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EXAMINING THE THEFT OF AMERICAN INTELLECTUAL PROPERTY AT HOME AND ABROAD

HEARING

BEFORE THE

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EXAMINING THE THEFT OF AMERICAN INTELLECTUAL PROPERTY AT HOME AND ABROAD

Tuesday, February 12, 2002

U.S. SENATE,
FOREIGN RELATIONS COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 2:33 p.m. inBuilding SD–419, Hon. Joseph Biden (chairman) presiding.

Present: Senators Biden, Boxer, Smith, and Allen.

The CHAIRMAN. The hearing will come to order, please. I welcome our witnesses and all our guests. I welcome you to today's hearing on the theft of American intellectual property, fighting crime at home and abroad.

While this hearing is taking place here in the Foreign Relations Committee, I am also wearing my hat today as chairman of the Judiciary Committee, Subcommittee on Crime and Drugs, because we are discussing an issue that is not only a matter of international dimension, but it is also a crime, pure and simple.

The New York Times recently reported that illegal copies of the "Lord of the Rings," a film just recently released in movie theaters here in the United States, are already on sale in the streets of Jalalabad, Afghanistan. Windows XP was available for illegal use on the streets of Moscow two months before it was released in the U.S. by Microsoft. Every episode of "Seinfeld" is now available for download free to anyone with access to the Internet. In September of 2001 alone, 1.5 million songs were downloaded by Web sites which enable users to steal music. Video games that would cost $50 each in the United states are sold for the equivalent of 75 cents on the streets in some of China's cities every day. Thieves steal millions of dollars of American intellectual property from its rightful owners, and hundreds of thousands of American jobs are lost as a result.

American innovation and the protection of innovation by the government has been the critical component of America's economic growth throughout our history. The founding fathers were pretty smart, and they had the foresight to provide for protection of intellectual property, giving Congress the power, "to promote the progress of science and useful arts" by providing copyrights and patents.

The Federal Government's vigilance in shielding intellectual property rights remains essential. Innovation would slow, business would suffer, and jobs would dissolve if technological advances

were left unprotected. The American arts and entertainment industry could not survive without the ability to protect and earn income from its ideas. Would U2 continue to make records and go on tour if all the records, videos, and fan paraphernalia were given out for free? As much as they love music, they might, but it would not be fair.

Copyrights and trademarks mean nothing if government authorities fail to enforce the protection they provide intellectual property owners. It has been estimated that software piracy alone cost the U.S. economy over 118,000 jobs and $5.7 billion in wage losses in the year 2000 alone. Even more, the International Planning and Research Corporation estimates that government loses more than a billion dollars worth of revenue as a result of piracy.

To put this in perspective, with a billion dollars in additional revenue, the American Government could pay for childcare services of more than 100,000 children annually. Alternatively, one billion dollars could be used to fund a Senate proposal to assist schools nationally with emergency school renovation and repairs, and a thousand other things we could usefully use it for.

This is a crime, a crime against which we have made some progress, but against which we can do more. The purpose of today's hearing is to focus on this crime, review what is being done to fight it, and discuss what more can or should be done in light of the continued growth of piracy and counterfeiting abroad and at home.

Fighting crime is not merely in the interest of the United States. As software and entertainment companies begin to flourish in foreign countries, foreign governments are starting to realize that intellectual-property theft possesses a significant economic threat to them. The Indian film industry, as it matured, became increasingly aware that its product was being pirated. It successfully pushed the Indian government to institute adequate protections for intellectual property. One of the challenges we face is to help other countries follow in India's footsteps.

When an American owns property, the government has the responsibility to protect that property from theft. When that property is an idea, it deserves our protection no less than if it were land or a personal object. Who among us would want to see expanded the efforts that have been made by the pirates against those who expend so much effort, the effort required to develop a new product, if the government were not prepared to punish those who would steal it?

