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electronic commerce

a conversation with Ira Magaziner

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The Promise of Electronic Commerce

Electronic commerce — the use of the Internet for business transactions — is on the increase worldwide. A recent survey issued by the U.S. Department of Commerce, " The Emerging Digital Economy," reports that while businesses have been using the Internet for dealing with other businesses for only about two years, the practice has already led to significant productivity improvements, and informational technologies "can be expected to drive...economic growth for years to come."

By the year 2002, the report predicts, the Internet will be used for more than $300 billion [thousand million] worth of commerce between businesses. In addition, the Internet offers a convenient way to buy, sell, and deliver to the consumer goods and services that can take an electronic form — software, newspapers, music recordings, airline tickets, securities. Of course, consumers can also use the Internet to order such tangible goods as computers, cars, and books.

In July, 1997, in an effort to further this natural growth and develop some basic international understandings on the subject, the Clinton administration announced what it calls a framework, or set of principles, for global electronic commerce.

"If we establish an environment in which electronic commerce can grow and flourish," President Clinton said at the time, "then every computer will be a window open to every business, large and small, everywhere in the world." But, the president added, "We know electronic commerce also carries a significant number of risks that could block the extraordinary growth and progress from taking place. There are almost no international understandings or agreements about electronic commerce."

"Because the Internet has such explosive potential for prosperity," Clinton explained, "it should be a global free-trade zone.... We want to encourage the private sector to regulate itself as much as possible. We want to encourage all nations to refrain from imposing discriminatory taxes, tariffs, unnecessary regulations, [and] cumbersome bureaucracies on electronic commerce. Where government involvement is necessary, its aim should be to support a predictable, consistent, legal environment for trade and commerce to flourish on fair and understandable terms."

An Interview with

Ira Magaziner

Ira Magaziner, a senior adviser to President Clinton for policy development, is the architect of "A Framework for Global Electronic Commerce," the U.S. government's plan for furthering business on the Internet. In recent months, Magaziner has conducted a series of digital video conferences with international journalists to elaborate on the administration's thinking. These questions and answers are an edited version of what was said in video conferences with journalists and Internet developers in Brussels, Stockholm, and Canberra.

Before joining the White House, Magaziner advised corporations and state government on strategy and policy analysis, founding two international consulting firms, SJS Inc. and Telesis. He graduated from Brown University in 1969 and attended Balliol College in Oxford, England, as a Rhodes Scholar.

Q: Is electronic commerce increasing in the United States? Is it an important part of the telecommunications revolution?

A: We're finding in the United States that information technology industries and electronic commerce are growing even much faster than we had anticipated. We believe now that the information technology industry itself — the building out of the Internet — is accounting for over one-third of the real growth of the U.S. economy in the past few years. We believe that the better-than-expected performance of the U.S. economy this past year is in part due to the growth of the information technology industry and its positive effects on productivity.

We're finding a very, very rapid growth now of commerce on the Internet, particularly in the area of businesses working with other businesses. Many businesses are beginning to put their purchasing, supply chain management, inventory control, customer relations, and logistics, on the Internet. And we think there will be over $300 billion [thousand million] of business-to-business commerce of this sort on the Internet within four years.

The companies that have begun working like this — companies like General Electric, Boeing, Cisco, Federal Express, and Wal-Mart — are experiencing very dramatic productivity improvements as a result. Cisco, the high-tech company that makes Internet routers, began to sell on the Internet only 18 months ago, and already a third of its sales, two billion [thousand million] dollars, are on the Internet.

Q: What about consumer services?

A: We're also finding that companies that serve consumers through the Internet are beginning to grow very rapidly. A new company called "Amazon.com" just began selling books on the Internet two years ago. In their first year, they sold $16 million of books. This past year they sold $150 million worth of books, and now their major competitors, traditional chains of bookstores, are going on-line.

We think that about 20 percent of all books sold in the United States next year may be sold on the Internet — up from nothing three years ago. We're seeing similar Internet sales growth in products as varied as retail banking services, airline tickets, flowers, even automobiles. So, this is an area of very rapid growth.

Q: Is electronic commerce developing at a different pace in the United States and Europe?

A: In general, we think that the Internet and electronic commerce are still developing faster in the United States than in Europe. I should say that Internet use is spreading rapidly in Europe now, but electronic commerce, we think, is for now growing faster in America. There are also major differences within Europe. From the statistics that we've seen, and from what I've learned on recent trips, a number of the Scandinavian countries, for example, are adopting the Internet and electronic commerce at

about the same pace as the United States — quite rapidly. Some of them even have a higher per capita usage of the Internet than we do in the United States. I think if Europe focuses on developing the right climate for electronic commerce, it will catch up very quickly.

Q: So far, the Internet has not been heavily regulated. Do governments need to get more involved at this point?

A: The U.S. government believes that it's best for our economy and best for the development of this new digital age to try to set a predictable legal environment globally for the conduct of commerce. That means trying to agree on common frameworks for things like document authentication, digital signatures, the formation of contracts, and the protection of intellectual property.

But, in general, we think that governments should stay away from regulating, over-taxing, or censoring the Internet because we fear that if governments become too involved — if they create this as a regulated industry in some way — that will strangle the growth potential that we see.

We advocate a market-oriented approach to the development of the digital economy. We feel this approach should not be similar to the way we in the United States have historically regulated the telecommunication or broadcast industries. We believe Internet commerce should be an environment where buyers and sellers can come together free of government interference, and it should be a contract-based system. In principle these developments should be led by the private sector, and privately established codes of conduct should govern, not government regulations.

Q: Isn't there a need to enforce both customs tariffs and sales taxes or value-added taxes in the arena of global electronic commerce?

A: On these specific questions, we believe the following. Number one, we think that electronic transmissions on the Internet should continue to be free of any customs duties. We have spent more than 50 years bringing down customs duties in the physical world, and we should not introduce them to this new electronic world.

Second, we oppose any discriminatory taxation against the Internet, such as "bit" taxes, Internet access taxes, and Internet telephony taxes, because we think that they will only stifle the growth of this new medium.

Let me emphasize that we feel that our economies, as well as our revenues, will be best served by allowing this new area to grow fast rather than stifling its growth by over-taxing it.

We think that necessary forms of existing taxation, for example, commercial sales taxes such as we have in the United States, should be applied to Internet commerce, but the key is that they be applied in a way that is neutral, simple, and uniform. That is, if I go into a store to buy something and I have a 10 percent tax when I buy it where I live, then I should have a 10 percent tax when I buy the same item on the Internet. It should be tax-neutral, whether bought on the Net or in a store.

The difference will be that the method of collection, because of the nature of the Internet, may have to be different. What will be most crucial is that Internet sales taxes be uniform because with the Internet you will have one seamless marketplace. And if every taxing jurisdiction were to have a different definition of how to impose taxation, it would be impossible to do business on the Internet.

