn McCarthy

Thank you Mr. Chairman for scheduling a hearing on the impact Electronic Commerce has on small businesses. I would also like to thank our panel of witnesses for taking time out of their busy schedules to testify before this subcommittee on this matter.

An explosion of marketing, advertising, research, and other business-generating activities are occurring over the internet. Business transactions over the internet are both beneficial to many businesses, and potentially harmful to traditional real estate sales and big box retailers. Nonetheless, small businesses are able to utilize this new medium as a tool to promote and expand their enterprise.

Recent studies have shown that small businesses are recognizing the importance of E-commerce. This new medium has been increasingly relied upon by small businesses if they wish to receive a sufficient amount of exposure. Small businesses in Long Island, New York must utilize E-commerce in order to compete with the huge manufacturers that reside there.

By utilizing the advantages of the internet, it is possible for small businesses to avoid the expensive costs and complications of commercial and billboard advertising. E-commerce offers a cost-effective method of creating a 24-hour, animated web site. A small business can pay \$100 to Yahoo to build a catalog, inventory system, and web site for the business. These sites enable consumers to access a world of information about any business of their choice, all with the simple click of a mouse button. By facilitating the accessibility of the product for the consumer, as well as saving money by cost-effectively advertising, small businesses will prosper.

E-commerce also increases the efficiency of small businesses. It eliminates the hassle of manually monitoring the requests and orders of customers, therefore freeing employees to wait on customers at the counter. The complications associated with retail chains can be avoided, enabling manufacturers to offer products directly to their consumers.

E-commerce is an incredible source of opportunity and advantage for small businesses. In an era where small businesses are looking to expand and compete, the internet is a tool that should bolster, rather than hinder, their success.

I thank the Chairman for recognizing the importance of this issue and look forward to the testimony from our witnesses.

Statement by Rep. John E. Sweeney
before the Small Business Committee
May 26, 1999

Chairman Talent, thank you for the opportunity to speak about electronic commerce, commonly known as e-commerce.

E-commerce is becoming a very popular way to conduct business. Information technology has made e-commerce an easy, efficient, and safe way to execute transactions. The internet has brought greater access and increased customer convenience and choice to consumers.

The Department of Commerce predicts that more than \$70 billion in sales will be generated by e-commerce in the year 2000. By 2002 it is estimated that \$327 billion will change hands. During the 1998 holiday season, the average on-line shopper spent \$600 on-line and internet sales totaled \$3 billion.

These figures are striking but unfortunately, small businesses have largely shared in the success of e-commerce.

According to a study by National Small Business United, only 22% of small businesses are using the internet to sell their products or service. Approximately 1.2 million small businesses are using their web sites to advertise their business.

1.2 million is a start, but there are 24 million small businesses in the U.S. Only 20% are taking advantage of the resources that are available to them to participate in e-commerce.

The Administration stated in 1998 that the SBA should work with other agencies to ensure that small businesses are afforded every opportunity in relation to e-commerce. However, I have yet to see concrete programs that help small business navigate the waters of e-commerce.

My district in upstate New York is largely comprised of small business entrepreneurs. Many areas within the district are sprawling and rural and it is very difficult for owners to draw business in traditional ways.

E-commerce would give my small business owners the opportunity for open competition while allowing them the chance to expand their businesses.

I believe e-commerce holds much promise to the business world but I urge the members of this committee make a commitment to small businesses to ensure they will have the same opportunities and resources as larger businesses.

Chairman Talent, thank you for the opportunity to speak on e-commerce.



U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

**STATEMENT OF
DANIEL O. HILL
ASSISTANT ADMINISTRATOR
For TECHNOLOGY
U.S. SMALL BUSINESS ADMINISTRATION**

**BEFORE THE
COMMITTEE ON SMALL BUSINESS
UNITED STATES HOUSE OF REPRESENTATIVES
MAY 26, 1999**

Good morning, Mr. Chairman and Members of the Committee. Thank you for inviting the U.S. Small Business Administration (SBA) to appear before the House Committee on Small Business to discuss our current activities in the area of electronic commerce (E-Commerce). My name is Daniel O. Hill and I am the Assistant Administrator for the Office of Technology at the SBA. I am appearing on behalf of Administrator Aida Alvarez whose schedule did not allow her to be with you today.

The Age of Electronic Commerce

Twenty-seven million purchases are now made on the Worldwide Web every day. At the beginning of 1993, there were just 50 sites on the Web and now the number is estimated to be over one billion. The number of small firms engaged in electronic commerce is growing rapidly. Global electronic commerce is expected to grow to more than \$300 billion annually in just a few years. The percentage of small businesses with access to the Internet nearly doubled in the past two years from under 22 percent in 1996 to over 41 percent in 1998. But there remain significant obstacles to small business involvement in this new medium. The SBA is working to help small businesses overcome these obstacles and take advantage of the many opportunities afforded by electronic commerce.

What is Electronic Commerce?

Electronic commerce refers to more than the buying and selling of goods over the Internet. It is using the power of computers, the Internet, and shared software to send and receive product specifications, drawings, bids, purchase orders and invoices, and any other

type of data that needs to be communicated to customers, suppliers, or employees. Electronic commerce is the new way to conduct business, affecting not only internal business activities within a firm, but also requiring new kinds of coordination with their clients and other institutions. In most industries this requires the adoption of new business models involving new organization structures and business strategies.

Implications for small business

The potential opportunities that electronic commerce and the Internet afford small business are staggering. The smallest companies can now have instant access to customers and suppliers worldwide in ways that only the largest multinational corporations have had in the past. And many small businesses are being formed on the basis of this new-found opportunity.

At the same time, small firms that do not adopt electronic techniques run the risk of losing market share and customers from missed opportunities. In particular, the prospect of small businesses losing their current markets to large firms selling through the Internet is quickly becoming a real threat. There are special security and confidentiality uncertainties involved with electronic commerce that create a strong tendency in this new marketplace for customers to buy from known brand name companies. This leads to enhancing the market position of the largest existing players such as Amazon.com and E-Bay.

Small firms may have more to gain than large firms from the successful transformation to electronic commerce, and more to lose from failing to adapt quickly to this new medium.

Electronic commerce is not only changing the way firms compete, but also changing the way firms do business with the Federal Government. As part of an effort to streamline the Federal procurement process (a \$200 billion-a-year market), electronic commerce is quickly becoming the principal means of processing Federal procurement transactions. For example, in 1998, the Federal Government spent \$8 billion in purchase card transactions. In addition, SBA's Fiscal Year (FY) 1996 Appropriations Act (Public Law 104-134), set new requirements for most businesses to have the capability to send and/or receive payments electronically. By January 1, 1999, all Federal payments must be made via Electronic Funds Transfer (EFT), and by 1998 companies must pay all business taxes above \$20,000 electronically. These changes provide both a challenge and opportunity to improve small business access to Federal business opportunities. SBA is working to meet this challenge.

The SBA's role

SBA is working hard to encourage small business involvement in electronic commerce, both as users, and as developers and innovators of the technology. Many small firms do not have access to the Internet and do not understand the need for it. These firms are in danger of missing the competitive opportunities made possible by electronic commerce. The SBA can play an important role in helping such firms by providing technical assistance, training, and information. There is a clear public interest in seeing the continued viability of

the small firm sector which creates two-thirds of all new jobs, more than half of new product innovations, and provides the base for local economic development and community stability.

At the other end of the spectrum of small firms are the new high-tech start-ups that are formed with advanced computer and information technology expertise. Many of these firms are in the business of developing and adapting the information, telecommunications, and computer technologies that make electronic commerce possible. They are at the cutting edge of the Internet and electronic commerce technology. These firms do not need technological assistance or training. Instead, they need to have a fair legal and regulatory environment for innovation that is not biased in favor of large firms. SBA supports nurturing this innovative role of small firms in issue areas such as intellectual property protection, security, and domain name disputes.

Last year the President's Management Council's Electronic Processes Initiatives Committee issued a government-wide strategic plan to help agencies improve Federal buying and paying operations. The plan recognizes that sellers—large and small—want easy, effective, and inexpensive ways to find customers and market their products. Lower transaction costs mean greater returns on investment. The plan expressly acknowledges small businesses' need for a low cost, user-friendly operating environment and access to training and technical assistance to reengineer their business strategies and processes to accommodate change.

To this end, as agencies implement the government-wide strategic plan and strive to deliver improved service to the American taxpayers through the use of electronic commerce,

SBA is undertaking a variety of actions to assist small businesses in maintaining their competitiveness as they transition from paper-based to electronic processes. Here are some specific examples:

- SBA is developing an electronic commerce course for its Small Business Classroom on the Web. The course will include a variety of useful links to both governmental and non-governmental sources.
- SBA is helping coordinate various governmental E-Commerce activities to ensure that small businesses are included.
- SBA is developing partnerships with credit card companies to increase the number of SBA small businesses that have been certified to conduct credit card transactions with government and private sector credit card holders, and to provide more cost-effective credit card transaction processing fees for SBA small businesses. We view this an important step in preparing for electronic commerce.
- The SBA is working with the Digital Economy Working Group and internally to develop better measures and analysis of the economic impact of the Internet on small businesses. We are participating in a conference that is being held this week on the analysis and measurement of the digital economy. We are also planning further research efforts to better understand the importance of E-Commerce to small firms' innovative activity.
- The SBA has developed several Internet based systems for providing information to small businesses. SBA and the National Partnership for Reinventing Government (NPR), in conjunction with an interagency task force, are creating a "new and improved" *U.S. Business Advisor*, an Internet one-stop gateway to government for business. PRO-NET is an electronic gateway of procurement information for and about small business. It is a search engine for contacting officers, a marketing tool for small businesses and a link to procurement opportunities and important information. It is designed to be a "virtual" one-stop-procurement-shop. We have also developed TECH-NET and ACE-NET, systems to deal with technology issues and access to capital. You can access these by going to the SBA Home Page (www.sba.gov).

I have attached a partial list of SBA activities on the Internet as an Appendix I.

These ongoing SBA activities are consistent with President Clinton's Directive on Electronic Commerce and Policy Statement issued November 30, 1998. The Statement directed the U.S. Department of Commerce (DOC) and the Small Business Administration to

develop strategies to help small businesses overcome barriers to the use of the Internet and electronic commerce. I have included in the Appendix II a summary of the Directive.

In response, the SBA is planning a series of new activities and working closely with the Department of Commerce and other agencies to implement a broad-based effort to identify specific areas of need, and to provide outreach, extension, and technical assistance to small firms. To carry this out, we will adopt an approach the SBA's Office of Technology used in our very successful Y2K preparedness program—by which we have helped small businesses across the country address the potential disruptions associated with the Year 2000 computer problem.

1. We will begin with an **Issue Identification Phase** to clarify the issues and areas of greatest need. Focus groups will be conducted representing different industry sectors and geographic regions, and will include participants from industry, trade associations, universities, other non-profit organizations, state and local governments, and Congress. Research and analysis will be conducted to help understand the issues (economic impact, intellectual property protection, taxation, etc).
2. Second, we will move to the **Awareness and Outreach Phase** to disseminate information to small businesses to make them aware of the issues, problems, and SBA/DOC assistance activities and resources. Seminars, conferences, newsletters, websites, and resource partners will be used to provide the information to small businesses.

3. Third, is the **Take Action Phase** designed, based on the findings of the focus groups, to get small firms to take actions to address the problems. This phase will involve training activities in partnership with private firms and organizations where possible.
4. Fourth, is a **Reassessment Phase** to review what may have been overlooked.
5. Finally, we move to the **Institutionalization Phase** where we ensure that there is an E-Commerce component well-integrated into our portfolio of ongoing small business assistance programs.

Current Initiatives:

The objectives of our current and planned electronic commerce initiatives include:

- Working in partnership where possible with the private sector and other federal agencies that are engaged in electronic commerce;
- Educating small, minority and women-owned businesses about electronic commerce and increase their capacity to successfully engage in electronic commerce;
- Developing a framework for understanding the ways electronic commerce and the Internet affect small business activities including marketing, networks, production, and innovation; and developing improved means of measuring and analyzing this impact;
- Increasing the number of SBA small businesses that have been certified to conduct credit card transactions with government and private sector credit card holders;
- Helping educate small businesses about available Federal and private resources;
- Developing a Web site, companion CD-ROM, and supporting applications to introduce small businesses to federal contracting and electronic commerce; providing a basic understanding of issues, processes and technologies; assist them in acquiring needed tools; and deliver hands-on, interactive training where possible in using those tools;
- Reaching out to small businesses to make them aware of electronic commerce, Internet, and EDI technologies and the benefits they can bring to an enterprise by

participating in trade shows, hosting workshops and regional seminars, and giving presentations both one-on-one and to groups;

- Providing training, consultation, and technical support services in concert with resource partners;
- Identifying legal, regulatory, intellectual property, and tax issues that affect the ability of small firms to play an innovative role in the development of electronic commerce technologies.

SBA's FY 2000 budget request to Congress includes \$2 million to help support our electronic commerce activities. If approved, we propose to use these funds to carry out the Presidential directive by conducting the activities I have mentioned, working with the private sector and other federal agencies that are engaged in electronic commerce.

Thank you for the opportunity to discuss the SBA's activities in the area of electronic commerce. I will be happy to answer any questions you might have.



"SBA on the Internet"

APPENDIX I

Introduction and Overview of SBA's Website

www.sba.gov

The SBA Home Page offers over 10,000 documents and over 5,000 links to help small businesses start and grow. The web site offers counseling, training, financing and procurement opportunities and special assistance for minorities, women and veterans. The SBA Home Page is now averaging over 5 million hits with over 500,000 people weekly.

PRO-Net

pro-net.sba.gov

Pro-Net is an electronic gateway of procurement information -- for and about small businesses. It is a search engine for contracting officers, a marketing tool for small firms and a "link" to procurement opportunities and important information. It is designed to be a "virtual" one-stop-procurement-shop. You can get to the PRO-Net Home Page by going to the SBA Home Page and then clicking on the PRO-Net button.

HUBZone Empowerment Contracting

www.sba.gov/hubzone

The HUBZone web site provides a wide array of information including background information, mapping capability that identifies qualified areas, and program applications. Access this site by clicking on HUBZone under the Special Initiatives section.

Y2K Awareness Resources

www.sba.gov/y2k

The U.S. Small Business Administration has designed its Year 2000 (Y2K) site on the World Wide Web to be a one-stop resource for small businesses to make themselves Y2K O.K. To get to the SBA's Y2K page, go to SBA's homepage. Then click on the Y2K icon in the middle of the page, just below the SBA seal.

Small Business Classroom

classroom.sba.gov

The Small Business Classroom is a digital strategy for reaching new markets and training small business clients in a changing, global environment. The on-line classroom is designed to bring easy-to-use, electronic business courses to anyone with a standard Internet connection. You can get to the SBA Classroom by going to the SBA Home Page and clicking the SBA Classroom button.

Welfare-To-Work

www.sba.gov/w2w

This website provides information on SBA's national outreach initiative to small businesses seeking to hire individuals from Welfare to Work. For small business owners interested in the program, this website provides a one-stop site for information on how to get started. This site is accessed by clicking on Welfare-to-Work under Special Initiatives section.

Women's Online Business Center

www.onlinewbc.org

The SBA's Women's Online Business Center is a free, interactive, state-of-the-art Internet web site for beginning and established women business owners. To access the Women's Business Center Home Page, go to the SBA Home Page and then click on the SBA Offices and Services button and then on Women's Online Business Center.

Service Corps of Retired Executives (SCORE)

www.score.org

The SCORE Small Business Site contains "how to" articles, guest columns, interactive business quizzes, and a selection of hotlinked resources to guide entrepreneurs in search of specific information. SCORE's premier service--small business counseling-- is offered via the Get Email Counseling feature of the site. You can get to the SCORE Home Page by going to the SBA Home Page and then clicking on the SBA Offices and Services button and then on SCORE.