If we want to protect American innovation—and, by extension, American jobs—we need to maintain a vigilant stand against intellectual-property theft. American intellectual property is of immense value, perhaps our most valuable resource. Not to protect it is the equivalent of letting coal be stolen from our mines or water taken from our rivers. How will we protect the creative genius of America? How will we preserve the creativity and experimentation that are America's inexhaustible oil wells?

I look forward to discussing these and other questions today. If nothing else, it is my hope that this hearing will educate all of us on the need to respect intellectual property rights in the cyber age and the particular challenge posed by high-tech pirates.

A Federal judge, in a recent court opinion upholding the constitutionality of the Digital Millennium Copyright Act, captured perfectly, in my view, the challenge we face. He said, "We live in an age in which the excitement of ready-access to untold quantities of information has blurred, in some minds, the fact that taking what is not yours and not freely offered to you is stealing."

I would like to thank all of our witnesses for taking the time to join us today. I look forward to this hearing.

At this time, I would like to recognize Senator Allen, who also has an opening statement, and then I will introduce the witnesses.

Senator ALLEN. Thank you, Mr. Chairman, and I want to thank you particularly for holding this hearing today. I think it is terrific to see the Foreign Relations Committee discussing the protection of intellectual property, both domestically and internationally.

As we try to spread American ingenuity and innovation abroad and have that innovation benefit those in other countries, one of the impediments to our technologists and those who develop it is the concern that it will be stolen, it will be copied and they will not get a return. And then some of that copyrighted material or software will come back into this country, obviously at a lower price than what would be sold to consumers.

So this is an issue, obviously, of concern to the Commerce Committee, to the Judiciary Committee, and, yes, also to the Foreign Relations Committee, because this very much deals with some of the intrigues and concerns that we have with certain countries around the world.

As you know, Mr. Chairman, I am chairman of the Republican High-Tech Task Force, and one of the principles of our task force is to enhance the deterrents to Internet piracy and counterfeiting of intellectual property and also bolstering international cooperation against computer crimes. This hearing will be very helpful in advancing this goal, which I know is shared by many members of this committee.

And, indeed, I agree with what you said, Mr. Chairman, on the issue of property rights when you talk about the rule of law and it is part of our Constitution that people's property is to be protected. And, indeed, in a draft statement report—I will quote from your report, Mr. Chairman:

> American innovation and the protection of that innovation by government has been a critical component of American economic growth throughout our history. The founding fathers had the foresight to provide for protection of intellectual property, giving Congress the power to, quote, "promote the progress of science and useful arts by providing copyrights and patents." And obviously our vigilance as a government in protecting these copyrighted acts or this intellectual property has an impact on the growth of innovation, it has an impact on business and investment, and it also clearly has an impact on jobs in this country.

Now, the unauthorized use of intellectual property is a top concern for publishers and users. New technologies and distribution models are—made possible by the Internet—are wonderful, but

they also have created opportunities for companies in the software and information industries to get jobs and new ideas. Unfortunately, the wrong side of it, it has become a fertile hunting ground for online pirates.

First, let me mention some successes of the Bush administration. In an effort to combat piracy, the Department of Justice last month announced the formation of one of the largest cyber-crime units in the country. It is comprised of six assistant U.S. Attorneys who will specialize in computer and intellectual property crimes in San Francisco, Los Angeles, San Diego, Atlanta, Boston, New York, Dallas, and Seattle. And I am pleased we have today with us U.S. Attorney John Gordon who will give us some of the details, I suspect, as the battle goes on in the front lines in the Los Angeles area.

Our U.S. Customs Office is engaged in Operation Buccaneer, the largest anti-piracy operation ever, which is bringing down a Trans-Atlantic ring of hackers believed to be the major providers of illegal software on the Internet. We are told that the hackers who are the target of this effort are responsible for 95 percent of all pirated software available online, causing at least $1 billion in lost revenues each year.

But lost revenue to content producers and content providers is only one part of the problem. Piracy is not a private offense. It hurts everyone. Consumers have to pay more for their product. Producers may be less inclined to be as creative with their artistic endeavors. Software engineers will either have less compensation or possibly less incentive to be innovative and creative when they know their product cannot be protected. And all of this, obviously, adversely affects our families, good-paying jobs, and communities all across our country.