Within the United States, we are promoting a bill now before Congress that will create a moratorium on new taxation until we can develop a uniform approach at the state and local government level. We are also promoting discussions within the OECD [Organization of Economic Cooperation and Development] at an international level to try to develop a uniform approach.

Q: Some governments are concerned that if their citizens buy goods and services through the Internet, the governments will not be able to collect the taxes that are due at the time of sales. Do you share that fear?

A: The fear you mention is legitimate, but I think that there is a solution. We are working on this problem at the state and local government level in the United States.

We don't think that every jurisdiction has to have the same tax rate. There can be different tax rates, although

we think that the technical standards for the agreed-upon tax system need to be coordinated. Let me give you an example.

The difficulty with the Internet from the viewpoint of collecting taxes is that it's very hard to identify where the seller is based because a company selling on the Internet could have its file servers any place in the world. So, it's difficult to enforce the collection of the tax by the seller. If I have a company based on some island in the Caribbean, and I have my computers located in a number of places and I send music across the Internet to a purchaser in Belgium, how do you determine where I have nexus and how do you collect the taxes?

One solution that we are working on is to seek an international agreement that would base the collection of the tax on the residency of the buyer, with some international agreements about definitions of residency.

Let's say there is a 10 percent tax in Belgium. If I am a Belgian and buy something for 10 francs on the Internet — and use a "smart card" — the chip in my smart card could automatically debit the card 11 francs. Ten francs go to the seller; one franc goes to the tax authority's escrow agent.

In this case the situation of the seller would be much easier because the seller now doesn't have the liability of collecting the tax, doing all the paperwork, and forwarding the tax to whatever government it is owed. For the buyer, it's automatic. When I make my payment electronically, automatically the tax is taken out. I don't worry about it.

For the tax authority, there are three benefits to this system versus the current system. The first benefit is that there is a higher compliance rate. In the U.S. sales tax system, we get only about 60 or 70 percent compliance. Even if I — the purchaser — am making the payment electronically, of course it won't be perfect. There will be people trying to cheat, but likely there will be a higher compliance rate because the money is taken electronically at the same time as the electronic purchase is made rather than collected and forwarded later.

Second, the tax authorities get their money faster. In many sales and VAT [value-added tax] jurisdictions, it takes about three to four months to collect taxes for the government because they are first collected by the store or sales organization, then the paperwork is done, then it's withheld and forwarded.

In the theoretical case I outlined, you probably would have an escrow agent that might hold the money for a week or two to make sure that a sold product does not get returned, but then the funds can be forwarded to the tax authority within weeks instead of months. And with the money the government saves by more efficient collection, it can

hire the escrow agent to do the collecting. The escrow agent might be a bank or a credit card company or a software organization.

And then, finally, it's actually easier to police tax avoidance because if there's a governmental jurisdiction somewhere in the world that is giving false residency cards, or some similar scheme, you can exclude the domain names of that place from the collection system.

This is a very simple description of something that is very complex. And there are many technical issues that have to be addressed to make a system like this work. I am merely suggesting that there are possible solutions.

One final word: even under such a system, a buyer could still make a purchase over the Internet and retain anonymity if he or she so preferred. The way a buyer could do that would be to go to a bank and get a digital storage card. That digital card purchased at the bank could be coded according to the tax rate of the buyer's residency. Then, if the buyer used that digital cash card to make the purchase over the Internet, the purchase could still be anonymous, but taxed at the correct rate.

Q: What forum should deal with these complex tax questions?

A: The U.S. government feels that these issues should be discussed in the OECD because the OECD, we think, has a good tax competence. And we should try to arrive at a common approach. Within the United States, we are supporting legislation that would force our states and local governments to come together to develop a common approach to the tax issue. Ultimately, we would like to have the approach agreed to by our states and local governments be coordinated with the OECD discussions, so that we have a harmonization internationally. The OECD has already begun such discussions.

Q: Do you feel that international banks are ready and willing to act as escrow agents for Internet tax collections?

A: It may be the banks, it may be credit card companies, it may be software companies that would set up businesses to do these collections. We've consulted with some American banks and credit card companies, and they'd be quite interested to set up businesses like this if they are paid by the tax authorities to do so. And the tax authorities would be able to pay out of savings because if they get money quicker, that has value to them.

Q: If taxes in electronic commerce are to be based on the residency of the buyer, can you elaborate on how that would be determined?

A: I think what we would look for is an international agreement based upon residency or citizenship. People would need to declare themselves in some way — according to some agreed-upon definition of where they really did live — as to the location of their primary residence. And if we can agree among nations on that definition, then I think we have the basis to solve the problem you describe.

Of course, people may try to cheat, as they do today, but I think the cheating won't be any greater than today, and perhaps we can make it less. I think the key is the agreement on the definition of citizenship and residency.

Q: Do you distinguish between the sale of goods or services on the Internet?

A: An excellent question. Let's say I sell a music CD [compact disc]. If I mail that CD to a customer today — that is, physically — probably you'd call that a good, not a service. But if what I do is download the music so that the music transfers across the Internet in digital form and then it's re-encoded as music and put on a disc in the home of the consumer who buys it, is that a good or is that a service? It gets confusing.

Also, consider an airline ticket. If I have an electronic ticket, is it a good or is it a service? Eventually, it may be that instead of buying a book and having it shipped to me physically, that book may be just downloaded and printed out onto my printer. Is the book then a good or a service?

So, we feel it is much simpler just to speak about electronic transmissions. Whether something is a good or a service becomes less clear when you're talking about the digital world. We don't see any usefulness in trying to invent a new set of rules for something that will be neither goods nor services.

My sense is that the countries in the European Union and the United States agree in principle with the idea of having commerce over the Internet be free of customs duties.

Q: Recently, there has been considerable discussion about the DNS — the domain name system — that underlies the Internet. It has been managed by the U.S. government, but is being turned over to the private sector. Can you discuss that issue?

A: I'm glad that you asked this question because I think there's some misunderstanding about what we are proposing to do here. For historic reasons, because the Internet was financed originally by the U.S. government, the technical management of certain aspects of the Internet is still done under contract from the U.S. government. And this includes the management of the domain name system, the Internet number address system, the registration of Internet protocols, and the management of the root server system of the Internet, the system that routes messages on the Internet.

What we are proposing to do is to privatize these technical management gatekeepers — that is, to turn them over from the U.S. government to a private, nonprofit organization that would have an international board of directors nominated by various private stakeholder organizations. We're calling for that organization to be created by the end of this summer, and we will then gradually turn over all of the authorities that the U.S. government now has in these areas to this private organization.