APPENDIX II

Summary of Presidential directive on electronic-commerce and small business:

On November 30, 1998, the President issued a Directive on Electronic Commerce and Policy Statement directing the Secretary of Commerce and the Administrator of the Small Business Administration to develop strategies to help small businesses overcome barriers to the use of the Internet and electronic commerce. The directive indicated that the initiative should cover the following areas:

- the training of government employees who have contact with small businesses on the use of the Internet and electronic commerce;
- moving commonly used Government products and forms to the Internet to enable small business to use the Internet to interact with the Government;
- working with the Digital Economy Working Group to develop better measures of the economic impact of the Internet on the small business;
- developing an outreach plan that includes partnering with the private sector to inform small businesses on how to profitably use the Internet and electronic commerce;
- highlighting successful small business use of electronic commerce and Internet; and,
- establishing an Internet-based program to match exporters with export finance providers, and to allow instant exchanges of information and access to export financing for small business.

Statement of Harris N. Miller, President

Information Technology Association of America

**Testimony Before The House Small Business
Committee**

**Hearing on the Benefits and Challenges of Electronic
Commerce on Small Business**

May 26, 1999





Harris N. Miller
President
Information Technology Association of America (ITAA)

Harris N. Miller became President of the Information Technology Association of America (ITAA) in 1995. Miller directs the day-to-day operations of the association and reports to the ITAA Board of Directors. ITAA is the largest and oldest information technology (IT) trade association, representing 11,000 software, services, internet, telecommunications, electronic commerce and systems integration companies. ITAA has grown more than 25% each year that Miller has been President.

Miller is also President of the World Information Technology and Services Alliance (WITSA), an "association of associations" representing 38 high tech trade groups around the world. He was a member of the 1998 World Congress on Information Technology Board of Directors, and recently became a Board Member of the George Mason University School of Law National Center on Law and Technology.

Among many significant accomplishments during the past three years, Miller:

- Conceived the ground-breaking study, "Help Wanted: The IT Workforce at the Dawn of a New Century." Under his leadership, ITAA produced the National Information Technology Workforce Convocation, which brought together leaders from education, government, and industry to formulate partnerships and "best practices" to increase the quantity and quality of IT workers.
- Led the IT industry in supporting the passage of Telecommunications Act of 1996 and assuring statutory protections for IT companies.
- Directed the association's creation of a multifaceted Year 2000 Century Date Change Program. ITAA is widely recognized by both government and industry as the foremost trade association in the Year 2000 area. Played an instrumental role in formulating the Year 2000 International Cooperation Center and conducted the first global summit on the Year 2000 issue, bringing together representatives from over 130 nations.
- Helped achieve numerous legislative and regulatory victories for the Information Technology industry, including creation of the Foreign Sales Corporation credit for software exporters, extension of the R&E tax credit, an Internet tax moratorium, extension of the H1-B visa limit for highly skilled foreign professionals, and government procurement reform.
- Secured ITAA's position as IT industry sector coordinator for Critical Information Infrastructure Protection under Presidential Decision Directive 63.
- Appeared on numerous network and cable television programs, radio programs and has been quoted in virtually all major national news publications. These include CBS, NBC, CNN, CNBC, BBC, Wall Street Journal, New York Times, Washington Post, Business Week, Financial Times and many more.

Miller leads ITAA's public policy focus in other areas such as encryption, taxation, IT workforce shortage, intellectual property, telecommunications reform, Year 2000 date conversion, and business immigration. He has testified before Congress and state legislatures on numerous issues, and briefed federal, state, and local officials on issues critical to the IT industry. He has written and spoken widely on a variety of high tech issues and has been published in various popular and academic journals. He is a much sought after conference presenter both nationally and internationally.

Miller has a broad range of other public policy experience. Prior to joining ITAA, he was president of Immigration Services Associates, a government relations firm based in Washington, D.C. specializing in immigration issues. Concurrently, he acted as government relations director for Fragomen, Del Rey & Bernsen, P.C., a nationwide law firm specializing in immigration, and he operated his own government relations firm, Harris Miller & Associates, with clients in high tech, agriculture and banking.

In addition to private sector experience, Miller has many years of government service, including assignments as Legislative Director to former U.S. Sen. John A. Durkin (D-NH); Deputy Director, Congressional Relations, U.S. Office of Personnel Management; and Legislative Assistant, Subcommittee on Immigration, Refugees and International Law, Committee on the Judiciary, U.S. House of Representatives.

Miller is also active in professional and civic activities. He served as chairman of the Fairfax County, Virginia Democratic party for six years. He served as co-chair of the Virginia Opera Northern Virginia Finance Committee and, until recently, was a member of the Virginia State Lottery Board. Miller was chairman of the American Heart Association, Northern Virginia Council; a member, Virginia Governor's Commission on the Federal Funding of State Domestic Programs; and he served on the board of the National Conference of Christians and Jews, National Capitol Area Region. He is Co-Chairman of the 1999 Wolf Trap Ball Corporate Committee.

Miller holds an undergraduate degree from the University of Pittsburgh and a graduate degree from Yale University.

Testimony of Harris M. Miller, May 26, 1999

**Statement of Harris N. Miller, President, Information
Technology Association of America**

Testimony Before The House Small Business Committee

Hearing on the Benefits and Challenges of Electronic Commerce on Small Business

May 26, 1999

Mr. Chairman, thank you for this opportunity to testify about the impact of Electronic Commerce and the impact of the Internet on the nation's small and mid-sized companies, often called small and medium enterprises (SME). Today I would like to outline both the opportunities and the challenges that face SME's as they move their business processes into the Digital Age. But first I want to take a moment to discuss the concepts that make up the definition of Electronic Commerce and suggest that we agree on a common taxonomy when discussing the issue.

Information Technology Association of America

The Information Technology Association of America (ITAA) represents 11,000 direct and affiliate member companies--many of which are small and mid-sized companies themselves. ITAA member firms work at the forefront of computer software, systems integration, telecommunications, Internet, electronic commerce, outsourcing and more. We have long championed the cause of the information technology (IT) sector, truly the nation's engine of growth, a huge contributor of increased U.S. competitiveness, and the leader in the movement to a borderless global economy.

Electronic Commerce - Background

Electronic Commerce (or Electronic Business) is a phrase that means many things to many people and agreement on a standard definition can be hard to find. It is fair to say that the vast majority of traditional business transactions can be readily adapted to electronic media.

Electronic Data Interchange (EDI) has been around for years. While many consider EDI the precursor to Electronic Commerce, it is fundamentally different in several important respects. EDI is supported by an extensive set of standards (ANSI X.12 & EDIFACT), has been practiced by trading partners with satisfactory results, and is used in both domestic and international markets. EDI, as successful as it has been, suffers from serious shortcomings. It is limited to a fixed set of transaction sets that must move through a lengthy approval process; it is not flexible. It is limited to transactions between partners which have undertaken lengthy negotiations and have signed partnership agreements; it is not spontaneous. It often requires suppliers to implement several different systems in order accommodate the proprietary systems of their major customers; it is not inexpensive. It requires the use of Value Added Networks (VAN) to serve as translators and carriers of transaction data; it is not real time.

Electronic Commerce, on the other hand, is open, spontaneous, and relatively inexpensive to implement. It is scalable and flexible. Thus it has become much more than an improved version of EDI. Because of the development of the personal computer, networking technology, the growth of the Internet and the development of HTML and the World Wide Web, a whole new set of capabilities and services have evolved in the still very early days of the Digital Age. Electronic Commerce includes, among other things, e-mail, customer service, on-line research, and interactive consumer participation in business transactions. These transactions range from the purchase of a sweater from Lands End and the purchase of a lobster from Mr. Hansen to the execution of complicated stock trades from the comfort of one's

Testimony of Harris M. Miller, May 26, 1999

home. Let me quickly add that the term "transaction" in electronic commerce is defined more broadly than "buying and selling". By transaction we mean any electronic event. The transmission of a design drawing from Ford, USA to Ford, UK, researching a medical problem on the Web, sending an e-mail, transferring funds between two corporations, the execution of a stock trade and downloading a software program are all transactions.

Based on the infrastructure of the public switched network and the development of packet-switching technology, the Internet can truly be called an "open" medium with extremely low barriers to entry. These low entry barriers allow SME participation in Electronic Commerce activities on an unprecedented scale. However, Mr. Chairman, I hasten to add that plugging in a modem and contracting access to the Internet will not assure success. Even the smallest firms with the least complicated business models must plan their strategy carefully and recognize the potential challenges that may await them.

The growth of the Internet and with it the ability of increasing numbers of organizations to conduct business electronically rests on three pillars: technology (which includes infrastructure), business practices and processes and, finally, public policies. Failure to recognize and respect the interdependence of these pillars as crucial to the future of electronic business will lead to unfortunate consequences. At best, growth is slowed and entrepreneurial spirit is discouraged. At worst, the electronic paradigm may fail. On the other hand, paying close attention to these three pillars and maintaining the balance among them will surely lead to unprecedented successes for SME's.

The Numbers

There is no question that reports on the growth and future potential value of Electronic Commerce activities vary widely. Much of the confusion is sown by the popular press which, in most cases, reach for a bottom line number with little regard for the methodology behind the number. Predicted estimates of the value of Electronic Commerce transactions between 2000-2002 vary from a low of \$23 billion to a high of \$1.5 trillion. The numbers all come from respected research firms. How can they be so far apart? The firms argue that simply publishing a bottom line number while failing to explain the methodology of the study results in both confusion and a misreading of the trends of the paradigm.

My point is that the numbers can be very misleading; the simple fact is that the market is huge and growing at an ever-accelerating rate. On-line shopping during the past Christmas season exceeded even the most optimistic forecasts substantially. The simple strategy is not to be left behind. Electronic Commerce is a fact of life and companies of all sizes must play or pay. Motivated SMEs can create companies that would never have been viable 5 years ago. Amazon.com is the poster child of Internet commerce. The fact is that for the price of a share of amazon.com, a creative businessperson can become amazon.com.

Let me quote the results of a study on the extent small business adoption of Electronic Commerce. PSI Global reports that their survey of over 900 SMEs shows that:

- SMEs' use of PC Banking services increased 50% in the last 12 months - to 9%. 6% say they will use the service in the coming year. However, only 22% of those surveyed had ever even been contacted regarding the service,
- 63% of SME's use the Internet, twice the number of one year ago,
- 31% of the surveyed companies have a web site, up from 24% last year,
- 20% of those surveyed purchase materials and supplies over the Internet.

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It is clear that SMEs are moving in the right direction. Later, in my testimony, I will describe some specific efforts by industry and government to include SMEs in this new paradigm.

Technology

Technology is truly moving at warp speed. The information technology sector, unregulated and solidly entrepreneurial, has delivered massive improvements and breakthroughs, both in hardware and software, at ever decreasing cost. A study released earlier this year by the World Information Technology and Services Alliance (WITSA) concluded that the Information and Communications Technology (ICT) sector is responsible for \$1.8 trillion in spending in 1997, approximately 6% of the aggregate world GDP. In 1997 ICT was nearly 40% larger than in 1992. It is growing 27% faster than the overall worldwide GDP, which has grown by an average of 5.5% annually for the past 5 years. I will be happy to make a copy of the full report available to the Committee.

The one sector of ICT that is still too regulated is telecommunications, and that is where we find competition and innovation often lagging. Both in the US and internationally, telecommunications competition--including competitive access for SME's--is crucial.

Practices and Processes

Electronic Commerce activities can be classified into three readily identified and markedly different segments:

- Business to/with Business,
- Business to/with Consumer and
- Intra-Business (Intranets).

While each of these sectors utilizes similar and sometimes identical technologies, they operate with markedly different practices and processes. It is important to keep these differences in mind as you examine the opportunities and challenges in Electronic Commerce.

Business to Consumer

The Business to Consumer segment has received the most attention over the past couple of years. Clearly this on-line retailing phenomenon is growing substantially and offers opportunities to many SMEs which wish to broaden their reach and find new channels of distribution for their products. We hear daily stories of entrepreneurs who have taken the leap in utilizing the Internet for advertising, selling and servicing their product lines. Many of these businesses are operating only on the Internet while others are supplementing their traditional distribution methods.

In almost all cases, the successes mask the failures. The critical mistake many practitioners make is the failure to recognize that a successful electronic commerce installation requires an examination, understanding, and willingness to change the basic business processes of the company. The consumer sees an attractive web site, which allows easy access to product information and a simple way to order merchandise. The supplier on the other hand faces a more complex challenge if he or she is going to take full advantage of the new Electronic Commerce model.

The web based ordering process must be integrated with the rest of the company operations. If the details of your sweater purchase at the Land's End web site fail to transition to the business to business model

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and subsequently flow to inventory control, input to manufacturing schedules, trigger reorder points and materials purchases, notify accounts payable and generate useful data that can be used for accurate forecasting of future business, the effort yields minimal improvement. If the data on the sweater sale do not go to ordering, packaging, shipping, accounts receivable; if it does not automate the payment process, debit a credit card and credit the Lands End account - again - minimal improvement. If the data fail to allow shipment tracking and facilitate a customer friendly return policy - minimal improvement. On the other hand, the SME that understands the required level of integration of Electronic Commerce into its business processes will see a fundamental transformation of the enterprise.

Business to Business

The Business to Business segment represents, by many accounts, 80% of the reported Electronic Commerce transactions worldwide. In this segment, we find companies that truly are willing to understand and adjust their business processes will reap the most rewards. It is also in this segment that the most expensive failures occur. Poorly planned strategies that fail to recognize the important steps and decisions that have to be made will guarantee marginal results, if not a complete and expensive failure. The advantages to businesses are clear: lower costs, more reliable processes, and improved customer service - - - cheaper, better, faster. Some of these benefits are quantifiable; others are not. R.A. Weber & Associates estimates that the cost of processing a single purchase order can be reduced from an average of \$79 to \$6 with a fully integrated electronic commerce solution. I cannot imagine any business that would be reluctant to realize that kind of quantifiable saving.

More and more large businesses expect that their suppliers will be able to conduct business on line. You hear the phrase disintermediation--eliminating the "middleman." Some observers talk about "frictionless" transactions. While I think these concepts overstate the reality, no doubt doing business on line eliminates some traditional business steps that impose costs.

As various observers have noted, the Internet alters the traditional relationship between reach and richness. In a traditional business model, the closer you are physically to your customers and your suppliers makes a tremendous amount of difference in the content of your relationship: how much you know about each other, how much you know about each other's products and services, etc. The closer you are, the richer the relationship. The farther away, the shallower the relationship.

But in cyberspace, physical proximity is not paramount. A well-constructed Web Site can tell customers everything they need to know about your products and services, whether that customer is five miles or five thousands miles away.

Electronic Commerce, unlike EDI, which was too expensive for most SME's to implement, supports the ability of major businesses to access a much larger universe of potential suppliers. An SME's transition to electronic commerce can increase its customer base dramatically. A good example is the Automotive Industry Action Group (AIAG), which assists lower tier automobile parts manufacturers in implementing Electronic Commerce, thus giving SMEs access to vastly increased opportunities in the automotive sector.

Reduced costs and improved business processes and more customers are only part of the benefits that Electronic Commerce can bring to the SME. Rapid communication through e-mail, twenty four hour customer service, immediate updating of product literature and price sheets are a few of the digitally enabled techniques that help a business person establish a closer and more productive relationship with customers and suppliers.

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Intra-Business (Intranets)

I will only briefly mention Intranets. Effective and timely internal communications are essential to the success of any business. Intranets help tie the disparate functions and locations of a business together. Work group collaboration software, human resources information, company activities, product changes, and e-mail facilitate the ability of a corporation to act as a team. Experience has shown that even very small companies can benefit from using an Intranet. Multiple examples support this conclusion. There is increased emphasis being placed by manufacturers on a segment called Small Office/Home Office (SOHO) demonstrating that Intranets can be practical for the smallest business units.

Challenges

Achievement of the benefits of electronic commerce is not inevitable. It will require supportive public policy. In this society we are used to picturing concrete structures - roads, bridges, and buildings - as the building blocks of an economic infrastructure. Yet, in the information age, we need to visualize economic infrastructure in broader terms. It is the skills of well trained employees. It is a communication infrastructure capable of using other technologies. And it a legal framework that fosters competition and thereby facilitates innovation.