I hope, Mr. Chairman, that the product of this hearing will be an answer to the question that many Americans may ask, "Well, how does the sale of a pirated video in China hurt me?" I understand that Jack Valenti, in the second panel, will show us some pirated videos that were recently purchased in China, and I know our other witnesses will focus on the cost of piracy to people here and abroad.

With these distinguished people on both panels, who are very knowledgeable, have good insight, I hope that they will relate how the harm from the piracy of intellectual property actually harms American people in a way that normal people that—in other words, non-lawyers—would understand.

People, when you are talking about trademarks, intellectual property means a lot of things. It is trade names, trademarks. It is licenses, it is copyrights, it is patents. The infringements or the theft of any of those or the unauthorized use has an impact. And the better you can explain how that affects Americans and their jobs and our prosperity and our way of life, the better we will be to get the public support behind this important issue.

I would like to add two final points, Mr. Chairman.

I was pleased by yesterday's news report on today's hearing and by your call for stronger law enforcement. I spoke with Jeff Raikes—Jeff Raikes' colleagues in Microsoft in Redmond, Washington—last month, and they shared with me a proposed modifica-

tion to Section 2318 of Title 18 of the U.S. Code, which will strengthen anti-tampering legislation to protect the authentication features of copyrighted works. I am eager to work with you and our colleagues to enact this proposal into law.

Finally, I would like to submit, for the record, a thoughtful written statement by Robert Holleyman on behalf of the Business Software Alliance, which is a strong voice of the world's software and Internet industry and a leader in anti-piracy efforts.

[The prepared statement of Mr. Holleyman follows:]

PREPARED STATEMENT OF ROBERT HOLLEYMAN II, PRESIDENT AND CEO, BUSINESS SOFTWARE ALLIANCE

Mr. Chairman and Members of the Committee,

On behalf of the members of the Business Software Alliance (BSA)[1], I submit this statement concerning a related threat to the American software industry, software piracy and counterfeiting. BSA members have been fighting the piracy of our products since our companies were founded. BSA pursues both criminal and civil cases on behalf of its members in over 65 countries around the world. Unlike most other forms of intellectual property, software has always been created in digital form, making it relatively easy to produce perfect duplicates. Since software is a high value good, it also represents the greatest share of pirated American intellectual property on a dollar basis.

THE CONTRIBUTION OF THE AMERICAN SOFTWARE INDUSTRY TO AMERICA'S ECONOMY

U.S. software publishers earn more than half of their total revenue from overseas sales of software. BSA estimates that the U.S. software industry supplies 70 percent of the world's demand for legitimate packaged software. Since 1990, the industry's trade surplus has grown at an average rate of 17.9 percent annually. In contrast, the U.S. economy has posted increasingly large trade deficits throughout the past decade, as a growing number of major U.S. industries moved manufacturing facilities and jobs offshore.

Software industry growth, fueled by the ever-increasing demand for software, has generated a significant number of U.S. jobs. According to a study by Nathan Associates, a Virginia-based consulting firm, the U.S. software industry employed more than 800,000 U.S. workers in 1998, with aggregate wages of $55.6 billion. By the year 2008, the software industry is expected to employ more than 1.3 million workers in the United States. No other industry is providing employment opportunities at such a rapidly increasing rate and at such high wages.

SOFTWARE PIRACY OVERVIEW

In 2001, we estimate that over $11 billion in software sales were lost due to software piracy. This loss is more than just a loss to our member companies' bottom lines. It is also a huge tax revenue and employment loss to the U.S. and foreign treasuries. I am sad to report that in some countries, such as China and Vietnam, over 90 percent of software in use has been pirated. While the piracy rate is lower in other countries, in far too many places in Asia, Latin America and Eastern Europe, the rate still exceeds 50 percent.