It would be our hope that by October this new nonprofit organization will be up and running, and that some time shortly after we will be able to transfer to it all the authority that the U.S. government now has.

Q: Where will this organization be based?

A: The organization needs to be based some place, and we think that the United States, for a variety of reasons, is a good place to base it. The competence and expertise and the people that have been doing this work up until now are based here. But, we want to make sure that European law and other laws can obtain in the way the system is organized. So, we don't have the intention to try to make this organization only something that is in the jurisdiction of the United States.

We oppose the idea of an intergovernmental organization being involved because we think that government organizations inherently move too slowly and too bureaucratically for the Internet. Consequently, we would be strongly opposed to the notion of creating some intergovernmental organization to coordinate these functions. What we do support and would welcome are suggestions from Europe or elsewhere about how to ensure that this not-for-profit truly has international representation because that's our intention.

We think it's important, for example, that there be an internationally representative board from the private sector. And we think it's important that in areas like trademark that there be the potential for rights holders to bring suits in different jurisdictions, not just one jurisdiction. So, we are welcoming comments from other nations about how to ensure that this new Internet organization can be a truly international organization.

Q: How do you deal with the presence of objectionable or obscene material on the Internet, whether for commercial purposes or otherwise? And what are your plans to protect the privacy of individual citizens who use the Internet for commerce?

A: We don't yet have a satisfactory system. But the industry is working very hard to develop a system, and we're hoping to have certain codes of conduct in place within the next year.

These are two separate issues: content and privacy. In the case of content, we believe that when parents sign up with an Internet service provider, they should get a system with simple boxes on the screen that they can click on, and those boxes will be filtering software developed by software companies in conjunction with various private groups that reflect the societal values of those groups.

So, for example, you might have a box developed by a group like the Christian Coalition, or you might have a Children's Television Network box, or something like this. So that each parent, according to their own value system, can check a box and say, okay, if the Christian Coalition has developed or approved this filtering system, then I'm comfortable with this configuration of filters. It should be very simple, so that if you're the type of parent who's afraid of the Internet, afraid your children understand it better than you do, and you're not sure what to do, you can have a simple device you rely on to protect your house against whatever content you choose.

If you merely wish to set up filters for your own use, then in your browser software or your search engine software should be the ability to do your own filtering. If, for example, you're not bothered by violence, but you dislike explicit sexual material, you should be able to filter out what you don't want.

The tools are being developed to allow this kind of system to be put in place. There are already filtering softwares. They're not as good yet as we would like to see them, but they are becoming better. So, we believe that within this year, we should have a system like I'm describing in place in the United States, and hopefully it can be extended internationally.

Q: What about individual privacy?

A: The question of privacy is developing differently. The way that may come to work on the Internet is by private codes of conduct based on OECD privacy principles. That is, a seller should notify a potential buyer, "Here's what I'm going to do with information that you give me about yourself." The buyer can then say, "No, I don't want to do business with you," or "No, I don't want you do to that." They can say no. And if they say no, then even the fact that they visited the Web site gets wiped out

so that there's privacy protection.

If the buyer says yes, he or she may say, "Okay, you can use this information you are obtaining about me as a result of this transaction but only inside your company," or they may say, "You may sell the information." The buyer would place whatever conditions he or she wants on the use of personal information. The buyer and seller essentially would form a contract where the buyer agrees to what can be done with information. The buyer has control.

Any organization doing business on the Internet that complied with a privacy code of conduct could then have a seal put on its Web site to attest that it followed this agreed-upon code of conduct in respect to privacy issues. The organization would enforce this code of conduct. This organization would audit Web sites regularly to make sure that all the Web sites that display the seal are following the code of conduct. Also, it would take complaints from consumers and follow up on them.

This system would mean that government and industry could go to consumers with education campaigns and say, "Look, as a consumer, you're free to go any place on the Net you want. It's a free medium. You can buy any place you want. But be careful. If you go to a Web site that doesn't have one of these particular seals, your privacy may not be protected."

If consumers are well-educated in this respect, there will be a market incentive so that if I'm a company wanting to start a business on the Internet, I'm going to go try to seek the seal because if I don't have such a seal, I'm going to limit my marketplace. Many people will refuse to visit or shop at my site.

So we create a market incentive for businesses to seek out a seal assuring that privacy will be protected if they engage in electronic commerce. We think that type of system works more effectively than government regulation, which would be inherently difficult to enforce.

Of course, if the monitoring organization finds that there's fraud being committed in regard to privacy, then the case can be referred to the appropriate government agency under existing antifraud laws. The reason we favor this type of approach is that, even if we were to pass a thousand pages of federal legislation to protect the consumer's privacy, we couldn't enforce it because there are tens of thousands of Web sites that form every week on the Internet. No government agency can monitor all those Web sites. So, instead, what we're trying to do is to empower people to protect themselves by creating an environment with the seals where they can have control of their own data.

Q: Is there any chance this will work in the real world?

A: We think that a system like this will be beginning this summer in the United States.

Q: How do you expect the Internet and the growth of electronic commerce to affect national economies and patterns of employment?

A: We think that there will be a major turnover of jobs. In the United States, we believe that millions of jobs will be lost because of the Internet in areas like retailing — or in what we call "middleman-type" areas — insurance agents, travel agents, and so on. But we think that there will be a far greater number of jobs created in the information technology industry itself and in the information gathering and marketing industries.

The good news is that the jobs that are created will have higher skill and higher wage rates than the jobs that are lost. What we find already in the United States is that information technology industry jobs pay over 60 percent more than typical jobs in the economy. One aspect of this that we think is very important is a system of retraining, so that people who are losing their jobs because of this transformation can be retrained for the new jobs that are coming. This transformation also puts great importance on the education system. People need to be educated in the new information technology industries because that's where the tremendous growth in jobs will occur.

Q: How do you see the Internet in five years' time?

A: In five years, there will be probably about 750 million people using the Internet around the world. The Internet will likely be available in some of the poorest areas of the world, because low-earth orbital telecommunications satellites will be up, and

I think there will be projects through the aid organizations to build local area networks that will allow people in less developed countries to have access to the Internet.

There will be a tremendous amount of commerce on the Internet five years from now. In the United States alone, we believe there will be over 300 billion [thousand million] dollars of business done annually on the Internet by then.

In the United States, every school, every library in the country will be wired up to the Internet. And we will have gone through a number of years of extensive training programs with teachers and librarians, so that they can use the Internet and encourage students to use it. I would expect that will also happen globally.

In addition, significantly greater numbers of homes will have the Internet. It will come to them on their television set, as well as their personal computer. I think that Internet telephony will be larger than traditional telephony. That is, five years from now more telephone calls will be made using the Internet than using traditional circuit-switching technology. And it will be quite natural, when you're watching normal broadcast television, to interact with the Internet as a single medium.