The opportunity for small businesses to effectively participate in Electronic Commerce could be threatened by some ill-considered policies. Four challenges could harm small business access to Electronic Commerce:

- Increased Federal Internet regulation,
- Limited small business access to high speed telecommunications,
- Lack of Digital Trust and Security,
- Electronic Commerce taxation.

Regulation

Proposed legislation giving Federal agencies broad new powers to regulate how Internet commerce is conducted is a significant threat to small business electronic commerce. Small businesses should not have to hire a lawyer to review each change they make to a consumer-oriented web site.

The Clinton Administration, with bipartisan Congressional support, has espoused the theme on the Internet policy front that industry should lead. Industry has met that challenge. Yet some in Congress have suggested giving the Federal Trade Commission broad powers to regulate how web sites communicate with consumers.

Acceptance of Electronic Commerce is occurring at an unprecedented speed. The Internet as a consumer medium is only four years old, so it is natural that different consumers may require varying degrees of comfort level using it. The reluctance of some consumers to engage in Internet commerce after such a short period should not be seen as a need for regulation. As a result, Internet commerce companies have a strong incentive to address effectively consumer concerns in order to advance online commerce. All businesses, small and large, are striving to earn consumer confidence.

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The success on the Online Privacy Alliance (OPA) is illustrative of the benefits of self-regulation. Within a matter of months, the leaders in the IT industry and other industries committed to promoting e-commerce have worked out common privacy principles and established privacy practices. Today, the overwhelming majority of the most heavily trafficked online sites have adopted and display privacy policies.

In addition, the wonderful openness and communications power of the Web provide strong incentives for e-commerce companies to keep their customers satisfied. A company doing business on the Web which fails to meet consumer expectations can expect the word to spread quickly, much more quickly than in more traditional vendor/customer environments. Those that live by the Internet can also die by the Internet if they fail to perform.

Free market responses, technological innovation and cultural change, rather than special government rules are the best methods to let individuals decide to shop online at their own pace.

ITAA cautions against any precipitous action to treat Internet-based commerce differently regulatory. At the same time, the existing regulations should reflect the active manner in which people use the Internet. Unlike print or broadcast medium in which consumers are more passive recipients, the Internet consumer actively shapes what is seen.

We know the burden of regulation often falls disproportionately on small enterprises. Large companies are more likely to have the resources to retain lawyers to keep track of changing rules. We risk reducing the spirit of innovation that has so charged the development on of Internet by burdening smaller and new business with having to keep track of regulatory compliance.

Telecommunications

Small businesses have the strongest possible interest in seeing consumers receive access to advanced broadband services as soon as possible. Many are small companies and start-ups involved in making the promise of the information age a reality by offering products and services with ever-increasing speed and power.

As computing power doubles every 18 months, the limitations of analog, circuit-switched networks become all the more apparent. ITAA strongly believes that reliance upon competitive mechanisms -- as opposed to the incumbent-centric proposals -- will best meet this surging demand. The provisions of the Telecommunications Act of 1996 encourage incumbent carriers to open up their markets to competition, while providing essential safeguards that will deter them from using their monopoly power to impede the efforts of potential rivals.

We should be skeptical of the claim made by some large incumbents, that the pro-competitive regulatory requirements contained in the Telecommunications Act have deterred them from deploying broadband services necessary to provide high-speed access to the Internet and other information services. The real reason for the incumbent local carriers' failure to deploy advanced telecommunications services is that, in the absence of competition, they have no incentive to do so. The best means to promote the deployment of advanced services, therefore, is to promote competition in the local market.

The current debate reflects a choice between two competing views about how to best encourage investment in new telecommunications technologies. Under one view, the regulatory regime should provide assurances that incumbent carriers must be guaranteed the recovery of their investment before they deploy new services. Under the other view, regulations should facilitate a competitive market --

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which is the best means to cure the complacency typically found in a market controlled by a single dominant provider. ITAA supports the latter view, as did the Congress when it passed the Telecommunications Act of 1996.

Small businesses have a very large stake in the creation of a more competitive telecommunications marketplace. Only through competition will small businesses be able to access many of the telecommunications resources that larger businesses enjoy. And only through competition will carriers have the necessary incentives to make advanced telecommunications services broadly available.

Digital Trust and Security

The Internet and the implementation of Electronic Commerce promise to alter the very way people function. While there are clear benefits to this paradigm, there are new challenges that must be met to assure its success. Allow me to discuss some of these because recognition of these issues is important to the success of the effort.

The core element of doing business transactions is the contract. In cyberspace mechanisms must be found to compensate for the fact that many transactions are conducted between parties that are completely unknown to each other. An appropriate level of "digital trust" must be established. The critical elements of any contract are authentication (you are who you say you are), security of data, and non-repudiation. Techniques exist and are being widely used. However, the legal framework for acceptance of, basic security mechanisms; for example, digital signatures, certificate authorities and the techniques of public key infrastructure (PKI) has been slow to be implemented.

Many states are active in passing legislation to cover these issues. The real danger is a patchwork of incompatible, non-interoperable systems, practices, and requirements that become unworkable. While ITAA supports state implementation of consistent digital signatures legislation with dispatch, this is an area where the leadership of the Federal Government is necessary and the faster these issues are resolved the faster Electronic Commerce can grow. Last year Congress took an important first step in passing the Electronic Authentication Act which, among other provisions gives an electronic signature the same legal equivalent to a handwritten signature. ITAA was proud to have taken a leadership role in the coalition that shaped and supported this legislation, and we are supportive of new legislative initiatives to foster digital trust.

Security of data is a critical element in the development of trust. The Internet utilizes the Public Switched Network (PSN) and is basically an "open system". Stories of hacking and cracking are serious enough for the President to have issued PDD 63 which recognizes the dependence of the U.S. infrastructure on information technology and the potential vulnerability of those systems to attack. PDD63 has provided the initial outline and direction for the development of a more comprehensive national infrastructure protection strategy and plan. One of the key elements in data security is the use of a robust encryption scheme. ITAA has been at the forefront of the battle to protect the domestic of strong encryption and to educate the administration on the shortsightedness of its encryption export regulations. Only the strongest encryption techniques will assure users that their data is not vulnerable to attack.

Internet Taxation

Taxation is another issue that has been at the center of a heated debate. Last year Congress passed the Internet Tax Freedom Act that established a hiatus in new Internet taxes and established an Advisory Commission on Electronic Commerce to investigate how the patchwork of federal, state, and local taxes could be rationalized. The industry is not looking for special privileges, only fair and equitable treatment.

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ITAA played a significant role in this debate. ITAA advocated that all legal current taxes should be paid. Goods bought and sold over the Internet should be taxed under current regimes. ITAA opposed new taxes on the medium itself. Creative devices being used by the states such as bit taxes and double taxing of Internet Service Providers are unfair and discriminatory. These taxes would ultimately be borne by users. The unfairness and confusion, which were bound to result, would negatively impact the whole electronic community. The ITAA is excited about the work of the Advisory Commission and fully expects that the concerns of SMEs will be represented and addressed.

Implementation and Support

Small businesses have many resources available to them to become successful through Electronic Commerce, and the number is growing. These resources, both commercial and governmental, are focused on giving SMEs the help they need to succeed in moving to an Electronic Commerce model.

Large and small commercial companies alike are building large practices in helping SMEs on-line. This sector represents a huge business opportunity and it will not be under-served. There are large numbers of consultants and service companies that specialize in the process of moving a business and its processes to an electronic environment. The company must fully understand its processes and practices and there is help available for converting them to an electronic format. The company does not have to possess hardware, software, and networking skills. This element can be outsourced. They only need to know their business.

The Commercial Service of the U.S. Department of Commerce (DOC) has developed programs using digital technology to assist SMEs in reaching export markets. Utilizing their regional Export Assistance Centers (EAC), DOC has focused on Internet technology to bring U. S. sellers together with potential foreign partners and customers. The Virtual Trade Show, Video Conferencing, and Webcasts have all contributed to the ability of SMEs with limited resources to access targeted export market. The program is working and is growing.

The Small Business Administration is very active in encouraging SMEs to use Electronic Commerce. *Pro-Net* is an electronic gateway of procurement information -- for and about small businesses. It is a search engine for contracting officers, a marketing tool for small firms, and a "link" to procurement opportunities and important information. It is designed to be a "virtual" one-stop-procurement-shop.

Pro-Net is an Internet-based database of information on more than 171,000 small, disadvantaged, 8(a) and women-owned businesses. It is free to federal and state government agencies as well as prime and other contractors seeking small business contractors, subcontractors, and/or partnership opportunities. *Pro-Net* is open to all small firms seeking federal, state, and private contracts. Businesses profiled on the *Pro-Net* system can be searched by SIC codes; key words; location; quality certifications; business type; ownership race and gender; EDI capability, etc.

The Electronic Commerce Resource Centers (ECRC) provide Electronic Commerce training to SMEs. The ECRC vision statement sums up its mission: "ECRCs serve as a catalyst for a vast network of small- and medium-sized enterprises to adopt electronic commerce. These enterprises use advanced electronic commerce technologies to provide the Department of Defense and the other federal organizations with low-cost, high-quality products, goods, and services." While focused on training SMEs to do electronic business with the government, the principles used in the commercial marketplace are the same. The courses are available at no or very low cost.

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ITAA conducts seminars and workshops on Electronic Commerce business practices, often in conjunction with other vertical sector trade association. A recent Web-based educational session featured a discussion of the issues of the Construction Industry Manufacturers Association (CIMA). Attended by both members of CIMA and ITAA, the Webcast was designed to help businesses in the construction industry understand how Electronic Commerce can help their bottom lines.

In summary, Mr. Chairman, the opportunities for SMEs to participate in the Digital Revolution are excellent. Barriers to entry are low. Both government and commercial organizations are focused on this market segment. Training, outsourcing resources, web site development and hosting services, and targeted technical solutions are available. Well-planned programs succeed and deliver both financial and non-financial benefits to the SME. This Committee, by demonstrating its interest and commitment to the implementation of Electronic Commerce by the SME sector, clearly highlights the importance of this new paradigm.

Small Business in Electronic Commerce

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Based on a joint paper

“Small Business in the Digital Economy: Digital Company of the Future”

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1. Introduction

Some of the most exciting developments in the digital economy are in the realm of digital products. The developments are reflected in the ongoing spate of activities in businesses specializing in creation, assembly, procurement, and distribution of digitized content and services. New firms and business models sprout up almost every other day. Most of the activities are spurred by technological developments in content organization and presentation such as multimedia encoding and compression formats, content distribution such as enhanced bandwidth for the last mile, dynamic catalogue and directory services such as Web-database integration, and information retrieval using intelligent agents. A world where rich digital content is distributed to customers as customized bundles of reusable components, based on dynamically updated customer profiles, is projected as the future for content provision (Parameswaran et al 1999).

Digital products are often loosely defined to include software, multimedia education and entertainment products such as music and video, as well as other information-based products that can be digitized and delivered via electronic networks (Choi et al 1997). These products can now be free of the physical forms that used to carry the content, allowing a much greater degree of customization and differentiation. Naturally, in the digital economy, companies with a large inventory of digital components and possibly the control of delivery channels can customize more readily, giving them more access to consumers. The trend is illustrated in the recent acquisition of MediaOne by AT&T and the alliance between AT&T and Microsoft. Small digital companies, on the other hand, often have fewer product selections and limited resources to reach consumers. In addition, electronic commerce to many involves risks and uncertainties, one of which being the asymmetric information problem, as elaborated in section 2. Small businesses, most of which do not have a strong brand name to help mitigate the problem, may have a difficult time delivering their content to consumers. The situation raises pertinent questions about the potential for firms engaging in such business activities to succeed.

We have seen a tendency for companies with a widely recognized brand name to get larger and larger. For example, Amazon.com started out as a bookseller. Now they

also sell CDs and conduct auctions at the site. There is certainly an economic explanation to this: the technology infrastructure has an increasing utility. The cost structure of technology requires enormous investment in the infrastructure to make it possible to efficiently process information, and to handle heavy traffic and deliver satisfactory performance. Once the infrastructure is set up, the cost of offering more and more products decreases. Given the tremendous investment Amazon.com has made in infrastructure building, it will be a natural evolution for Amazon.com to expand their business to other types of digital products to take advantage of economy of scale. Meanwhile, the larger they get, the more they invest in building a reputation. Reputation pays off to win consumer trust, which means they can get more business from consumers and possibly lure business away from small companies that do not have an established name in the market.

The situation, without a doubt, will greatly influence competition. Will the current problems associated with electronic commerce, such as asymmetric information and the cost structure of technology lead to a world of natural monopolies with a few dominant firms as content providers, such as Microsoft as *the* software provider? Its stock market valuation certainly reflects the company's brand equity and the public perception and might imply the trend for the future. How are small digital companies going to exist in the digital economy? What needs to be done to improve small business' survivability? In this essay, we look at some issues concerning the nature of the electronic market and digital products, and how these issues affect competition in the digital economy, particularly for small businesses. We argue that digital product intermediaries should be set up to help small businesses grow in the digital economy.

We envision a scenario where product customization drives content development. Digital intermediaries facilitate the customization process between small businesses – the content providers – and consumers. By pooling resources – contents from multiple small players – together, the intermediaries achieve economy of scale in infrastructure building. The intermediary will deal with asymmetric information by authenticating online companies, providing quality assurance to consumers, maintaining digital components from participating content providers using dynamic catalogues, and ensuring content compatibility by enforcing open technology standards. Products provided to consumers

would be customized product bundles generated on the fly from multiple sources according to each customer's preference, as opposed to fixed bundles. Individual content providers won't need to build a relationship directly with consumers. Instead, consumers rely on the intermediaries to overcome the barriers presented by asymmetric information, brand reputation, and the cost of infrastructure building.

Product Customization and Bundling

In the physical world, scale economy and standardization plays a major role. The digital world enables individual product customization. Once the digital content is produced, the reproduction cost is virtually non-existent. If competing content providers sell uniform products, the price could go down to zero. Fortunately, digital products allow a great degree of product customization and bundling, depending on individual customer's preferences. This is a reverse paradigm from the bundling concept widely practiced right now. Currently, products are often times pre-bundled by content producers, not only in the traditional print business but also in the electronic delivery of digital content. For example, magazines are bundles of articles. Subscriptions to cable TVs are bundles of different types of programs. A viewer interested in only sports channels such as ESPN is forced to buy subscription to the home-shopping channel QVC as well. Consumers don't really have a choice in terms of what kind of bundles they can have. In this type of bundling, product customization is very limited. In the physical world, bundling helps achieve economies of scale in printing, binding, and shipping. As we move to a world where digital content is delivered electronically, printing, binding and shipping are not longer needed. Customizing product bundles can be done by intelligent agent software that understands individual's needs and preferences. Each product bundle will be generated uniquely for a consumer's unique needs.

The customers will directly interact only with the intermediary, which provides the appearance of having a huge inventory of a wide range of products. The intermediary contracts with numerous small content providers to procure content of different types, with provision for bundling content from different sources while reselling. The content will include both static and dynamic information. Static content may be articles, reports,

news items or books, whereas dynamic content may be sports tickers, stock quotes and so on. Further, there will be multimedia content such as digitized music, video clips of news stories, movies, recorded events such as concerts or conferences, live coverage of events, multicast channels of entertainment and news, radio stations online, remote education programs etc.

Small business has long been known to be able to find niches in the market. Bigger companies find themselves resistant to change and are less flexible in responding to changing customer needs. For example, new trends in pop music often start with small independent music labels who support bands ignored by bigger companies. In the digital economy, for small companies to effectively compete, they will have to develop core competencies and collaborate with each other to construct innovative content tailored to consumer's unique taste.