Over the past decade, the most significant change that our industry has seen in software piracy has been in the means by which it occurs. Until recently, software piracy was most often a local or regional issue. Software piracy in Latin America had little to do with software piracy in Asia. This is no longer the case. With the widespread reach and use of the Internet, pirates now operate on a global basis. A software pirate can advertise his stolen American-developed software from Asia while offering downloads from a South American server and accepting payment on a European based payment service. All of the activity has occurred outside of the United States even though the company, and in fact the country, most directly harmed by the activity is here.

[1] The Business Software Alliance (www.bsa.org) is the voice of the world's software and Internet industry before governments and with consumers in the international marketplace. Its members represent the fastest growing industry in the world. BSA educates computer users on software copyrights; advocates public policy that fosters innovation and expands trade opportunities; and fights software piracy. BSA members include Adobe, Apple Computer, Autodesk, Bentley Systems, Borland, CNC Software/Mastercam, Compaq, Dell, Entrust, IBM, Intel, Intuit, Macromedia, Microsoft, Network Associates, Novell, Sybase, Symantec, and UGS.

INTERNATIONAL ISSUES

The success of the U.S. software industry is due in large part to this country's historical commitment to strong copyright protection. As noted above, piracy severely limits—and in some countries virtually blocks—development of a strong local copyright industry.

The ability of countries to reap high economic benefits from e-commerce is highly dependent on their ability to promote protection and enforcement of intellectual property rights. Multi-lateral and bilateral trade alliances must be fully backed by governments' firm commitment to respect and enforce intellectual property rights within the public and private sectors; to treat the manufacture and sale of counterfeit software as a crime warranting tough enforcement and penalties; and to ensure that its laws and enforcement regimes adequately address Internet piracy. Worldwide governments can help promote this commitment to intellectual property protection and fight Internet piracy by:

- ensuring that they fulfill their obligations under the WTO TRIPs Agreement by adopting and implementing laws that provide for effective enforcement against piracy;
- encouraging ratification of the WIPO Copyright Treaty and strong criminal enforcement;
- advocating government legalization policies and other reforms that will fundamentally reduce piracy rates; and
- Dedicating resources to the investigation and prosecution of Internet piracy, training, technical assistance and mutual cooperation.

THE CRITICAL IMPORTANCE OF TRIPS IMPLEMENTATION

Given the emergence of organized criminal counterfeiting operations, it is imperative that all governments fulfill their obligation under WTO TRIPs to enact and enforce strong criminal remedies against piracy, including tough, effective penalties. Moreover, to combat rampant piracy among end users, these criminal laws must be supplemented by civil remedies that allow software publishers to obtain civil ex parte search orders along with adequate damages, without significant judicial delays or overly burdensome bond requirements.

The TRIPs Agreement is the first major international treaty to recognize that intellectual property rights are meaningful only if accompanied by adequate enforcement procedures and remedies. In addition, TRIPs requires that intellectual property right enforcement regimes meet specific "results-oriented" performance standards. Specifically, each member's enforcement regime must "permit effective action against infringement" and "constitute a deterrent to further infringements." Moreover, enforcement procedures cannot be "unnecessarily complicated or costly," or "entail unreasonable time limits or unwarranted delays." Thus, in assessing TRIPs compliance, it is critical to review and monitor all aspects of a country's enforcement regime, including the adequacy of procedural remedies and penalties, as well as their effectiveness in deterring piracy.

IMPLEMENTATION OF WIPO COPYRIGHT TREATY

In order to promote a safe, legal environment for e-commerce, it is critical that governments implement laws that guard against piracy on the Internet. In direct response to the growing threat of Internet piracy, the international community in 1996 adopted the WIPO Copyright Treaty to ensure protection of copyrighted works in the digital age. Among other things, the WIPO Treaty (i) makes clear that a copyrighted work can be placed on an interactive network only with the consent of the relevant rightsholder; (ii) makes clear that the Berne Convention's reproduction right applies to electronic uses of works; (iii) protects all forms of expression of computer programs; and (iv) prohibits "hacking" of technical protections that have been applied to works.