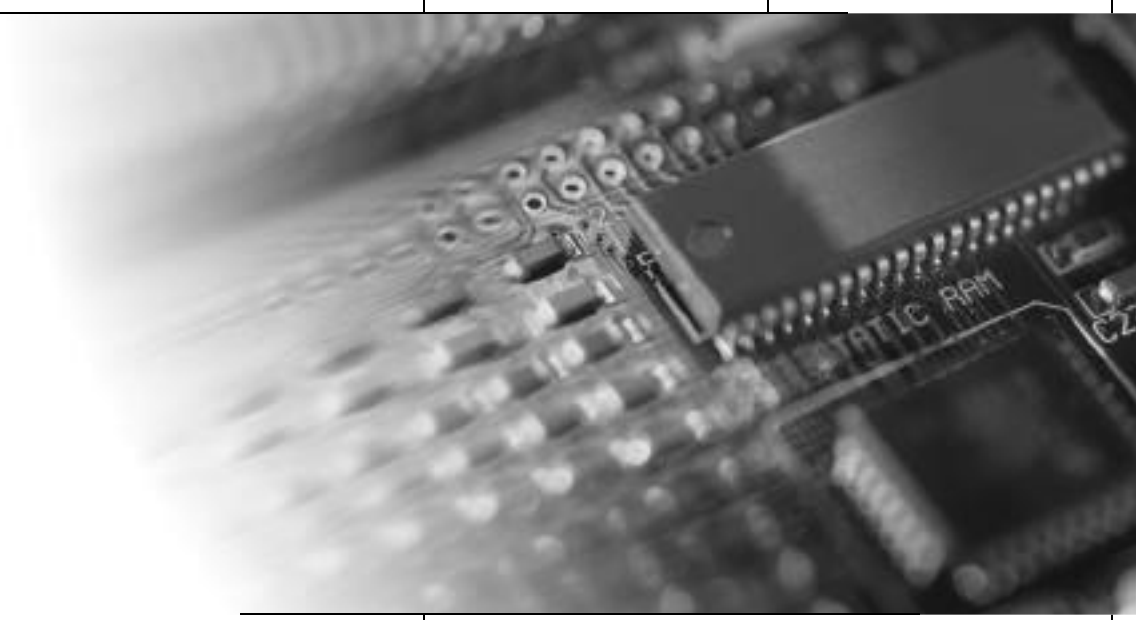
So, I think that we're going to see quite a revolution, and I think that revolution is already going to be apparent in the next five years.

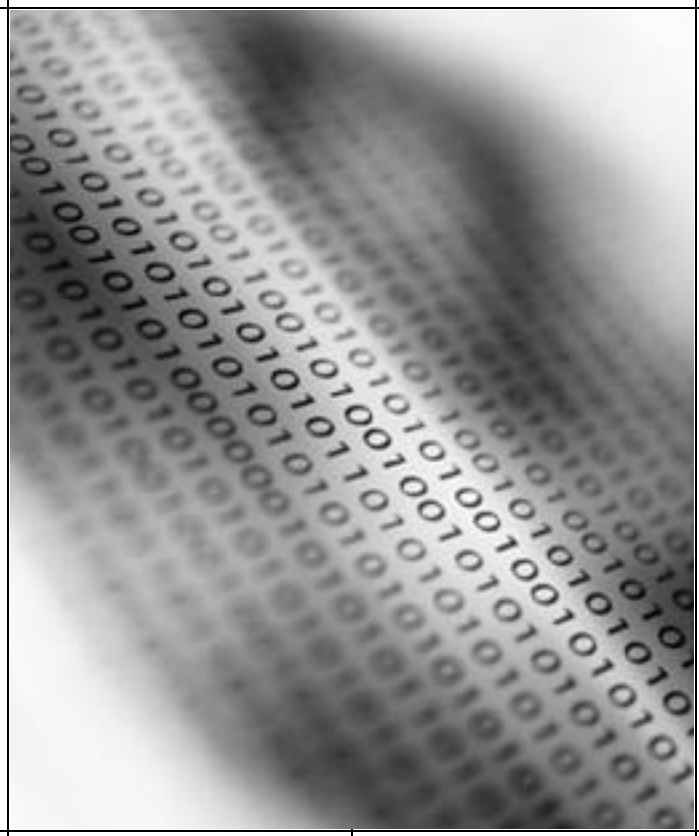
Q: Do you see any drawbacks with the Internet?

A: Well, like any new technologies that can advance society, there can also be drawbacks. For example, in the Industrial Revolution, which brought great progress and was by and large tremendously beneficial to people, there were also some drawbacks, and society was too slow to respond to some of these. We had child labor problems, and terrible factory working conditions, and pollution problems.

In the case of the Internet, there are some potential problems. Children could have access to material that parents feel uncomfortable with. People's privacy could be violated more easily with the Internet. If we're not careful, the Internet could be used by terrorists and those wanting to break the law to further their aims. And so, we're also working very hard to try to create capabilities within law enforcement agencies to meet those potential cyber-crimes.

We feel it is our responsibility to try to work and anticipate those drawbacks and minimize them, so that we can realize





the positive benefits with as little negative fallout as possible.

Q: Is encryption one of those concerns?

A: This is perhaps the most difficult issue we've had to deal with because there are legitimate concerns of people in the commercial community that you need encryption — that is, a way of locking unauthorized users out of access to data — to help electronic commerce flourish. There are, however, competing concerns from the law enforcement community that if high-level encryption is available to international terrorists and drug dealers it will make it easier for them to do their business and harder for law enforcement to catch them.

We have been trying for a long time now to bring about some compromise between the law enforcement community and the business community on these issues. We've been trying to strike a balance that allows high levels of encryption to be used in commerce, but which also allows law enforcement to have the potential for access in cases where there is clear justification that a criminal act may be involved. And advances in technology may offer potential solutions.

Q: How about copyright protection?

A: We think copyright protection is very important. But we think that has to be balanced in terms of the way in which that gets enforced. There were some people calling for the Internet service providers and telecommunications companies to be responsible for enforcing copyrights — to be the traffic cop so to speak. But now we have new digital technology called the Digital Object Identifier System being developed. If you're a copyright holder, you will be able to, in a sense, "water-mark" or tag your product so that the owner of a piece of digital material can be quickly identified.

The On-Line Marketplace

Digital Delivery of Goods and Services

Software, CDs, magazine articles, news broadcasts, stocks, airline tickets, and insurance policies are all intangible goods whose value does not rely on a physical form. Much of today's intellectual property is produced, packaged, stored somewhere, and then physically delivered to its final destination. The technology exists (or soon will exist) to transfer the content of these products in digital form over the Internet.