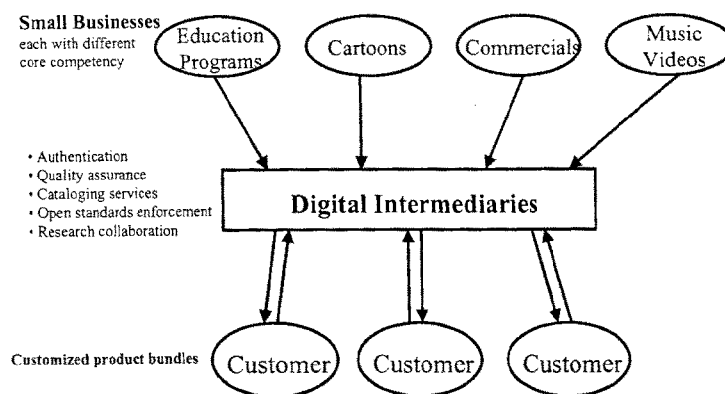


Figure 1. The Framework of Digital Intermediaries.

Figure 1 presents the framework for one application of digital intermediaries – an intermediary of multimedia products for children. For example, the parents can specify at a certain time what education programs to play for their kids, what music videos their kids can watch, etc. What they get is a customized program bundle that is best suited for

their kids, instead of a pre-fixed bundle determined by the cable networks, as is currently the case. In the next section, we discuss the challenges faced by small businesses in the digital economy to illustrate why this type of digital intermediaries is needed. Then in section 3 we outline some of the functions digital intermediaries should provide. Section 4 concludes the essay with some public policy issues the government should address.

2. Asymmetric Information, Trust, and Reputation

In a traditional face-to-face business environment, eye contact, handshake, and chatting help develop basic trust between vendors and customers. Customers get to know the quality of products by looking, touching and feeling. However, such an environment does not exist in the electronic market, which is characterized by asymmetric information – transacting parties do not have the same information. With the global, but insecure Internet being the primary carrier of electronic commerce transactions, security continues to be a concern for consumers as well as merchants. Web sites can be counterfeited, identities can be forged, and the nature of transactions can be altered. That is, there exists asymmetric information on the authentication of business entities and the integrity of business transactions. As a consequence, proper mechanisms are needed to make business transactions secure, meaning that they need to satisfy a broad set of requirements, including nonrepudiation, authentication, integrity, and confidentiality (Bhimani 1996). Nonrepudiation means that the parties in a transaction cannot deny it after the fact. Authentication refers to the ability to verify the identity of parties involved in transactions, while integrity guarantees that the data transferred should not be modified in transit or in storage. Finally, confidentiality means that when trading parties transmit a business contract over the Internet, no one else but the intended business partner can read it. Confidentiality helps protect transacting parties' privacy, a strong form of which is anonymity, where the other parties of the transaction do not know the identity of one or more of the participants. Technologically speaking, these requirements can be satisfied through the use of encryption, digital signature, and digital cash. The application of these technologies has significant social implications. For example, online transactions have made it much easier for sellers to capture information about their potential buyers.

Protecting the privacy and anonymity of consumers are hot topics in both the popular press and the research community. But ironically, extreme confidentiality such as anonymity may not always be desirable, at least anonymity for legitimate online businesses, because it will further perplex the asymmetric information problem and prevent companies from building a strong online brand name.

There is another side of asymmetric information, which is related to information on product quality. Global networks in general and the Internet in particular have made information dissemination much easier and faster than ever before, for both consumers and vendors. The online market offers abundant amount of product information for consumers. However, too many choices and too much information mean that it is difficult for consumers to tell which vendors really offer quality products. This is especially true for digital products since digital products are mostly experience goods. Their quality becomes known only after consumption (many information goods are purchased only once) (Choi et al 1997). The consequence is, as Kevin O'Connor, CEO of DoubleClick, says, "On the Net, consumers have a lot of choices, so brand wins" when consumers don't have enough quality signals (Colvin 1999). Indeed, to the extent asymmetric information exists, brand reputation becomes extremely important, which creates a situation that affects market efficiency by shifting competition into favoring a few established brand names that could be potential monopolies. In many situations, information asymmetry has significant implications on the operations of markets (Jensen and Meckling 1976, Caillaud 1990, Greenwald 1990). The theory can be traced back to Adam Smith's *Wealth of Nations* (1776). He argues that if every buyer knew every seller's price and every seller knew every buyer's offer, everyone in the market would be able to make decisions based on complete information and therefore resources of the society would be distributed efficiently. That is, Pareto efficient outcomes for a market economy depend on all of the economic agents having the same information about all of the relevant economic variables (including common beliefs about future economic events). In reality there are many examples of asymmetric information where some agents may be better informed than others may and thus the competitive market outcomes can no longer be guaranteed to be Pareto efficient. An important example arises where a product or service can vary in quality and is known to the seller, but not the buyer. This

situation, known as the lemon problem, leads to a market failure (Akerlof 1970). Because of asymmetric information, the market is unable to signal through prices those firms that are offering high quality products at a “fair” price from those firms that are offering similar products of very low quality. One possible consequence is that when consumers go online, they only transact with well-established brand names to help mitigate the asymmetric information problem and minimize their risks involved in online transactions. To overcome the asymmetric information problem, there needs to be non-market corrective mechanisms to improve economic outcomes.

Trust has been used as a remedy for asymmetric information in the conventional market. For example, when customers enter a retail store, a number of physical cues, such as business licenses, plaques indicating membership in the local Chamber of Commerce, indicates that the store is a legitimate business, which helps customers establish trust towards the business. They in turn will feel more confident in engaging in business transactions with the store. In addition, a good reputation stemming from repeated transactions may further enhance the trust. History has shown that a good reputation can be very effective in establishing a business’ trustworthiness (Johnston 1996, Milgrom et al. 1990). Trust is based on “reliability, predictability, and fairness” (Anderson and Weitz 1989). The use of trust as a factor in determining inter-organizational and interpersonal behavior has been studied extensively. Indeed, to the extent trust exists, there is a reduction in information asymmetry among the parties.

In the global electronic market, however, the traditional setting for establishing trust between trading partners is almost non-existent. Trust is typically built over time upon experience and repeated interactions. Most relationships are confined at a local scale. But this traditional view of trust building again only favors big players with established brand names in the online market – the brand name may attract one to conduct his first transaction with the company. If the experience turns out positive, then the customer will come back, which leads to repeated transactions. The problem most likely arises when it comes to small businesses – without a strong brand name and an established reputation, the nature of the electronic medium simply does not convey enough product quality information to consumers. Consequently, these small businesses will have a much harder time fostering consumer trust and convincing buyers of the

quality of their products. If the transaction has any aspects of uncertainty at all, the consumer will turn to a company he has confidence in based on a substantial past history or an established reputation (Shapiro 1992). Therefore, in the electronic market, brand recognition and the trust associated with a brand name are of great value for competition.

A brand can be defined as a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one sellers or groups of sellers and to differentiate them from those of competitors (Kotler 1991). When a brand has a positive brand equity, consumers react more favorably to an element of the marketing mix for the brand than they do to the same marketing mix element when it is attributed to a fictitiously named or unnamed version of the product or service (Keller 1993). Here, "brand equity" plays a big role in competition in the market. Each brand brings to mind a particular image, an anticipation of what the product will be like and the quality one will receive. These images help convince consumers to buy their products and give them an edge over other competitors (Berry 1993, Keller 1993). In other words, a brand name could serve as a remedy for asymmetric information and help build a trusting relationship between the consumer and the vendor. People subscribe to Bloomberg for financial news because its brand name represents quality of its news services. However, one may hesitate to put the same degree of trust on a news story from an unknown information service company. In short, the existence of asymmetric information leads to an electronic market where household brands will have tremendous advantages in the competition.

Building brand equity, however, is a tremendous challenge. Although the entry barrier is relatively low in the online market and electronic commerce does open the playing field for both big and small companies, establishing a widely recognized online business that can handle heavy traffic from around the world requires huge investment in the infrastructure. Amazon.com is a typical example of that. The majority of their revenue goes into building the business infrastructure and a strong brand name as the world's largest bookseller that operates at a low-cost. Admittedly, not every business can afford to do the same. Obviously, companies with a household brand name (e.g., Wall Street Journal) in the traditional market could easily transfer their reputation into the

electronic market. Also, early entrants to the electronic market will enjoy a brand name that comes with first mover advantages, such as Amazon.com and E*Trade.

On the other hand, small businesses, most of which do not have the advantage of a strong brand name, may have a hard time establishing the online trust enjoyed by their big counterparts. Due to asymmetric information, consumers may wonder if a company is a legitimate business, whether it will deliver the products they have already paid for, what they can do if the product does not meet the promised quality, or whether the product is compatible with other products they already have, as in the case of software. This kind of perceived distrust inevitably prohibits the growth of small online players and prevents the electronic market from being a leveled playing field for big as well as small businesses. Consequently, the possible natural monopoly situation may result in inefficiency of the market and the death of innovation.

Under the circumstances, building an infrastructure to help small businesses survive and prosper becomes a top public policy issue. How to help small businesses build a trustworthy reputation, develop innovative contents, and compete with well-established brand names in the digital economy? Two sets of problems need to be dealt with. One relates to how to overcome the challenges presented by asymmetric information, the other relates to product development and innovation. We next outline a blueprint for a digital product intermediary to illustrate, without going into technical details, what can be done to address the issue.

3. Digital Product Intermediaries

The intermediary primarily acts as a middleman between consumers and content providers – small digital businesses. On the consumer side, for them to trust a small digital business, three concerns have to be addressed: First, consumers want to make sure the companies are really who they claim they are. Second, consumers need more information about the company's product or service quality to trust them and eventually transact with them. Third, consumers need at least the same degree of product customization as that offered by big companies. On the small business side, they need the reputation and the infrastructure provided by the intermediary. Therefore, the digital

intermediary needs to provide the following services to small businesses and consumers.

Strong Authentication

As we pointed out earlier, in the online environment, identities can be forged much more easily than in the physical world. Authenticating the content creators therefore becomes a paramount concern for business transactions. Certification authorities (CA) have recently emerged to provide this type of services. Major players include VeriSign, GTE CyberTrust, and IBM VaultRegistry. They authenticate the identity of each trading party in a transaction by issuing digital certificates based on technological mechanisms such as the public key cryptography (Denning 1982) and digital signatures. A certificate is a digitally signed statement by a CA that binds the identity of an individual or organization to a public key. By digitally signing a certificate, a CA vouches for the identity of the public key holder. When digital certificates are used in business transactions, some of the major security concerns mentioned in section 2, namely confidentiality, message integrity, and user authentication, can be addressed. The benefit for a small business to carry a digital certificate is to increase consumer confidence that they are dealing with a business entity that has been authenticated.

A digital certificate could be revoked after its issuance. For example, if someone fraudulently gains access to a company's certificate, the certification authority can immediately revoke the certificate (recording the certificate's serial number in a database that keeps track of all the certificates that have become invalid) upon reporting of the incident (Ford and Baum 1997). Since all certificates will be verified with the issuer before their acceptance, the revoked certificate can therefore be detected. Even if someone stole a certificate that actually belongs to another business, he won't be able to purport himself as the real certificate owner using a revoked certificate.

An issue of concern is what if a business changes its identity after committing a fraud. Strong authentication would help address this issue. That is, the digital intermediaries will need to trace the history of certificate holders to make sure they can't change their online identity or even if they did, the certificate will contain the information

stating so. This level of authentication provides extra protection for consumers and endorses small businesses that carry the certificate.

The digital intermediary, as a trusted third party, needs to provide authentication services to small businesses. Carrying a valid digital certificate helps small businesses overcome the first consumer concern; that is, they are who they claim they are. What is missing from the services provided by the current certification authority model is the certification of the certificate holder's reputation – is the certificate holder a reputable business entity? Does he deliver product and services in the quality represented? While vouching for the identity of a certificate holder, the current model does not vouch for his reputation. Therefore, the certificate doesn't really help consumers overcome the trust barrier for a no-name small business.

Quality Assurance

Besides authentication services, the digital intermediary also needs to provide quality assurance to its customers. By offering a digital company's product through its services, the intermediary vouches for the reputation and product quality of that company. This service decreases or even eliminates the need on individual company's side to do extensive marketing to build brand equity and reputation, thus saving important resources for product development and innovation.

Small companies, through the services of the intermediary, can reach a much broader set of customers. Marketing literature has shown that renting a reputation – a seller without a brand reputation uses reputation spill-over to sell through a reputable seller – is an effective entry strategy (Chu and Chu 1994). In the digital economy, renting a reputation can be used more widely since creators of digital products could be very diverse and many of them might be small or independent players. Investing in reputation building for them is a major undertaking, which may not even pay off. On the other hand, intermediaries, being long term players, have an incentive to build and maintain their reputation.

To have effective quality assurance to consumers, the intermediary needs to enforce rules on content creators. It acts as an extralegal mechanism to enforce honest

behavior from content providers. Although content creators avoid a reputation building effort on a large scale, they still need to maintain their reputation with the intermediary. By signing up with an intermediary, each content provider guarantees honest behavior and product quality. Deviating would result in being sanctioned by the intermediary. Plenty of instances have shown that extralegal mechanisms such as informal social norms or community standards can help people interact to their mutual advantage. Extralegal mechanisms usually refer to systems governed by informal social norms (Johnston 1996) which can be defined by the specification of desirable behavior together with sanction rules in a community. In such a situation, people behave honestly in many cases because honesty is rewarded and/or defection is punished in future transactions or other social activities. Literature has shown that community standards and extralegal mechanisms, although they are not legally enforced, work effectively at regulating economic relations among communities that adopt them (Bernstein 1992, Ellickson 1991). In fact, nonlegal sanctions can deter breach when the transaction parties have a history of prior dealings that has established a basis of trust and/or a significant prospective future advantage to each in the continuation of the relationship. Companies providing content to the digital intermediaries will have to conform to the quality rules agreed upon by both parties in order to continuously use the services of the intermediaries. In short, enforcing quality rules by the intermediaries is not only effective but also of utmost importance for the reputation of the intermediaries.

Cataloging Services

Interactions among customers and the intermediary will be mediated by an extensive set of directory and catalogue services and mobile agent based systems, which are key elements in integrating content and customizing products. Directories, with information on what is available, at what location, and what is included in the content, allow the intermediary to procure and assemble content. Catalogues give customers the flexibility to look up and choose the type of products they wish to purchase. Currently there are multiple technology developments that can be used to build the directories and catalogues. For example, the Lightweight Directory Access Protocol (LDAP) can be

used to retrieve and manage a variety of directory information. Resource location standards such as the Resource Description Framework (RDF) can be used to describe the content and content relationships available at a particular Web site, and Extensible Markup Language (XML) is very flexible in defining new document types. The catalogues will be dynamically created based on underlying databases available at content providers' sites and will provide an interface that is seamless regardless of the original source or nature of content. Further, the catalogues will provide a vast array of choices which may include various combinations of information components. The mobile agent based systems help retrieve information from the catalogues, while at the same time assembling profiles of customers. Incentive systems should be built in so that customers are assured that such profile information is not abused. The key to having mobile agent systems and dynamic catalogues is to effect the existence of an adaptive system, which can rapidly update the catalogues to reflect individual customer preferences and to make products available on-demand. The agents, in turn, can communicate with each other, ensuring fast dissemination and synchronization of information regarding demand and supply. Such a seamless flow of information will also lead to efficient content procurement and inventory management.

Research Collaboration

Another activity the digital intermediaries can facilitate is research collaboration among participating content providers. With limited resources, small individual companies' research capabilities are often constrained. Developing innovative content for consumers may not be an option if done alone. The intermediary can operate as a market mechanism where consumers propose desired products not yet available and how much they are willing to spend on the products if developed. Then the content providers can pool their expertise and jointly develop the products. For example, in the pharmaceutical industry, drug discovery is normally a long and expensive endeavor and composed of many processes. Most of the major drug discovery efforts are done at big companies that can afford to spend millions of dollars to complete the whole process. Smaller pharmaceutical companies tend to focus on a few processes, such as computer

simulation, which produces digital products. Therefore, the intermediary can help these small companies with different expertise to coordinate and participate in a joint drug discovery research. For instance, one company might have an advanced process that uses supercomputers to simulate experiments on small molecule compounds that could be useful in cancer treatment, while another company may be an expert on chemical analysis. Together they can carry out tasks previously done only by big companies. We will return to this point and elaborate on how the market intermediary works in section 4 where we discuss a new funding process for basic research.

4. Small Business and Public Policy

We're still in the earliest moments of an economic revolution. As competition in the electronic market unfolds, a few issues come to mind concerning public policies for small businesses and the government's role in encouraging R&D and helping businesses grow.

Reputation Building and Collaboration

First, we need to recognize the tendency for businesses in the online market to get larger and larger to achieve economy of scale, because of the cost structure of technology, which could potentially lead to natural monopolies where the economic power is concentrated in the hands of very few players. Small businesses, in response to that, will have to compete by their core competency. Instead of being a highly integrated company that does everything on its own, collaborating with other small businesses through digital intermediaries may be an effective countermeasure to the huge investment required to set up the technology infrastructure in the digital space, thus benefiting by economies of scale. It also compensates for the lack of brand equity and deep pocket.

The second issue is concerned with promoting consumer trust towards small online businesses in order for them to compete with big brand names. Intermediaries are needed to rebalance the playing field and stimulate competition in the online market. They should have strong authentication to endorse small businesses and quality assurance

to protect consumers. This is not only a question of survival for small businesses, but also a public policy issue at a larger scale – when there are only a few players in the market, motivation to innovate diminishes. The government needs to recognize the importance of helping small businesses build their reputation and establish trust among consumers.

Open Technology Standards

Preserving open technology standards should also be a top policy concern. As we said, in the digital economy, integrating digital content and providing customized product bundles are becoming the major trend in content provision. Integrating content, be it software or multimedia objects, from multiple sources means that content provided by different content creators written in different languages for different computing platforms should be able to share data and functions in a networked environment. Interfaces between content components should be seamless and the integration and customization processes should be transparent to customers. Therefore, technology compatibility and interoperability become extremely critical, not only to the success of digital intermediaries, but also the wide adoption of electronic commerce in general. Technologies such as Java RMI (Remote Method Invocation) that is not tied to a specific platform or CORBA (Common Object Request Broker Architecture) that is not tied to a specific language or communications protocol are of paramount importance to the future of the digital economy.

R&D and Research Funding

Finally, and perhaps more importantly, we need to understand the critical role R&D plays for the growth of the digital economy in general and small businesses in particular. Often times, innovating and groundbreaking ideas come from extensive research efforts. Big companies can either deploy their own R&D arm or outsource their research efforts through contracts and grants to research institutions or consulting firms. Small businesses, lacking the resources to do the same, have to rely on research outcome

from the public domain, which inevitably puts them in a competitive disadvantage. The government should reexamine and rethink its role in promoting research and provide alternative ways to encourage active participation in R&D by small businesses. One possible approach would be to set up a government sponsored market mechanism – an intermediary – that fundamentally changes the funding process for basic research. For example, the National Science Foundation has for many years administered grant proposals and funded basic research through various initiatives and programs. While its efforts are commendable, the ad hoc funding process has been less than efficient or satisfactory. A great deal of the creative energy of individual researchers and investigators is consumed by proposal management and administrative burdens associated with the application process. Although NSF recently started accepting research proposals through FastLane, an attempt to computerize the current system and facilitate information exchange through the use of World Wide Web, the fundamental method behind the scene remains the same.

In a radically new design of the funding system and government's role in the system, we propose to apply the market idea to the funding process for basic research (Ba et al 1998b). Economists have long argued that markets and price systems are an effective way of coordinating buyers and sellers and allocating resources (Hayek 1945). Markets create valuation knowledge that plays an important role in guiding new investments. Therefore, it seems natural to introduce the idea of markets to facilitate the funding process of basic research.

In the new design, a government agency such as National Science Foundation would be the one operating the funding market for basic research. At the same time, it would be a buyer representing the public for the benefits of the society. The funding market will be World Wide Web-based, allowing reviewing and bidding access to only qualified buyers (i.e., potential funding groups). It is important that the buyers be qualified before they can participate in the bidding process to avoid abusive use of the market or plagiarism of research ideas. Researchers submit their proposals to the market under different categories, with cross-reference links if it is interdisciplinary in nature. Each time a proposal is submitted, an automatic notification will be sent out to all potential buyers subscribing to the relevant subjects or categories, calling for a review.

Any qualified government agencies or private companies can submit their sealed bid to NSF, indicating how much value they think the potential results are worth to them, which will be used to calculate the amount they will contribute to the research effort. The combined valuation from multiple sources provides a more complete value for the research project than having simply one person or one panel reviewing the project. The market may be run weekly or when a certain number of proposals have been submitted. The market process will reveal which research projects have the highest value for the society. The research proposals that maximize the value of market surplus will be funded. Through the market, researchers no longer need to submit proposals multiple times in order to get funding from multiple sources, eliminating the extra burden of proposal management. In addition, the market can facilitate a partnership between government agencies and industries in the effort to support more basic research that might be too expensive for individual companies alone to develop. Moreover, greater interactivities can be fostered between researchers and the potential funding groups through various communication channels brought by the market – the bidding process itself serves as a quick feedback to researchers in terms of research viability and applicability.

A theoretical model of the market can be found in Ba et al (1998a). Two particular points need to be mentioned. First, the model is incentive compatible – the only beneficial way of bidding is for companies to reveal their true valuation of research. So it does not pay off if companies wish to free ride the research results by putting a lower than true valuation. Second, the funding market takes into account the fact that research projects are often interrelated and interdependent. The value of the knowledge created by research projects often comes from project bundles, that is, combinations of multiple pieces of knowledge from multiple projects. Each project alone may have only limited value but together they can be of big impact because of their complementary nature (i.e., $1+1>2$). Therefore, each project alone may not generate enough interest but when combined with complementary projects on the funding market, funding sources may have a greater incentive to fund the research. Our market model explicitly deals with the complementarity issue in the bidding process by allowing potential funding sources to submit a value for a project bundle.

Our theoretical analyses have shown that the proposed market mechanism can optimally select what research is most valued and what to invest in. In addition, more research projects can be funded through the market because of the economy of scale advantage that comes with the market – when research results can be used by multiple entities in bundles that have greater values because of their complementary nature, it is more likely that the creation of the results, the research projects, will be funded.

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Professor Whinston in the last two years has not received federal grant, contract, or subcontract that relates to the hearing before the house committee.

**Testimony of Alan W. Anderson
Senior Vice President – Technical Services
American Institute of Certified Public Accountants (AICPA)**

**Before the
House Committee on Small Business
May 26, 1999**

Summary

There are significant barriers to the growth of electronic commerce for small business that reflect its customer's concerns about the risks of doing business on the Internet. Customers ask questions like:

- How do I know whom I am conducting a transaction with?
- Will I receive what I ordered in the condition that I expect?
- Is it a reliable business?
- Is it a secure site?
- Will my privacy be protected?
- Will I get scammed?

The Internet provides an exceptional opportunity for small businesses to conduct business transactions efficiently and effectively in cyberspace. There are various projections for overall growth of such business from about \$1.0 billion today to more than \$100 billion in the next five to eight years. For these projections to become a reality and for small business to be able to be a part of this growth opportunity, the above customer concerns have to first be addressed.

The CPA profession, through the American Institute of Certified Public Accountants, has researched concerns about electronic commerce and believes the CPA profession is uniquely positioned to offer a comprehensive private sector response to these issues (in essence consumer protection) on the Internet. In response to this need, the AICPA, together with the Canadian Institute of Chartered Accountants (CICA) has developed a new service called *CPA WebTrust™*, that is designed to build consumer trust and confidence in the electronic marketplace.

CPA WebTrust requires a Web site to:

- disclose its business and information privacy practices and to follow those practices,
- maintain effective controls over the integrity of transactions, and
- maintain effective controls to protect private customer information.

After a specially licensed CPA has conducted an independent and objective examination of a Web site and determined that the site has complied with the *WebTrust* Criteria, the Web site can obtain and display the *CPA WebTrust* seal of assurance. However, the process doesn't end there. *CPA WebTrust* requires ongoing periodic updates to ensure that the Web site continues to comply with the *WebTrust* Criteria.

We believe this new symbol of trust is a model for a private sector initiative that will both enhance e-commerce success on the Internet for businesses large and small and also provide for consumer protection. *CPA WebTrust* provides full, fair, and honest disclosure and provides assurance to customers or potential customers that a small business engaging in electronic commerce is legitimate and has appropriate controls to protect a customer's interests.

This will allow the customer or potential customer to make informed decisions about doing business on the Internet. Many legitimate small businesses will be required to "raise the bar" for doing business with customers on the Internet in order to qualify for *CPA WebTrust* but in so doing, will lay the foundation for future sustainable growth through the establishment of sound business practices and policies

* * * * *

Introduction

My name is Alan Anderson and I am representing the more than 330,000 Certified Public Accountants in the United States that are members of the American Institute of Certified Public Accountants (AICPA) in my capacity as a Senior Vice President for Technical Services of the AICPA. I am also a former partner of McGladrey & Pullen LLP, a public accounting firm for which I worked over 17 years.

In my testimony today, I will outline the needs of customers in the electronic commerce marketplace, the steps that the CPA profession is taking to provide assurance to customers

regarding these needs, and how these initiatives are postured to provide not only a private sector response to the associated consumer protection needs, but also a gateway to allow small businesses to compete effectively and on the same playing field as larger companies.

Although I represent the AICPA today, I wish to point out that e-commerce is a global initiative. The service that I will describe is the result of a joint effort between the AICPA and its counterpart in Canada, the CICA, and has been recently licensed to similar accounting organizations in England, Scotland, Ireland, Australia and New Zealand. We anticipate more expansion in the global marketplace in the coming months. For purposes of this statement, references to the AICPA also generally include our international partners.

Electronic Commerce Marketplace and Barriers to Consumer Acceptance

There have been many projections of the potential growth of consumer-oriented business on the Internet. These are generally in the range of \$1.0 to \$3.0 billion (less than 1% of total retail sales) today to over \$100 billion in five to eight years. These same studies often cite the consumer's concern about the need for protection related to the legitimacy of on-line business and the privacy and security of their transactions and use of personal information. As a result, many studies indicate that only about 20 to 25% of on-line users are willing to complete a purchase transaction over the Internet. As the Internet develops and matures, its success will therefore depend on gaining and maintaining the trust of consumers. This trust will be critical to the success of small businesses that engage in electronic commerce and depend on consumer confidence in place of the name recognition or tremendous financial resources familiar to larger businesses.

In order to understand the views of online users toward purchasing products on the Internet, the AICPA commissioned Yankelovich Partners to conduct a survey in mid-1997. This survey, conducted among 1,003 Americans who are 18 years old or older and subscribe to an online service either at home or at school indicated that:

- On-line users are receptive to buying a variety of products over the Internet but often do not do so because of security fears.

- A large majority of on-line users say they would not provide information about their income (91%) or give out their credit card number (85%) when shopping on-line.
- Large majorities are even hesitant to provide their phone number (74%) or address (67%).
- A lack of security is the number one reason given by non-buyers for not purchasing products on-line.
- Having credible assurance about the security of on-line transactions would greatly increase on-line purchasing of products and services.

This research indicated that there was a need to build consumer trust and confidence in order to overcome these barriers and for electronic commerce to reach its full potential.

The Yankelovich survey also explored these consumers' views about the concept of *CPA WebTrust*, which was then under development by the AICPA. The survey indicated that:

- More than three-quarters of on-line users have a favorable impression of *CPA WebTrust*.
- Significantly, nearly half (46%) of on-line users say the *CPA WebTrust* seal would make them more likely to purchase products and services on-line.
- The fact that CPAs are providing this seal of assurance is a key factor in creating user acceptance of *CPA WebTrust*.
- A majority of on-line users — particularly those currently or most likely to shop on-line — say CPA endorsement makes this service more trustworthy, useful, and important.

These findings were reaffirmed by similar research results that were released earlier this year by Ernst & Young LLP, in "The Second Annual Ernst & Young Internet Shopping Study".

Role of the CPA Profession

For over 100 years, the objectivity and integrity of the CPA has played a major role in shaping the U.S. economy. Consider the development of the U.S. securities market. Without question, the U.S. capital markets are the most effective and efficient in the world. One key element of the efficiencies this market enjoys is the audited financial statements reported on by the CPA.

With the advent of the Securities Acts of 1933 and 1934 and the requirement for audited financial statements to supplement the sale of securities, the CPA stepped in to fill a void in the capital market place. Because of the independence, integrity and objectivity that a CPA brings to an audit engagement, public confidence in the securities market grew – and continues to grow. Investors learned that an independent and objective professional had examined the financial statements of the seller. The investor could now rely with confidence on the financial information included within a prospectus. This reliability has freed the investor to focus more clearly on assessing management's ability to grow shareholder value.

A strong parallel between the Internet and the development of the securities market exists today. In many respects, electronic commerce on the Internet is in its infancy. The potential economic benefits of electronic commerce have yet to be realized by retailers, especially the small business owner, or consumers.

One reason for this is the lack of trust and confidence consumers have about the Internet. How do I know whom I am transacting with? Is this a reputable company that I can depend on? Is the Internet reliable? Is it secure? These are just several of the questions in potential customers' minds.

To increase consumer confidence and to address these fears and concerns, the AICPA has developed and is offering the *CPA WebTrust* service, with its sister Institutes across the world. In simple terms, Web sites can elect to be audited by public accounting firms and CPAs, who are specifically licensed by the AICPA. Those Web sites that demonstrate they meet all of the *WebTrust* Principles and Criteria are awarded the right to display the *CPA WebTrust* seal of assurance.

The *CPA WebTrust* seal of assurance is a symbolic representation of a CPA's unqualified report, which also appears on the Web site. [Please refer to Appendix A for an example of what a customer will see as he or she views and clicks on the *CPA WebTrust* Seal.]

The WebTrust Principles and How WebTrust Works**The WebTrust Principles**

CPA WebTrust is based on three main principles designed to ensure that Web site operators institute practices to protect consumer interests, while at the same time providing small businesses with the tools necessary to stimulate future growth and sustainability on the Internet. Web site management must make a written assertion that their Web site follows these principles. These principles are described as follows.

Business Practices & Information Privacy Disclosures Principle

The entity discloses its business and information privacy practices for electronic commerce transactions and executes transactions in accordance with its disclosed business and information privacy practices.

To enhance customer confidence in electronic commerce, it is important that the customer is informed about the entity's business and privacy practices for electronic commerce transactions. As a result, it is required for the business to properly disclose its business practices for dealing with such matters as the following:

- A description of the goods or services being offered
- The time frame for completion of transactions
- Method of delivery of goods or services, including customer options
- Payment terms
- Electronic settlement practices and related charges to customers
- Product return policies
- How to obtain customer service and support
- How to file claims, ask questions or register complaints
- How to file a complaint for resolution by a third party using binding arbitration
- How information being collected is being used, maintained or distributed to others,

This principle relates not only to the electronic commerce transaction processes that the business uses, but also provides assurance to a potential customer that the business has a proven history of demonstrating compliance with these disclosures.

WebTrust does not include any direct representation as to the quality of its goods or services nor their suitability for any customer's intended purpose (such matters are outside the scope of the *WebTrust* Principles and Criteria. However, they are covered, in part, in the *WebTrust* Consumer Recourse Mechanism provided through a third party binding arbitration feature).

Transaction Integrity Principle

The entity maintains effective controls to provide reasonable assurance that customers' orders placed using electronic commerce are completed and billed as agreed.

These controls and practices address matters such as appropriate transaction identification, transaction validation, the accuracy, completeness, and timeliness of transaction processing and related billings, the disclosure of terms and billing elements and, if applicable, electronic settlement. These matters are important to promote confidence in electronic commerce and effectively demonstrate to a potential customer a small business's ability to deliver on its sales promise. This demonstrated ability serves to increase sales for the small business owner engaging in electronic commerce by reducing the consumer's fear in dealing with the anonymity associated with Internet shopping.

Information Protection Principle

The entity maintains effective controls to provide reasonable assurance that private customer information obtained as a result of electronic commerce is protected from uses not related to the entity's business.