Excerpted from Chapter Four of the recently published Commerce Department's "Emerging Digital Economy" report. The web site is www.ecommerce.gov/chapter4.htm

CONTENT

News from around the world is now available on the Internet, usually free of charge. More than 2,700 newspapers have on-line businesses, of which over 60 percent are U.S.-based. All but three of the top 50 magazines in the country (as defined by paid circulation) had a Web presence as of January 1998. More than 800 TV stations across the U.S. have Web sites. UltimateTV.com lists 151 U.S. cable channels, including CNN, fX, HBO, MTV, the Weather Channel, and a host of others. AudioNet calls itself the leader in Internet broadcasting, with live continuous broadcasts of over 175 radio and television stations, play-by-play of thousands of college and professional sporting events, live music, on-demand music from the CD Jukebox (over 1,600 full-length CDs), live and on-demand shows and Internet-only Webcasts, and live and on-demand corporate and special events.

The rapid emergence of information services on the Internet is being driven by consumer demand, more effective distribution, and an expected shift in advertising revenues away from traditional media to the Internet.

Consumer Demand

Nearly 90 percent of Web users go on-line to get news and information. There, they can find obscure or limited circulation journals on-line as well as the top sellers. Articles limited to text and perhaps a picture in a print edition may be supplemented in the on-line version with video or audio clips, maps or in-depth background research.

Still somewhat difficult to navigate, the Internet's wide selection of content sites save individuals time when conducting research, and yields much more complete and up-to-date information than off-line alternatives. As technology advances, and search tools become easier to use, individuals can be expected to increasingly turn to the Internet's content sites to do research, to learn about the day's news, and to be entertained.

How quickly individuals change their behavior in favor of the Internet, and away from other media, is difficult to determine. Recent studies indicate that as use of the Internet increases, television viewing declines. However, some of today's Web businesses point out that circulation for their existing newspapers and magazines has not dropped, even while their Web audiences increase. They state that some in the on-line audience are also found among their most loyal print readers, but look to each medium to satisfy different purposes. For instance, *Business Week* reports that visitors to its Web site read the front-page article and then use the site to research the magazine's archives and special report sections, features they do not have in the print version.

It may take a number of years before the impact is felt. For instance, McGraw-Hill's financial information services division began to distribute its products electronically over ten years ago. Up until three years ago, print revenues made up 85 percent of the division's sales. Today, digital products account for more than 50 percent of sales.

Lower Capital and Distribution Costs

The *New York Times* invested $350 million in its new printing press. Readers can now see front-page photos in color instead of black and white. Readers accessing the *New York Times* on the Web not only see color photos from the print version's front page — but they also get radio clips, color spreads on special feature sections for the Web only, and the chance to interact with other *New York Times* readers interested in the day's or week's hot topics.

Web content businesses require a much lower capital investment than their print counterparts, lowering the barrier to entry in this on-line industry. With the Internet, the content of a newspaper or a magazine does not have to be printed and delivered to news stands or doorsteps across the city in order to be consumed — steps that add 30 to 40 percent to the cost of the product.

Instead, content delivered via the Internet can be entered directly into a computer, stored digitally on a server and appear directly on a reader's computer screen with a few simple commands the reader enters

on the Web site. The consumer can then read the information on the screen or print it out. The publisher's distribution costs include paying off the investment in the Web servers and other technology that ensures that when someone enters the site, it responds quickly. Unlike newspaper or magazine content that gets used once, digitally stored content offers the potential for repeated repackaging and reuse. Once the content has been created and stored, there is little or no extra cost to send it to one reader or 1,000 readers. That increases the efficiency of the newspaper and magazine businesses dramatically.

However, simply establishing a presence on the Internet does not guarantee that a business will succeed. Building brand awareness through advertising and marketing is critical to success in a new and rapidly evolving market, particularly on the Internet where consumers have the choice of spending their time and money at thousands of different sites. If the Internet evolves in such a way that a limited number of sites become the "funnel" that guides a viewer through its vast content, businesses looking to appeal to mass audiences may have to pay large fees to secure "shelf space" on those sites. Or, they may be excluded altogether. In this scenario, advertising and marketing costs may become too expensive for some to bear. If, on the other hand, technology and consumer preference evolves so that consumers access and navigate the Internet using a variety of devices and tools (perhaps personal software "agents"), then high rents might be avoided.

Statistics on Web traffic indicate that the "funnel" model is winning out today. Over time, as people begin to access the Web via their TVs, telephones, and personal digital assistants, and as the Web becomes easier to navigate, this may change and lower advertising and marketing costs may result.

Shift of Revenue Sources to the Internet

Even with their lower costs of operation, content businesses on the Web do not yet generate adequate revenues. Unlike newspapers and magazines that rely on subscriptions for some of their revenue, most Web businesses currently shy away from charging subscriptions in favor of building an audience and attracting advertising and direct marketing/ transactions revenues. Though growing, these revenue sources are still small.

At this early stage of development, it is unclear how quickly Internet content businesses will draw readers or viewers away from traditional media sources such as newspapers, magazines and television. As it happens, advertising and subscription revenues flowing to the Internet are likely to increase. Even if the total audience for a newspaper or a TV sitcom does not decline, advertisers may shift spending to the Internet if they feel that it provides a more effective means to reach their audiences.

Current trends in classified and local advertising spending indicate a shift already taking place. Newspapers have been watching their share of classified advertising dollars shrink as real estate agents, car dealers and owners, and businesses looking to hire employees increase their advertising in niche publications, direct mail, and on-line services. A 1996 Newspaper Association of America study points out that newspaper publishers could lose as much as 50 percent of their classified ad dollars in the next five years if current trends continue. If that happens, the average newspaper's operating margin, now 14 percent, would drop to 3 percent. To maintain revenues from classifieds and to attract local advertising dollars, newspapers have been quick to establish Web sites featuring classified ads and city guides.

Other industries are also seeking a share of classified and local advertising revenues. Software companies, telephone companies, Internet service providers, television networks, and newspapers are gearing up to compete for a share of this potentially large market. A New York-based research firm, Find/SVP, reported that more than 60 corporations ranging from Warner Brothers and PacTel to NBC and U.S. West have launched, or are in the process of organizing, Web sites with a strong emphasis on local content.

Software companies and search engines feature city guides listing movies and restaurants, arts and music, current events, places to go, local sports, weather, and news. Some broadcast and cable networks

combine coverage of national news and entertainment with local news from affiliates and searchable databases of on-line classified ads. Directory listings and mapping services partner with newspapers, software companies, and others to offer their own city guides. Telephone companies have their own directory listings and mapping services and are partnering with others for real estate listings, restaurant guides, and other local information and services.