These controls address matters such as:

- The collection and use of customer data and a customer's access to such data
- Encrypting private customer information (such as credit card numbers and personal and financial information) transmitted to the entity over the Internet,
- Protecting such information once it reaches the entity,
- Requesting permission of customers to use their information for purposes other than those related to the entity's business, and
- Obtaining customer permission before storing, altering, or copying information on the customer's computer.

Consumer concern about the safeguarding of private information traditionally has been one of the most significant deterrents to undertaking electronic commerce transactions.

The WebTrust Criteria

In order to provide more specific guidance on meeting the *WebTrust* Principles, the *WebTrust* Criteria have been developed. These criteria provide an objective basis and a consistent set of measurement criteria for CPAs to use in testing and evaluating Web sites and an effective benchmark for the small business to use in developing a sound electronic commerce business. The small business must be able to demonstrate over a period of time, at least two months and typically three months or more, that (1) it actually executed transactions in accordance with the business and information privacy practices it discloses for electronic commerce transactions, (2) its controls were operationally effective, (3) it maintains a control environment that is conducive to reliable business practice disclosures and effective controls, and (4) it maintains monitoring procedures to ensure that such business practices remain current and such controls remain effective. These concepts are an integral part of the *WebTrust* Criteria. The full text of the *CPA WebTrust* Principles and Criteria document is available at the AICPA's Web site at www.aicpa.org.

The CPA WebTrust Examination

Obtaining the Seal

To obtain the *CPA WebTrust* seal of assurance, an on-line business must meet all the *WebTrust* Principles as measured by the *WebTrust* Criteria associated with each of these principles. In addition, the entity must (1) engage a CPA who has been specifically licensed by the AICPA to provide the *CPA WebTrust* service and (2) obtain an unqualified report from such CPA.

In order to award the *CPA WebTrust* seal, the CPA must examine the Web site in accordance with professional standards established by the AICPA. Those standards require that the CPA plan and perform the examination in such a manner as to obtain reasonable assurance that management's assertion is not materially misstated.

The CPA tests management's assertion that its Web site meets all of the *WebTrust* Principles and Criteria. The CPA's examination will include: (1) obtaining an understanding of a small business's electronic commerce business and information privacy practices and its controls over the processing of electronic commerce transactions and the protection of related private customer information, (2) selectively testing transactions executed in accordance with disclosed business practices, (3) testing and evaluating the operating effectiveness of the controls, and (4) performing such other procedures as are considered necessary in the circumstances.

In many respects, the standards a CPA must follow in performing a *CPA WebTrust* engagement are similar to those followed in performing an audit of financial statements. Both types of engagements require the same planning, supervision and due professional care. In addition, CPAs use a screening process for new clients that ensures that they are legitimate businesses and have a history of meeting their commitments.

Independence and objectivity are two other key elements of both the audit and the *CPA WebTrust* engagement. For example, a CPA cannot have a financial interest in a business that he or she is examining for the *CPA WebTrust* seal. It is these two characteristics that provide a great deal of value to both users of financial statements and the *CPA WebTrust* seal of assurance. Because the CPA has no interest in the business under examination, he or she can make fair and objective assessments of the controls and procedures that management has in place.

Keeping the Seal

Once the seal is obtained, the business will be able to continue displaying it on its Web site provided:

- Its CPA updates his or her assurance examination of the assertion on a regular basis. The interval between such updates will depend on matters such as:
 - The nature and complexity of the business's operation,
 - The frequency of significant changes to its Web site,
 - The relative effectiveness of the business's monitoring and change management controls for ensuring continued conformity with the *WebTrust* Criteria as such changes are made, and
 - The CPA's professional judgment.

For example, an update will be required more frequently for a financial institution's fast-changing Web site for securities transactions than for an on-line service that sells archival information using a Web site that rarely changes.

- In no event would the interval between updates exceed 3 months and this interval often may be considerably shorter.
- During the period between updates, the on-line business informs the CPA of any significant changes in its business policies, practices, processes, and controls if such changes might affect the business's ability to continue meeting the WebTrust Principles and Criteria, or the manner in which they are met. Such changes may trigger the need for an assurance update or, in some cases, removal of the seal until an update examination by the CPA can be made. If the CPA becomes aware of such a change in circumstances, he or she would determine whether an update examination would need to be performed and whether the seal would need to be removed until the update examination was completed and the updated auditor's report is issued.

Protecting the Seal

The AICPA has teamed with VeriSign, Inc., a leading provider of digital authentication and security services on the Internet, to provide protection for the *CPA WebTrust* seal. VeriSign conducts an independent verification to ensure that the Web site is a genuine site for the named business and provides a highly secure digital certificate verify the site's identity and protect the *CPA WebTrust* seal.

How CPA WebTrust Helps Protect a Customer's Interests while Stimulating Growth for Small Business

We believe that *CPA WebTrust* will help protect the consumer in the following ways:

- Required disclosure of business practices provides significant information for the consumer on which to base purchasing decisions. Our research with small business owners displaying the *CPA WebTrust* seal has shown that a reliable form of disclosure on business practices coupled with the assurance of knowing that these practices have a demonstrated history of being followed significantly reduces the amount of time needed to educate potential customers who request information through email or telephone calls. One small business displaying the *CPA WebTrust* seal has reported to the AICPA that it experienced a significant increase in sales followed the posting of the WebTrust seal to its web site.
- Required controls over transaction integrity and information protection help ensure that the risks of doing business over the Internet are minimized. Obviously, this perceived risk by the customer is greater when doing business with an unrecognizable entity, as is often the case with small businesses.
- For Web sites who do not currently meet the *CPA WebTrust* criteria, the "bar will be raised" for doing business on the Web thereby laying the foundation for small businesses to be able to grow and stay a viable force on the Internet.
- Independent verification by the respected CPA profession helps build consumer trust and confidence especially since this is updated at least once every three months. Increased trust and confidence will undoubtedly benefit small business, which might otherwise lack credibility on the Internet when competing against larger, more established companies that enjoy name recognition and healthy marketing resources.

- The CPA and VeriSign both verify the legitimacy of the business and that the business owner's Web site is genuine. This provides reasonable assurance that only legitimate Web sites qualify for the *CPA WebTrust* seal.
- VeriSign provides a digital certificate to protect the *CPA WebTrust* seal and also uses so called "spider technology" to scan the Internet for any sites displaying a WebTrust-like seal without authorization. Attempts to counterfeit the *CPA WebTrust* seal would be quickly detected.
- The AICPA requires CPAs to attend training and obtain a special license in order to provide the *CPA WebTrust* service. As part of the license, the CPA firm agrees to an independent quality inspection of its *CPA WebTrust* services. Most CPA firms have been in the business of providing valuable audit, tax and consulting services to small businesses for decades.
- *CPA WebTrust* protects American consumers who shop at overseas Web sites and at the same time, provides trust and confidence to the overseas shopper looking to conduct commerce at the web site of a small business owner in the United States. Because the Internet is global, the AICPA has licensed similar accountant's institutes in a number of countries to offer *WebTrust* as a service to their members.

In Conclusion

Although still in its infancy, electronic commerce shows extremely high potential for our economy and will undoubtedly be of huge benefit to small business given the relatively low cost of entry. It provides convenience and promotes efficient markets therefore stimulating economic growth. We believe *CPA WebTrust* allows this growth to be an opportunity the small business owner can be a part of. No doubt there will be both intentional abuses and unintentional errors affecting consumers and therefore decreasing trust in this new medium. However, we believe that, if its use becomes wide spread, *CPA WebTrust* will enhance consumer protection on the Internet, and will build the consumer trust and confidence that is needed for electronic commerce to achieve its full potential.

It is our goal that consumers around the world will look to those sites with the *CPA WebTrust* seal as the safe places to shop on the Internet. Small business will be able to effectively compete

against large businesses once this factor of trust is established and in turn, promote a healthier economy. We believe *CPA WebTrust* will help to create a level playing field for those businesses that don't otherwise have name recognition or the resources necessary to create high visibility in the marketplace. Although Web sites that do not initially qualify for *CPA WebTrust* will need to make the necessary changes to their electronic commerce business practices to meet the *WebTrust* Principles and Criteria, we believe in the long run, that this will better position them for growth and sustainability on the Internet by providing a framework as to how sound electronic commerce is conducted.

We also believe that CPA WebTrust is an excellent model for implementing consumer protection and privacy in the private sector.

* * * * *

I would like to thank you once again for the opportunity to appear here today. It has been a privilege and an honor to participate.

I would be pleased to answer any questions that you or the Members of this subcommittee may have for me.

Should you desire, I would also be pleased to demonstrate *CPA WebTrust* live on one of the early Web sites that obtained the *CPA WebTrust* seal.

**ALAN W. ANDERSON, CPA, Senior Vice President, Technical Services
American Institute of Certified Public Accountants (AICPA)**

Mr. Anderson's role at the AICPA includes responsibility for all technical aspects of the CPA profession, including the development of technical standards and the profession's self-regulatory activities. He also oversees the AICPA's Personal Financial Planning (PFP) Division, Tax Division, Industry and Management Accounting Division, Management Consulting Services (MCS) Division, Information Technology Division, and the Partnering for CPA Practice Success (PCPS) Section.

Mr. Anderson also has responsibility for the AICPA's initiative on expanded assurance services for the CPA profession, which includes the CPA WebTrust program. He is a member of the AICPA, the Minnesota Society of CPAs, and the Information Systems Audit and Control Association.

Prior to joining the AICPA in November 1996, Mr. Anderson was a line partner and the national director of audit with the CPA firm of McGladrey and Pullen, LLP (Minneapolis, Minnesota), where he gained over seventeen years of experience in audit, control and security matters with some of the firm's largest clients in a variety of industries.

Appendix

A

Resource Marketing Home | Help | Internet Traffic | Search | Contact

Dialup Access Web Hosting E-Commerce Services TradeBanners Promotional Products



*Earn Money from your website...
Join our Affiliate Program!*

Clients
[Resource Marketing in the News!](#)
[Employment](#)
[Full Color Printing](#)
[Fun Links](#)
[Request CPA WebTrust info](#)

 Tired of Waiting?
 Check out Internet backbone traffic...

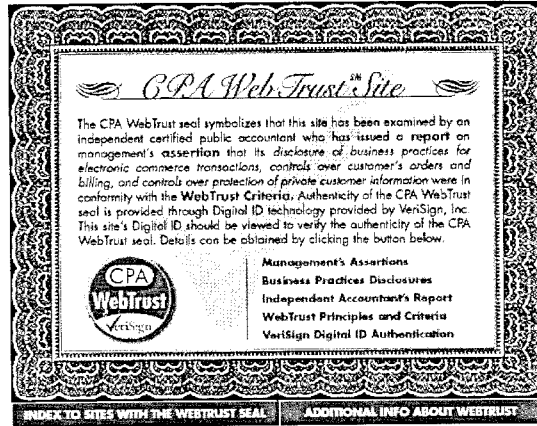


TradeBanners
 We bring you more hits by publicizing your site at no cost to you!

Try our **FREE Online Domain Name Checker!**



TrustCart™ – the easy way to add E-commerce!





Management Assertions

Resource Marketing, Inc. on its Web site for electronic commerce (at resource-marketing.com) asserts the following:

We have disclosed our business practices for electronic commerce transactions and executed transactions in accordance with these disclosed business practices,

We have maintained effective controls to provide reasonable assurance that customers' orders placed using electronic commerce were completed and billed as agreed, and

We have maintained effective controls to provide reasonable assurance that private customer information obtained as a result of electronic commerce was protected from uses not related to our business

during the period January 1, 1998 through February 28, 1999 in conformity with the AICPA/CICA WebTrust Criteria.

RESOURCE MARKETING, INC.

By: Christopher Swainhart, President

© 1998, Resource Marketing, Inc.



Independent Accountants' Report

To the Management of Resource Marketing, Inc.:

We have examined the assertion by the management of Resource Marketing, Inc. that "on its Web site for electronic commerce (at resource-marketing.com) during the period January 1, 1998 through February 28, 1999, Resource Marketing, Inc.:

- **disclosed its business practices for electronic commerce transactions and executed transactions in accordance with its disclosed business practices,**
- **maintained effective controls to provide reasonable assurance that customers' orders placed using electronic commerce were completed and billed as agreed, and**
- **maintained effective controls to provide reasonable assurance that private customer information obtained as a result of electronic commerce was protected from uses not related to Resource Marketing Inc.'s business in conformity with the AICPA/CICA WebTrust Criteria." Resource Marketing Inc.'s management is responsible for its assertion. Our responsibility is to express an opinion on management's assertion based on our examination.**

Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform our examination to obtain reasonable assurance that management's assertion is not materially misstated. Our examination included (1) obtaining an understanding of Resource Marketing Inc.'s electronic commerce business practices and its controls over the processing of electronic commerce transactions and the protection of related private customer information, (2) selectively testing transactions executed in accordance with disclosed business practices, (3) testing and evaluating the operating effectiveness of the controls, and (4) performing such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

Because of inherent limitations in controls, errors or fraud may occur and not be detected. Also, projections of any evaluation of controls to future periods are subject to the risks that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Resource Marketing Inc.'s management's assertion for the period January 1, 1998 through February 28, 1999 is fairly stated, in all material respects, in conformity with the AICPA/CICA WebTrust Criteria.

The CPA WebTrust seal of assurance on Resource Marketing Inc.'s Web site for electronic commerce constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update this report or provide any additional assurance.

This report does not include any representation as to the quality of Resource Marketing, Inc.'s services nor their suitability for any customer's intended purpose.

Fleming, Brockschmidt & Durkin PLL

<http://resource-marketing.com/webtrust/report1.html>

5/24/99

TB Accountants' Report
Certified Public Accountants

Page 2 of 2

Cincinnati, Ohio
March 1, 1999

© 1998, Resource Marketing, Inc.



Disclosure of Business Practices

1. What is your policy regarding customer privacy?

We never provide any other parties with access to your email address, postal address, or any other information that we may collect from you.

2. Do you use cookies, and do you store any information on my machine?

Resource Marketing uses no cookies and stores no information on your machine in the electronic commerce process.

3. What is the average time from the placement of my order to the delivery of an order?

TradeBanner member registrations, **TradeBanner** advertising purchases, **Web Hosting** and **Dialup Services** applications are generally processed within 2 business days.

4. What are your payment terms for TradeBanner registration and TradeBanner advertising purchases?

TradeBanners services need payment in full by credit card or check before services are rendered.

5. What fees are due to initiate Web Hosting or Dialup services?

Setup fees, the current month's prorated fees, and the next month's monthly charges are due when your order is placed.

6. How will I be billed for monthly Web Hosting or Dialup charges?

Monthly charges are billed in advance. We will charge your credit card on the first of every month for that month's services. Payments made by check are due no later than the 10th of the month.

7. Will the customer be informed of problems with a delivery and their options?

We will contact you as soon as we know your order will be delayed. The only reason your order could be delayed is if your credit card is declined or your check is returned, in which case we will contact you immediately for another card number or to make other payment arrangements.

8. How are the items normally delivered?

TradeBanners: Banners over the Internet, password and account numbers emailed.

Web Hosting: Usernames and passwords via email.

Dialup Services: Within the greater Cincinnati, Ohio area you can have software installed on

your computer and receive training by one of our technicians for a flat fee of \$95.00 at your location. Outside Cincinnati we fax, phone, or email your account names and passwords.

9. Are there any charges related to ordering electronically?

No. No additional fees are charged when placing an order electronically.

10. How may services be cancelled?

TradeBanners: Once your order is initially processed, your order cannot be cancelled.

Web Hosting: Once your order is processed, your web hosting agreement can be cancelled upon 30 days written notice. You will be liable for services rendered during those 30 days.

Dialup Services: Once your order is processed, your dialup service can be cancelled upon 30 days written notice. You will be liable for services rendered during those 30 days.

11. Are there any other terms applicable?

ADDITIONAL TERMS AND CONDITIONS:

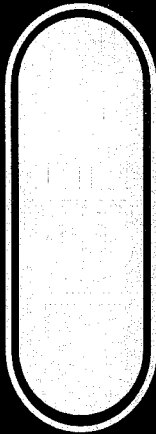
A late payment charge of 1.5% per month is due on overdue accounts. If a customer fails to make payment in full when due, customer shall be responsible for all collection costs incurred by Resource Marketing, Inc. including attorneys' fees and court costs.

12. If I have a question or complaint, where can I mail it?


Resource Marketing, Inc.
61 Covert Place
Ft. Thomas, KY 41075

13. Is there a phone number where I can reach an employee?

For customer service and other information contact us at (606) 441-8700, Monday through Friday, 9am to 5pm EST. Any calls placed outside those hours will be transferred to our voice mail system and will be returned the next business day. Calls during this period reaching a busy signal will be routed to a voice mail system checked multiple times daily. We also are available 7 days a week via e-mail at help@resource-marketing.com, and try to return email within the 2nd business day.



*CPA WebTrust*SM
Building Trust & Confidence
in Electronic Commerce



Chartered Accountants of Canada
Comptables agréés du Canada



WebTrust at a Glance

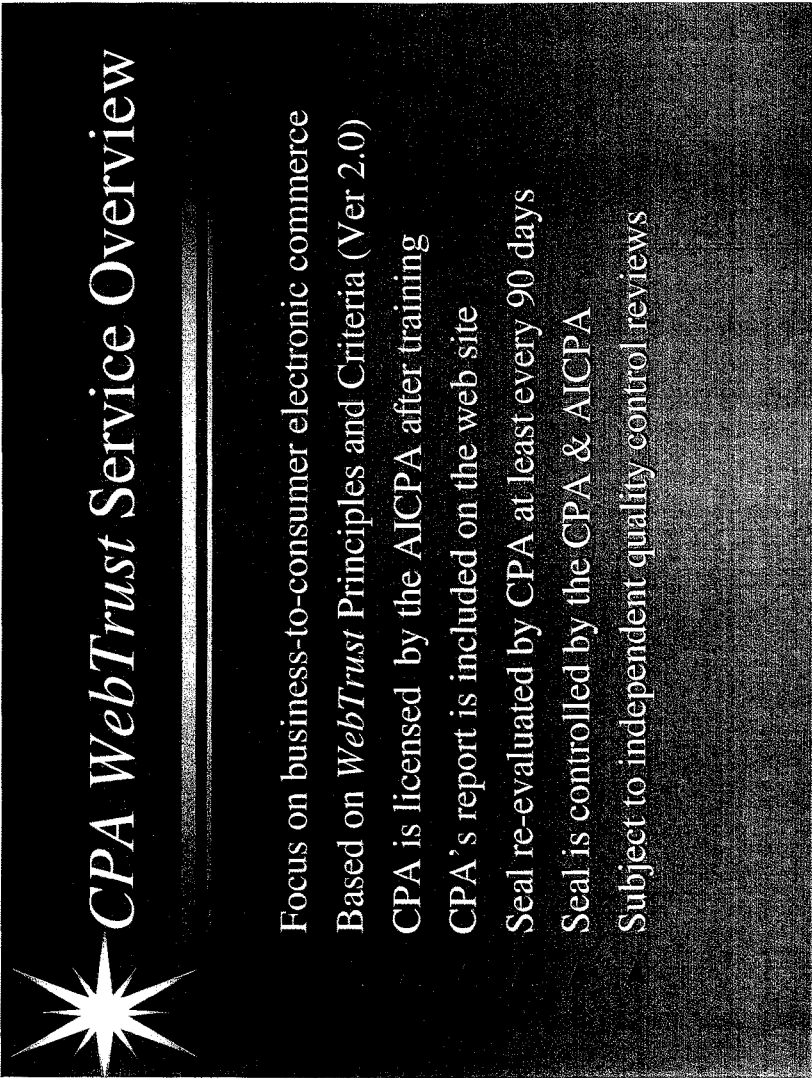
Comprehensive Business Disclosures
Security Testing
Privacy Testing
Transaction Fulfillment Testing
Consumer Recourse Provision
International Presence
Quality Control Reviews of CPA Firms
Fraud Deterrent



What User Sees by Clicking on the Seal

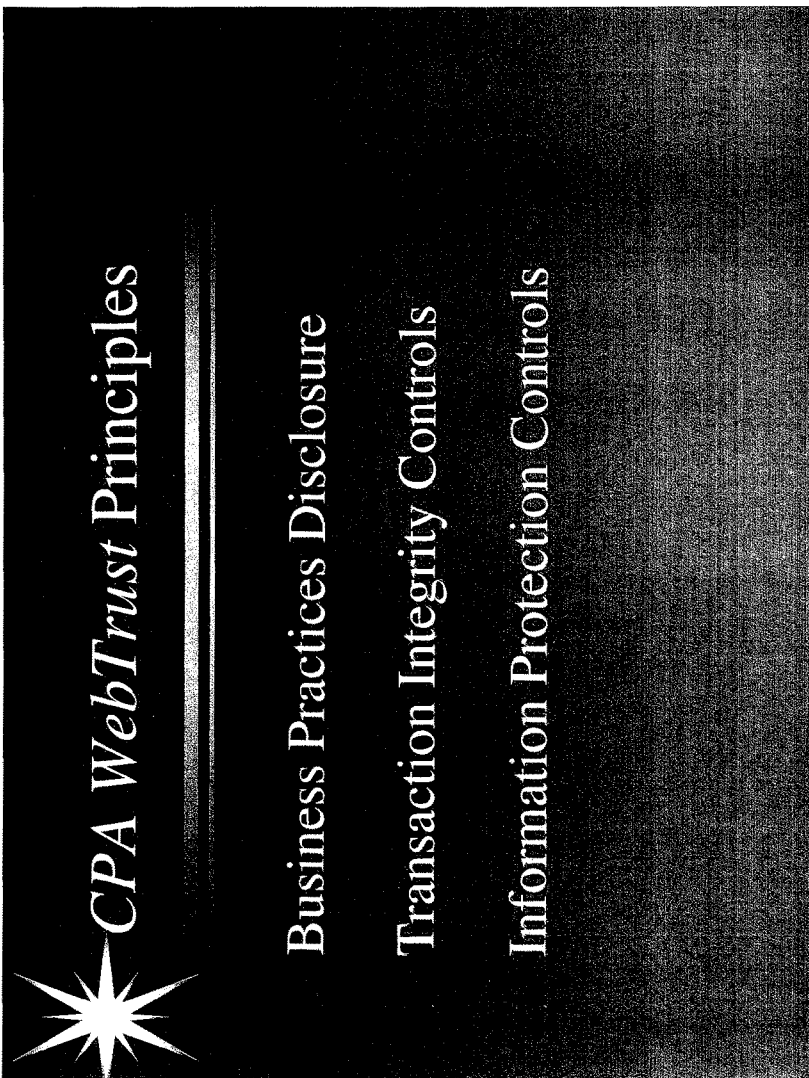


- CPA's attestation report
- Business practices disclosures
- Link to *WebTrust* Principles & Criteria
- Management's assertions
- VeriSign seal authentication information
- Other relevant information

A dark, textured rectangular graphic with a white starburst logo in the top left corner. The text is white and arranged in a list-like format. The title 'CPA WebTrust Service Overview' is at the top, followed by a horizontal line. Below the line are seven bullet points, each starting with a white diamond symbol.

CPA WebTrust Service Overview

- ◆ Focus on business-to-consumer electronic commerce
- ◆ Based on *WebTrust* Principles and Criteria (Ver 2.0)
- ◆ CPA is licensed by the AICPA after training
- ◆ CPA's report is included on the web site
- ◆ Seal re-evaluated by CPA at least every 90 days
- ◆ Seal is controlled by the CPA & AICPA
- ◆ Subject to independent quality control reviews






CPA WebTrust Principles

Business Practices Disclosure

The entity discloses its business practices for electronic commerce transactions and executes transactions in accordance with its disclosed business and information privacy practices.



Business Practices Criteria

Terms & conditions by which it does business

Nature of the goods, information, or services

Where customers can obtain warranty and other service

Information to allow customers to file claims & complaints

Information Privacy



Business Practices Criteria

NEW CONSUMER RECOURSE MECHANISM

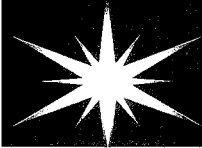
Consumer can resolve complaints related to:

The WebTrust Principles & Criteria

Accuracy, completeness, & distribution of private customer information

Quality of merchandise

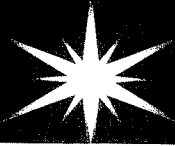
Binding Arbitration initiated electronically focusing on ease of use to consumer



CPA WebTrust Principles

Transaction Integrity

The entity maintains effective controls to provide reasonable assurance that customers' transactions using electronic commerce are completed and billed as agreed.



Transaction Integrity Criteria

CPAs perform rigorous detailed testing of internal controls and consumer transactions related to such items as:

Orders are checked for accuracy & completeness

Positive customer acknowledgement is received

Proper goods or services are provided

Billing & settlement is done properly



CPA WebTrust Principles

Information Protection

The entity maintains effective controls to provide reasonable assurance that private customer information obtained as a result of electronic commerce is protected from uses not related to the entity's business.



Information Protection Criteria


CPAs perform rigorous detailed testing of internal controls and consumer transactions related to such items as:

Collecting consumer information

Transmission of private consumer information

Protection and use of private consumer information

Protecting consumers' computers and files from viruses



Assessing Internal Controls

Integral part of the Transaction Integrity and Information Protection Criteria

A control environment must be conducive to:

- Reliable business practice disclosures on its Web site
- Effective controls over electronic commerce transaction integrity
- Effective controls over protection of private customer information

Based on rigor of testing, WebTrust acts as an Ecommerce fraud deterrent



How to Obtain a WebTrust Seal

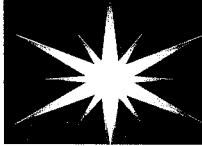
Contact a licensed CPA (150 firms in US)

CPA determines level and extent of testing

Set time frame for reassessment of

WebTrust seal (not to exceed 90 days)

Cost: \$1,400 per year + CPA's time

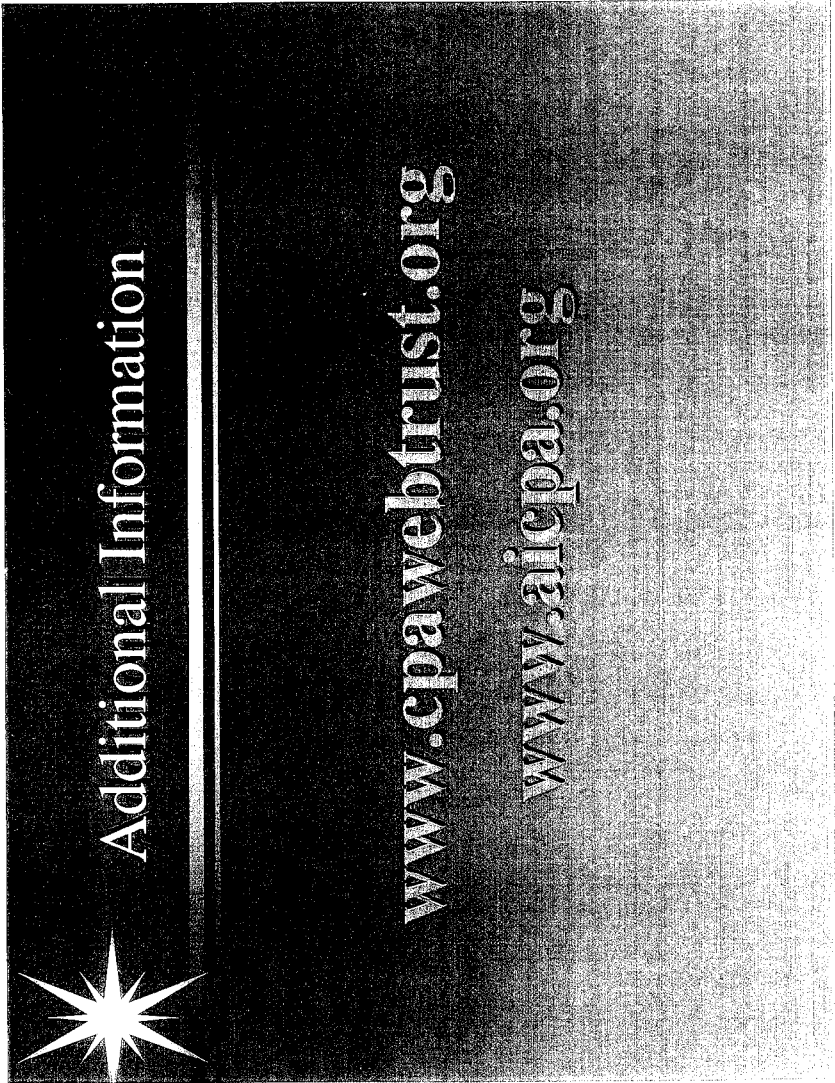


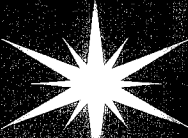
WebTrust: A Global Service

WebTrust is offered by CPAs or their equivalents in:

- / United States
- / Canada
- / United Kingdom
- / Ireland
- / Australia
- / New Zealand
- / Within 60 days: Netherlands, France, Belgium, Germany

WebTrust is the same product worldwide - adaptable to accommodate changes in laws/regulations



 Additional Information

www.cpawebtrust.org

www.aicpa.org



CPA WebTrust Fact Sheet

- CPA WebTrust is a comprehensive electronic commerce seal of assurance designed to build trust and confidence among consumers and businesses purchasing goods and services over the Internet. Developed jointly by the American Institute of Certified Public Accountants (AICPA) and the Canadian Institute of Chartered Accountants (CICA), WebTrust is currently being offered by specially trained and licensed CPAs in the US, Canada, Puerto Rico, England, Scotland, Ireland and Wales.
- The CPA WebTrust seal of assurance is placed directly onto the home page or transaction page of the online business, thereby assuring consumers that the business is in compliance with CPA WebTrust *Principles and Criteria*. Consumers can be confident that the business is legitimate and operating under standard business practices and controls. A seal will be awarded to the online business only if it passes the examination by the licensed CPA.
- Clicking on the seal allows consumers to read the CPA's attestation report that granted the online business its CPA WebTrust seal of assurance, as well as the date on which the seal was granted, its expiration date and links to other Web site businesses with active WebTrust seals.
- CPA WebTrust *Principles and Criteria* examines three broad categories:
 1. **Business Practices and Disclosures:** the way in which the Web site does business, takes orders, handles fulfillment, processes backorders, and other business considerations;
 2. **Transaction Integrity:** the ability of the online business to deliver on its sales promise by delivering what was ordered, at the agreed-upon price and in the requested time-frame to the customer;
 3. **Information Protection and Privacy:** the ability of the online business to ensure that personal information will be transmitted securely and that confidential information will be kept private;
- CPA WebTrust has a built-in customer complaint resolution mechanism. The AICPA has established a relationship with the National Arbitration Forum to use binding arbitration to resolve customer complaints about all of WebTrust's primary areas, including privacy, customer service issues and product quality.
- Given the dynamic, fast pace with which the Internet changes, each Web site business displaying the CPA WebTrust seal of assurance must undergo a review process with the CPA to renew the seal at least every 90 days. This renewal period may be shorter for some businesses, depending on their complexity. CPA WebTrust seals will be revoked from online businesses that do not pass the review process.
- Only CPAs who have completed training and been licensed by the AICPA in accordance with performance standards are qualified to issue the CPA WebTrust seal of assurance. Training, certification and licensing ensure consistent application of the CPA WebTrust *Principles and Criteria*.