Analysts project significant growth in revenues available for on-line content businesses. Forrester Research predicts that revenues from advertising, subscriptions, and transactions fees will grow to $8.5 billion [thousand million] within five years, or almost 5 percent of the $175 billion [thousand million] advertisers spent in newspapers, TV, radio, direct mail, billboards, and other traditional media in 1996.

TRAVEL

Vacationers and business travelers can now find information on the Internet about cities they plan to visit, from driving directions and recommended itineraries to weather patterns and business telephone numbers and addresses. Many hotels have detailed property descriptions, along with photos of the property's grounds, public rooms, and bedrooms. Rental cars can be reserved on-line. Top travel magazines offer on-line suggestions for the best weekend getaways.

The largest initial on-line travel business is the sale of airline tickets. Web-based travel services offer the reservations engines that airline customer service representatives and travel agents use directly — to leisure and business travelers. Customers enter point-to-point destinations, desired travel times and dates, preferred airlines, and other preferences into the reservation system. The system processes the information and delivers a choice of options, along with a secure transactions environment for customers who wish to purchase the ticket on-line.

In 1996, Web users booked $276 million worth of travel this way. For 1997, on-line travel sales are estimated to have reached $816 million. By the year 2000, on-line travel sales could reach $5 billion [thousand million], or close to 7 percent of U.S. airlines' revenues for passenger air travel.

According to a survey released in November 1997 by the Travel Industry Association of America, 13.8 million Americans used the Internet to plan their trips and 6.3 million made reservations on the Internet. And, consumer acceptance is growing. In 1996, 10 percent of Internet users used the Internet to make travel plans and purchases. When polled in 1997, nearly 70 percent of Internet users said they planned to use the Internet for travel in the upcoming year. Acceptance is high among the general population, as well. Thirty-eight percent of all adults said they would consider using the Internet for their travel in 1998.

Lower Sales and Marketing Costs

Lower sales and marketing costs, and increased consumer choice and convenience are driving the Internet's increased use in travel planning and reservations.

It is cheaper for an airline to process a ticket sale on-line than to use a travel agent or a reservations center. Not only are transaction fees reduced, but savings are also realized when cheaper electronic tickets can be substituted for more expensive paper tickets. Through the use of the Internet and other information technology, airlines expect to be able to significantly cut distribution costs.

At $12 billion [thousand million], distribution, travel agent commissions, marketing and advertising expenses, labor and other expenses for airline central reservations services are the airline industry's second largest operating expense.

How a ticket is sold, through an agent or by the airline directly, and whether the ticket is paper or electronic, can mean the difference between paying $8.00 or $1.00 to process a ticket. Airlines are pursuing various strategies to drive their distribution costs down: lowering travel agent commissions, selling through the Internet, and promoting electronic ticketing.

Southwest Airlines was the first major U.S. airline to let passengers buy tickets directly on its Internet

site in 1996, bypassing the agent and the commission. New Web travel services quickly emerged: on-line travel sites sponsored by airlines themselves, "virtual" travel agents like Microsoft's Expedia.com and The SABRE Group's Travelocity.com, and travel agents' own sites. Whether customers purchase tickets on an airline's site or through on-line travel agents, the airlines save money since their own travel reservations centers do not have to be involved in the purchase. In addition, the commissions they pay to on-line agents are about half what they pay to traditional agents.

While the airlines' ability to move customers away from paper tickets to lower-cost electronic tickets does not depend on the Internet, it is proving to be a useful vehicle for accelerating the shift. Some airlines encourage their Internet customers to use electronic tickets by offering frequent-flyer miles for travel booked on-line with an electronic ticket. Because Internet customers reserve their tickets, select seats and give credit card information on-line, getting an electronic ticket rather than a paper one seems natural.

Airlines also use the Web to generate additional revenues. No matter how precise an airline's forecasting, seats still go unsold on some flights. Auctioning airline seats to the highest bidder and offering special "cyberfares" for leisure travel are two techniques made possible by the Internet.

Every Monday or Tuesday, American Airlines looks at its yield management results and picks out low-performing markets. Midweek, more than one million "NetSAAver" subscribers receive an e-mail from American Airlines listing special discounted fares for travel in selected markets during the upcoming weekend. The NetSAAver program has generated tens of millions of incremental dollars for the airline since its launch in March 1996.

RETAIL BANKING

Internet banking is still in its infancy. Although most of the top 100 banks in the U.S. have a Web site, the *Online Banking Report* classifies 24 of them as "true Internet Banks" — banks that let their customers review balances, transfer funds and pay bills on their Web sites. Smaller banks also have Web presences. In *Online Banking's* list of 133 "True Internet Banks," 109 do not make the list of the top 100 U.S. banks ranked by assets.

Before the decade is out, customers are likely to be able to do most of their banking transactions on the Web. According to a 1996 Booz-Allen & Hamilton survey of North American financial institutions with Web sites, 80 percent of respondents planned to allow their customers to conduct most traditional banking transactions over the Internet within three years.

On-line retail banking is being driven by lower operating costs, the ability to offer new services, and the ability to do one-to-one marketing.

Lower Operating Costs

On-line banking services are less expensive to offer to customers than other forms of banking. Checking an account balance or transferring funds from a checking account to a savings account can be done in person at a branch bank, over the telephone, with an Automatic Teller Machine (ATM), at home using a PC, or, in some cases, on a bank's Web site.

A branch bank can serve as many customers as it has staff to handle. Once the investment is made to create a fully functioning Internet site (for a large bank, the initial investment could be millions of dollars; a more limited solution for a small bank might cost tens of thousands of dollars), the bank's Web site can handle one customer inquiry or tens of thousands a day.

Booz-Allen & Hamilton estimates that it costs about a penny to conduct a banking transaction using the Internet and more than one dollar if handled by a teller at a branch bank.

New Services

Today's on-line banking allows customers to check account balances, transfer funds, and update customer information — transactions that can already be performed through traditional banking channels. For some customers, the convenience of banking from home or the office is preferable to calling the bank's automated phone service or going to

a branch bank. Others do not find the services offered on-line today reason enough to change their banking habits.

In the future, analysts expect that Internet banking will be enhanced with new services that make on-line banking easier and more convenient than banking by ATM, by phone, or visiting the branch bank. Paying bills electronically is one such example.

Checks are the preferred method of bill payment in the United States. For a business, preparing and sending paper bills can be costly. For a consumer, paying bills by check can take a great deal of time. Billers print out and mail the bills to a consumer's home. The consumer writes a check, records the check number and amount paid, balances the checkbook, finds a stamp, and mails the check back to the biller. The biller receives the check, updates his accounts, and sends the check to the bank to credit to his account. Handling paper bills and checks can cost a biller between $1.65 and $2.70 each time he sends out a bill. It costs the customer time and the price of a stamp to pay each bill.

Today's Internet-based bill payment services take some of the paperwork out of the process. Rather than writing a paper check and mailing it to the vendor, a customer authorizes his bank to pay bills on his behalf. This saves the customer some time, and may save the vendor some money, if all steps are completed electronically. However, vendors still incur the costs of mailing the bill to the customer. And, smaller vendors without an electronic connection still have a series of manual and paper-based steps to complete.

Some banks believe that future Web-based bill payment services can make the entire process paperless. The vendor will send an electronic image of the bill to the customer's bank. The customer will electronically authorize the bank to pay the bill, the bank will debit the customer's account, and the vendor will receive payment electronically. The vendor's printing and mailing costs are eliminated, and processing costs are greatly reduced. The customer enjoys the convenience of paying bills without having to keep stamps and envelopes on hand. With services that automatically update account balances, the customer also saves time he formerly spent balancing his checkbook.

One-to-One Marketing

Today, most banks are still equipping their Web sites with basic transactions processing and do little with tailored or one-to-one marketing. However, some now realize that through the Internet, a bank can get to know a customer's banking priorities and preferences even better than it could when banking was done in small neighborhood branches.

Bank of America's "Build Your Own Bank" provides an example of how one-to-one marketing could work. Internet customers using this service provide the bank with basic information about their place of residence, occupation, age, income, and gender, whether they own or rent a home, and what types of accounts they have with the bank. They then indicate their financial interests and priorities — whether saving and investing, home buying/improvement, building a business, retirement, economic and financial markets, electronic commerce, or simply better financial organization and budgeting. Based on these inputs, the bank responds with Money Tips and news items geared to the customer's interests, and special offers for the services the customer has prioritized.

These and similar mechanisms give banks the opportunity to cross-sell products and services. Ideally, the customer benefits from these tailored offerings, as well. At a minimum, he should benefit from greater convenience. Because his account profile automatically gets called up when the customer logs into a personalized site, he wastes no time entering account information. Having up-to-date information about balances in each account gives the customer a snapshot of his holdings with the bank without having to do the math himself. The personalized tips and special offers may help the customer to make important financial decisions.

The Future

Over the next few years, a growing number of American households are expected to do their banking on-line — whether through a dial-up connection to their bank or through the Internet. Roughly 4.5 million

households were banking on-line in 1997. By the year 2000, as many as 16 million households are expected to bank on-line.

INSURANCE

Insurance carriers' Web sites typically provide customers with basic corporate and policy information, but refer customers to off-line agents or customer-service phone representatives in order to make a purchase. A more limited number of carriers' sites, and other sites, including banks, securities brokerages, real estate companies, and automobile marketplaces, allow Internet customers to purchase term life, automobile, and homeowners' insurance on-line.

By 2001, analysts project that more than $1 billion [thousand million] in premiums will be generated via the Internet. The rapid increase in sales will be driven by cost savings, increased competition, and growing consumer acceptance.

Cost Savings

Distribution costs for life and property and casualty policies can be as high as 33 percent or more of the product's price.

Selling policies and providing customer service over the Internet are much less expensive than via an agent or a telephone representative — as much as 58-71 percent lower over the lifetime of a customer. In a direct on-line sale by the carrier, the agent commission is avoided. If the sale is completed by an on-line agent such as Quicken InsureMarket, it can be more than cut in half. Even if a traditional agent completes the transaction started on the Internet, the transaction is less expensive. The Internet prequalifies the customer for the agent, saving sales time and expense. The Internet can also be used for electronic communication between agents and carriers, reducing time spent on routine tasks such as applications processing, updating customer account information, and reporting on the status of claims.

In addition to saving money, the Internet can generate new sales opportunities. Carriers that traditionally sell through agents may pick up new customers on the Internet that agents cannot effectively reach. Because of the time needed to acquire a new customer, agents tend to focus on clients they believe will buy larger policies. One insurer, Lincoln Benefit Life, reports differences in the face value of the policies it sells via the Internet and through independent agents. The majority of policies sold by an agent have face values of $500,000 or greater. On-line, Lincoln reaches customers who wish to purchase policies with face values of $500,000 and under.

Increased Competition

Banks and securities brokerages have begun to sell insurance in their aim to be the one-stop shop for consumers' financial services needs. Whether through alliances with insurers or in direct competition with them, these new entrants will affect how insurers go to market. At the moment, both banks and securities brokerages are embracing the Internet more rapidly than insurers.

Growing Consumer Demand

Surveys indicate that people would like to be able to get quotes, pay premiums, and update their policies on-line — functions that are not yet provided on most insurance carriers' sites today.

Insurance executives believe that, within five years, their customers will prefer to purchase and receive auto and term life policies on-line — to purchasing from an agent. They will use the Web to get product information and quotes, pay premiums, compare prices, access their claims status, access and update their policy information, and get advice from financial-service experts.

THE FUTURE

Most industry watchers predict that the market for the digital delivery of products and services will evolve quickly. The rate varies considerably by industry, however.

Selling travel on-line appears to have the fewest constraints, perhaps because computer reservations systems have been in place for years. Analysts predict rapid growth in travel services, from less than $1 billion [thousand million] in 1997 to close to $8 billion [thousand million] within three to five years.

Similarly, the financial services area is poised for quick growth. Nearly five million people actively trade stocks on-line and pay $8 - $30 per trade (traditional brokerages charge an average of $80 per trade).

Investment bank Piper Jaffrey estimates that $614 million in broker commissions were generated on-line in 1997. This represents more than 4 percent of total retail brokerage commissions and 29 percent of the $2.1 billion [thousand million] in commissions attributable to the discount brokerage sector. Analysts predict that 10-16 million households will bank on-line by 2000, more than double the number in 1997. Internet-generated premiums for insurance are expected to grow from $39 million in 1997 to $1.1 billion [thousand million] by 2001.

Other digital products and services have significant growth potential, but their long-term success is tied to solutions for protecting copyrights and to improvements in the Internet infrastructure. Intellectual property holders — software developers, recording artists and record companies, movie studios, authors and publishers — worry that digital copies sold or transmitted over the Internet may be prone to copyright infringement and piracy. The Internet is a natural, low-cost distribution channel for these digital products, but the uncertainty of whether their products can be protected impedes growth. Companies are working with technological solutions, such as "watermarks" and "digital object identifiers," so that they can keep track of their products on-line.

In December 1996, governments negotiated treaties at the World Intellectual Property Organization (WIPO) to address the question of how copyright should be recognized and protected in global Internet commerce. The U.S. government is working to have these treaties ratified in the United States and around the world.

For the multimedia industry, the question of bandwidth is crucial. Until Web users can download a video in a matter of seconds, Web sites will not create many video products to sell on-line and Web users will prefer to read text, watch television, or use their VCR.