American Institute of Certified Public Accountants
1211 Avenue of the Americas, New York, NY 10036-8775 (212) 596-6200 • fax (212) 596-6213



CORPORATE FACT SHEET

Mission: To provide digital certificate solutions to enable trusted commerce and communications

Markets: Digital certificates for businesses and individuals wanting to perform secure communications and electronic commerce

Products and Services: Internet Digital IDsSM for individuals and Web sites
VeriSign E-Commerce Solutions for enterprise and electronic commerce applications

Employees: 200

Founded: May, 1995

Strategic Partnerships: Visa, EDS, Intuit, Netscape, Microsoft, Reuters, AT&T, First Data Corp., RSA, Comcast, Softbank, Merrill Lynch, Cisco Systems, Gemplus, Security Dynamics, Oracle, America Online, AICPA, Litronic

Key Enterprise Customers: ABSA Bank, Air Travel Card, Bank of America, Diner's Club, Dow Jones, Federal Reserve Bank of NY, NationsBank, Novus/Discover, Royal Bank of Canada, VISA, Hewlett-Packard, Netscape Netcenter, Thompson Electronics, Broebeck, Phlager & Harrison, Arizona Department of Education, Softbank, Toppan Publishing, Ameritech, AT&T, British Telecommunications (BT), LHS

Management: Stratton Sclavos – President & CEO
Dana Evan – VP of Finance & CFO
Richard Yanowitch – VP of Marketing
Quentin Gallivan – VP of Sales
Michael Baum – VP of Practices & External Affairs
Arn Schaeffer – VP of Engineering
Ethel Daly – VP of Worldwide Operations
Nick Piazzola – VP of Federal Markets Division

(more)

VeriSign

Headquarters: VeriSign, Inc.
1390 Shorebird Way
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Ph: 650.961.7500
Fax: 650.961.7300

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Wakefield, MA 01880-1249
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Fax: 781-245-6006

VeriSign, Inc.
50 Charles Lindbergh Blvd. Ste. 400
Union Dale, NY 11553
Ph: 516.229.2717
Fax: 516.227.2350

VeriSign, Inc.
6250 N. River Road
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Ph: 847.292.4476
Fax: 847.292.1975

VeriSign, Inc.
4845 Jeff Road
Atlanta, GA 30327
Ph: 404.252.0007
Fax: 404.255.9666

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Ph: 410.691.2100
Fax: 410.691.4942

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Fax: 011.81.44.555.7771

VeriSign, Inc. (Persetel Holdings)
P.O. Box 11941
Vorna Valley 1686
Republic of South Africa
Ph: +27 (0) 11 315-1210
Fax: +27 (0) 11 315-6772



CPA WebTrust QUESTIONS & ANSWERS

What is CPA WebTrust?

WebTrust is a comprehensive seal of assurance service developed jointly by the American Institute of Certified Public Accountants (AICPA) and the Canadian Institute of Chartered Accountants (CICA). WebTrust enables consumers and businesses to purchase goods and services over the Internet with the confidence that the Web site business meets high standards of business practice as set forth in the CPA WebTrust *Principles and Criteria*.

WebTrust is available in the US, Canada, Puerto Rico, England, Scotland, Ireland and Wales. WebTrust will be available in several other countries shortly.

What does the WebTrust seal stand for?

The WebTrust seal demonstrates that the Web site has been examined by a qualified CPA who has verified that it complies with the WebTrust *Principles and Criteria*.

The *Principles and Criteria* cover three primary areas:

- 1) **Business Practices & Disclosures** – the way in which the Web site does business, takes orders, handles fulfillment, processes backorders, and other business considerations;
- 2) **Transaction Integrity** –the ability of the online business to deliver on its sales promise by delivering what was ordered, at the agreed-upon price and in the requested time-frame to the customer;
- 3) **Information Protection and Privacy** – the ability of the online business to ensure that personal information will be transmitted securely and that confidential information will be kept private.

A customer complaint resolution mechanism offered by the National Arbitration Forum, the AICPA's preferred provider of alternative dispute resolution, uses binding arbitration to resolve customer complaints about all of WebTrust's primary areas, including privacy, customer service issues, and product quality.

CPA WebTrust Q & A
Page Two

Is there a consumer complaint resolution mechanism for Web sites with CPA WebTrust seals?

WebTrust also provides a customer recourse mechanism through the National Arbitration Forum to resolve complaints about privacy, customer service and product quality through binding arbitration resolutions.

How do I know that a Web site has received the WebTrust seal of assurance?

A Web site that has met the WebTrust *Principles and Criteria* is eligible to display the prestigious WebTrust seal on its order page or on its home page. Consumers and businesses can also view a listing of the current WebTrust seals by visiting <http://www.cpawebtrust.org>.

The WebTrust report can be found by clicking on the WebTrust seal and following the hyperlinks to the CPA's report.

How long is a WebTrust seal valid?

A Web site may retain a WebTrust seal for as long as it remains compliant with the WebTrust *Principles and Criteria*. This requires that the CPA confirm through re-examination that the Web site business continues to comply at least every three months.

The seal can be revoked if the Web site fails to continuously comply with the WebTrust *Principles and Criteria*.

How much does a WebTrust seal cost?

The cost of a WebTrust seal is comparable to other consulting services performed by an accounting firm. Since no two businesses are alike, no two WebTrust engagements will be similar. The cost of a WebTrust examination will be based on the complexity of the Internet site, hardware and software in use, and other factors in use on the e-commerce site.

Why are CPAs offering WebTrust?

CPAs are recognized as independent parties that provide assurance as to the accuracy and fairness of many types of financial and non-financial information. CPAs must meet strict ethical, educational, and other professional requirements. They are now bringing their independence, objectivity, and in-depth knowledge of business and technical expertise to the Web with WebTrust.

**CPA WebTrust Q & A
Page Three****Why should consumers look for a WebTrust seal?**

WebTrust helps to make cyberspace a safer place to shop. E-commerce has been inhibited by concerns over the security and privacy of credit card and other confidential information transmitted when purchasing goods and services electronically, as well as the frequent inability of consumers and businesses to confirm the legitimacy of companies offering goods and services over the Web. WebTrust addresses these concerns while reducing the risk of fraudulent practices and privacy and security infringements.

Why does a Web site business need a CPA WebTrust seal of assurance?

Concern over the privacy and security of Web site businesses is one of the primary obstacles impeding the ability of many businesses to succeed with Internet commerce. Potential customers are also concerned with the legitimacy of many business entities, especially small businesses that offer products and services over the Internet. WebTrust lends credibility, especially to unknown sites and brands, thereby leveling the playing field for competition with nationally recognized or well known brands. It helps to turn online shoppers into full-fledged buyers. The WebTrust seal provides the assurance that Web sites displaying the seal meet high standards of security, privacy, and legitimacy. The seal is evidence that a Web site business has working controls and security measures in place that are as important to the Web site's protection as to the customer's protection.

Sites that have earned the WebTrust seal have reported that visits and sales at their respective sites have increased due to the presence of the WebTrust seal. Many of their online customers have expressed increased confidence in doing business with their Web sites because an independent, third party has evaluated the site.

5/23/99

Congressional Testimony

E-Commerce and Small Business

Brian Hanson
Owner
Hanson Bros. Fresh Seafood
Portland Public Market
Portland, ME. 04112
phone: 207-228-2008
fax: 207-228-2009
email: hansonbros@portlandmarket.com
web: SeafoodNow.Com

Hanson Bros. Fresh Seafood is a small privately owned retail seafood business operating in Portland, ME. Although we have an extensive history with wholesaling, fishing and processing this business is our first venture into traditional retail sales. Seafood retailing is a particularly challenging business: first, most participants in the seafood industry lack extensive customer and service excellence related skills; secondly, the perishable nature of fresh seafood require strong inventory skills and multiple distribution channels to avoid product loss and waste. Additionally, the seafood industry lacks a centralized commodity market that can protect small businesses from supply and price fluctuations.

Since the inception of our retail business we have worked hard to exploit as many market opportunities as we could identify. Obviously the internet seemed a natural compliment to our existing retail, wholesale and shipping business, and we spent some time reviewing our options and potential strategies. Through my research I realized several common errors that small businesses make when entering the "e-world".

1. Poorly designed web site.

Like any growth market the rise of internet has brought a variety of web related service providers: some good, some not so good. Fortunately price and quality are not always directly related. In the rush to get wired many business owners grab the first opportunity that they see. Thus, many web sites lack the attractiveness and user-friendly features that attract web users. Business owners should check references and previous work done by the vendor before signing on.

2. Lack of traffic/exposure

Unfortunately a great web site does not automatically attract customers. Businesses need to understand how web users think and use the net and how to build customer traffic. It is unrealistic to expect strong exposure unless they have the resources to buy an expensive national branding campaign. The only other way to obtain traffic is to have a high standing in the various search engines, and this can become an affordable option for smaller businesses.

3. Lack of functionality

Finally businesses should ask themselves why they are getting on the web. Current thought suggests that businesses will be behind the times if they do not have a web presence but too often that leads to rushed decisions, poor strategies and lack of focus. Small businesses should ask themselves why they are on the net: information for potential customers, sales and e-commerce, or product support.

It is important to note that these three issues are not mutually exclusive: all three need to be effectively addressed for a business to succeed on the internet. After noting these problems I attempted to solve them for our own e-commerce venture. My research had shown that online seafood vendors were offering similar and limited products. Typically

these were prepackaged clambakes, gift packs and lobsters to go. These products are popular, offer a good margin and are easy to ship and package. These products are also very seasonal and Hanson Bros. chose to offer a full range of fresh seafood products; in fact we offer all our retail products online. Hanson Bros. sells fish and seafood products from all over the world: Snapper from New Zealand, Oysters from Washington State, Opah from Hawaii and of course Maine lobster and haddock. Our product line offered something for a wide variety of customers in diverse geographic regions. Once I had a product line I needed to overcome my three obstacles. I realized that on our own we had very little chance of succeeding on the internet. We lacked technical skills, large capital for equipment and advertising and the time necessary to manage it all. Though the internet seemed a democratic forum for thought and dialogue the advantage as always goes to the big players. Fortunately I was contacted by an Internet Service Provider that had both the expertise and capital to help us make a presence on the web. Global Store had top notch designers, search engine specialists and the software to create a workable e-commerce site. In return we agreed to pay a commission on our sales. To create a recognizable image we chose SeafoodNow.Com as our URL/web address.

The physical creation of our site took many months and we ended up missing the lucrative '98 holiday season. We began our web site in late February of this year and sales have exceeded our expectations. Due to Global Store's staff we have stayed in the top of the search engines, our automated online ordering has worked with few problems and we have converted a fair percentage of our traffic into our sales. Our success has come solely from our research, forethought and strategy. We did not rush into e-commerce and our web site was complete and commerce ready when we opened.

Overall the internet has done several things for our business:

- Created another sales venue to move a perishable product.
- Enabled us to market to a national and international market.
- Created sales in our slower months thus supporting cashflows.

- Created a new profit center with low overhead.

We are keenly aware that time will bring more competition so we have concentrated on customer satisfaction as best we can. Without the face to face contact with the customers, however, we can only focus on quality, efficiency and responsiveness. It is interesting to note that the lack of regulation of internet commerce actually creates a higher standard of business. We cannot afford to have unhappy customers: word spreads rapidly among internet users so we are compelled to go the extra distance to satisfy people. The internet does not recognize convenience, location, proximity or personality so much as it rewards efficiency and reputation.

Brian Hanson



U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, DC 20416

JUL 13 1999

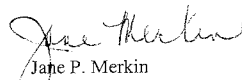
July 6, 1999

Honorable James M. Talent
Chairman
Committee on Small Business
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

On May 26, 1999, Daniel O. Hill, Assistant Administrator for Technology for the U.S. Small Business Administration (SBA) appeared at your Committee's hearing on Electronic Commerce (E-commerce). During the course of the hearing, Mr. Hill was asked a series of questions concerning SBA's role in enhancing the participation of the Nation's small businesses in E-commerce. I am happy to transmit the Agency's responses to those questions for the hearing record. If you need any further information or clarification of these responses, please feel free to contact my office at (202)205-6700.

Sincerely,


Jane P. Merkin
Assistant Administrator for
Congressional & Legislative Affairs

Enclosures

Question 1: Has the SBA developed data as to how many new businesses and how much economic growth has been generated by small businesses in recent years as a result of the Internet?

Answer 1: The answer to the first part of the question is no. The SBA has not developed data that could determine how many new businesses the Internet has generated. It is estimated that, in the mid-1990s, over a million new high-tech jobs were added to the U.S. economy.¹ In 1998, the Internet generated \$300 billion in the U.S. economy and 1.2 million jobs based on research by the University of Texas Center for Research in Electronic Commerce (UT C-REC)² A recent publication from the U.S. Department of Commerce states that, on average, over one-third of total real economic growth was contributed by IT-producing industries between 1995-1998.³

Question 2: What is SBA doing to "level the playing field" so that small businesses can compete for Federal government business? Specifically, how many companies are listed on SBA's PRO-NET internet procurement database, how many "hits" is the site receiving and which Federal agencies are using the site?

Answer 2: SBA's Pro-Net is an electronic gateway of procurement information -- for and about small businesses. It is a search engine for contracting officers, a marketing tool for small firms and a "link" to procurement opportunities and important information. It is designed to be a "virtual" one-stop-procurement-shop.

Pro-Net is an Internet-based database of information on small, disadvantaged, 8(a) and women-owned businesses. It is free to federal and state government agencies as well as prime and other contractors seeking small business contractors, subcontractors and/or partnership opportunities. Pro-Net is open to all small firms seeking federal, state and private contracts.

Businesses profiled on the Pro-Net system can be searched by SIC codes; key words; location; quality certifications; business type; ownership race and gender; EDI capability, etc.

As of July 6, 1999, 181,266 firms are registered on PRO-NET. Sixteen federal departments and agencies currently use PRO-NET. They are: the Departments of Defense, Veterans Affairs, Treasury, Justice, Labor, Agriculture, Housing and Urban Development, Transportation, Energy, Interior and State, Environmental Protection Agency, General Services Administration, U.S. Agency for International Development, National Aeronautics and Space Administration, and the Small Business Administration.

Statistics concerning the number of "hits" the PRO-NET website has received are attached.

¹ American Electronics Association (AEA), Source: <http://www.aeanet.org/public/press/index.html>

² <http://www.internetindicators.com>

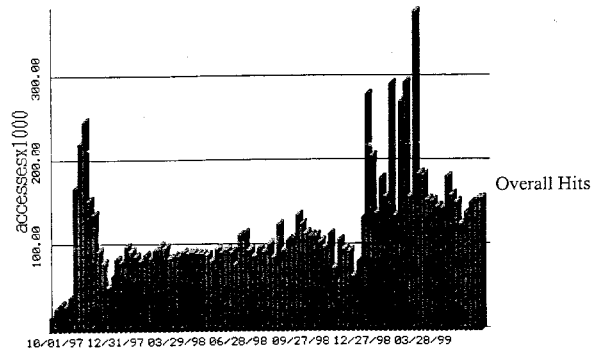
³ *The Emerging Digital Economy II*, page 15, <http://www.ecommerce.gov>

SBA: PRO-Net Web Server Statistics

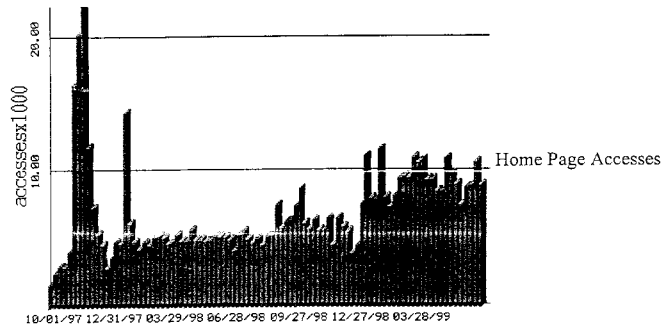
History from 10/01/97 -- 07/10/99

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Totals



| Item | Total Accesses | Total Bytes | Average Accesses | Average Bytes | Latest Accesses | Latest Bytes |
|--------------|----------------|----------------|------------------|---------------|-----------------|--------------|
| Overall Hits | 11,451,452 | 52,028,763,812 | 123,134 | 559,449,073 | 158,218 | 800,106,948 |



| Item | Total Accesses | Total Bytes | Average Accesses | Average Bytes | Latest Accesses | Latest Bytes |
|--------------------|----------------|---------------|------------------|---------------|-----------------|--------------|
| Home Page Accesses | 650,343 | 1,620,149,805 | 6,993 | 17,420,966 | 9,075 | 27,372,722 |