Increased bandwidth will also benefit education and health care services. Educational services will be able to use more video programming to supplement other on-line resources. The Web can also be a very useful tool in medical education and for the delivery of health care diagnostic services. Today's Web users can access some information from their health plans and physicians about medical conditions, symptoms, and suggested treatments. Increasingly, they will be able to schedule appointments, pay bills, and check the status of their [insurance] claims on-line. As new equipment is developed for remote diagnosis, doctors will be able to diagnose some medical conditions and recommend treatments to patients via the Internet (state laws and regulations regarding telemedicine and licensure may limit how widely remote diagnosis is used). However, because some medical diagnostics require very-high-quality images (poor resolution could give the impression of a tumor or a fracture where none exists, for instance), improvements in bandwidth, image quality, and reliability will need to occur before telemedicine and remote medical diagnostics emerge as viable industries on the Internet.

Electronic Commerce Initiative

The following excerpts are from the Executive Summary to "A Framework for Global Electronic Commerce." The complete document can be found on the World Wide Web at: *www.whitehouse.gov/WH/New/Commerce/summary-plain.html*

PRINCIPLES

1. The private sector should lead.

The Internet should develop as a market-driven arena, not a regulated industry. Even where collective action is necessary, governments should encourage industry self-regulation and private-sector leadership where possible.

2. Governments should avoid undue restrictions on electronic commerce.

In general, parties should be able to enter into legitimate agreements to buy and sell products and services across the Internet with minimal government involvement or intervention. Governments should refrain from imposing new and unnecessary regulations, bureaucratic procedures, or new taxes and tariffs on commercial activities that take place via the Internet.

3. Where governmental involvement is needed, its aim should be to support and enforce a predictable, minimalist,consistent, and simple legal environment for commerce.

Where government intervention is necessary, its role should be to ensure competition, protect intellectual property and privacy, prevent fraud, foster transparency, and facilitate dispute resolution, not to regulate.

4. Governments should recognize the unique qualities of the Internet.

The genius and explosive success of the Internet can be attributed in part to its decentralized nature and to its tradition of bottom-up governance. Accordingly, the regulatory frameworks established over the past 60 years for telecommunication, radio, and television may not fit the Internet. Existing laws and regulations that may hinder electronic commerce should be reviewed and revised or eliminated to reflect the needs of the new electronic age.

5. Electronic commerce on the Internet should be facilitated on a global basis.

The Internet is a global marketplace. The legal framework supporting commercial transactions should be consistent and predictable regardless of the jurisdiction in which a particular buyer and seller reside.

RECOMMENDATIONS

The principles described above guide the following recommendations:

1. Tariffs and Taxation.

The Internet should be declared a tariff-free environment whenever it is used to deliver products and services. The Internet is a truly global medium, and all nations will benefit from barrier-free trade across it.

No new taxes should be imposed on Internet commerce. Existing taxes that are applied to electronic commerce should be consistent across national and subnational jurisdictions and should be simple to understand and administer. State and local governments should cooperate to develop a uniform, simple approach to the taxation of electronic commerce, based on existing principles of taxation.

2. Electronic Payment Systems.

The commercial and technological environment for electronic payments is changing rapidly, making it difficult to develop policy that is both timely and appropriate. For these reasons, inflexible and highly prescriptive regulations and rules are inappropriate and potentially harmful. In the near-term, case-by-case monitoring of electronic payment experiments is preferable to regulation.

3. Uniform Commercial Code for Electronic Commerce.

In general, parties should be able to do business with each other on the Internet under the terms and conditions they agree upon. Private enterprise and free markets have typically flourished, however, where there are predictable and widely accepted legal principles supporting commercial transactions.

The U.S. supports the development of an international uniform commercial code to facilitate electronic commerce. Such a code should encourage governmental recognition of electronic contracts; encourage consistent international rules for acceptance of electronic signatures and other authentication procedures; promote the development of alternative dispute resolution mechanisms for international commercial transactions; set predictable ground rules for exposure to liability; and streamline the use of electronic registries.

4.
Intellectual Property Protection.

Commerce on the Internet will often involve the sale and licensing of intellectual property. To promote electronic commerce, sellers must know that their intellectual property will not be stolen and buyers must know that they are obtaining authentic products. Clear and effective copyright, patent, and trademark protection is therefore necessary to protect against piracy and fraud.

The recently negotiated World Intellectual Property Organization (WIPO) treaties for copyright protection should be ratified. Issues of liability for infringement, application of the "fair use" doctrine, and limitation of devices to defeat copyright protection mechanisms should be resolved in a balanced way, consistent with international obligations....

5.
Privacy.

It is essential to assure personal privacy in the networked environment if people are to feel comfortable doing business across this new medium.

Data gatherers should tell consumers what information they are collecting and how they intend to use it. Consumers should have meaningful choice with respect to the use and reuse of their personal information. Parents should be able to choose whether or not personal information is collected from their children. In addition, redress should be available to consumers who are harmed by improper use or disclosure of personal information or if decisions are based on inaccurate, outdated, incomplete, or irrelevant personal information.

The administration supports private-sector efforts now under way to implement meaningful, user-friendly, self-regulatory privacy regimes. These include mechanisms for facilitating awareness and the exercise of choice on-line, private-sector adoption of and adherence to fair information practices, and dispute resolution. The government will work with industry and privacy advocates to develop appropriate solutions to privacy concerns that may not be fully addressed by industry through self-regulation and technology.

6.
Security.

The GII [Global Information Infrastructure] must be secure and reliable. If Internet users do not believe that their communications and data are safe from interception and modification, they are unlikely to use the Internet on a routine basis for commerce. The administration, in partnership with industry, is taking steps to promote the development of a market-driven public key infrastructure that will enable trust in encryption and provide the safeguards that users and society will need.

7. Telecommunications Infrastructure and Information Technology.

Global electronic commerce depends upon a modern, seamless, global telecommunications network and upon the "information appliances" that connect to it. In too many countries, telecommunications policies are hindering the development of advanced digital networks. The United States will work internationally to remove barriers to competition, customer choice, lower prices, and improved services.

8. Content.

The administration encourages industry self-regulation, the adoption of competitive content rating systems, and the development of effective, user-friendly technology tools (e.g., filtering and blocking technologies) to empower parents, teachers, and others to block content that is inappropriate for children.

The government will seek agreements with our trading partners to eliminate overly burdensome content regulations that create nontariff trade barriers.

9. Technical Standards.

The marketplace, not governments, should determine technical standards and other mechanisms for interoperability on the Internet. Technology is moving rapidly and governments' attempts to establish technical standards to govern the Internet would only risk inhibiting technological innovation.

United States Information Agency
www.usia.gov/usis.html