The United States was one of the first countries to implement the WIPO Copyright Treaty by enacting the Digital Millennium Copyright Act. In addition, Congress has enacted legislation that criminalizes online distribution of pirated software and increases penalties for Internet piracy. To ensure that these laws have real impact, U.S. law enforcement agencies have elevated the priority given Internet piracy and other copyright offenses, resulting in important prosecutions against criminal pirates and counterfeiters. Similar measures are urgently needed on a global basis.

GOVERNMENT SOFTWARE MANAGEMENT

Government agencies and public institutions are typically among the largest users of computer software. As such, government leaders have an obligation to establish legalization policies and procedures that both prevent software piracy within the public sector and set an example for the private sector to follow. At a minimum, a government legalization policy should require government agencies and recipients of government funds to (i) comply with software copyright and licensing requirements; (ii) establish systems and controls to manage software use; (iii) ensure that adequate funds are budgeted for software procurement; and (iv) require all recipients of government funds to comply with software copyright and licensing requirements in connection with government-funded projects and government grants.

On September 30, 1998, President Clinton signed an Executive Order on Computer Software Piracy, which for the first time clearly articulates legal software use and procurement requirements for Federal agencies and recipients of Federal funds. Several American governors have issued similar executive orders for their states.

Foreign governments are now beginning to consider the adoption of decrees modeled after the U.S. Executive Order (the most notable example being China's "Red-Top Decree"). BSA urges other governments to follow suit and adopt policies that mandate legal software use by government agencies and public institutions. Moreover, to ensure that these policies have more than symbolic value, each government should designate a system for oversight and explicitly require agencies to implement a software asset management program. To assist in these efforts, BSA has published an international "Government Guide for Software Management," which is designed to help foreign governments adopt and implement software asset management programs.

Electronic commerce promises a new revolution in the development, distribution and use of products and services protected by intellectual property. It also poses monumental new risks. The WIPO Treaties, full implementation of the WTO TRIPs agreement, strong government management software policies and commitment of resources to investigation and prosecution of Internet piracy will provide a healthy environment for the development of e-commerce.

On a similar note, passage of Trade Promotion Authority is supported by my industry as another vehicle for boosting the protection of intellectual property around the world. I encourage this Committee to be a leader in the Senate in support for Trade Promotion Authority.

Finally, as part of the State Department's outreach on international development issues around the world, I would point out that the creation of intellectual property depends only upon individual creativity that every country has. Intellectual property does not require huge startup or investment costs. Nor does it shift environmental burdens to third world countries. In sum, intellectual property is an opportunity for every country around the world to prosper from. America's economic strength is often viewed as a role model for developing countries. I encourage the State Department through its Foreign Service Officers and employees in conjunction with the international development programs that it oversees to highlight the economic development potential of intellectual property.

CONCLUSION

Mr. Chairman and Members of this Committee, thank you again for the opportunity to submit a statement on software piracy for the record. Our industry depends upon the U.S. government to make the case for protecting America's intellectual property assets worldwide.

THE NEED FOR ANTI-TAMPERING LEGISLATION

Microsoft and other software publishers face a substantial challenge from the worldwide distribution of high quality counterfeit software. The software industry annually loses an estimated $12 billion in revenues because of counterfeiting activities. Such intellectual property crimes drain the U.S. economy of thousands of jobs, millions in lost tax revenues and billions in lost wages.

Among the practices of counterfeiters and pirate resellers is tampering with authentication features of software and other copyrighted works. These components, such as holograms, certificates of authenticity (COAs), and other security features, are affixed to or embedded in the copyrighted work to allow the rightholder to distinguish genuine works from counterfeits. Highly sophisticated counterfeiters engage in tampering activities both to make counterfeit software appear genuine and

to increase the selling price of genuine software and licenses. Examples of such tampering activities in the software industry include:

- Genuine certificates of authenticity and other authentication features are stolen from replicators or removed from genuine packaging and affixed to counterfeit packaging and CD-ROMs.
- Genuine academic and original equipment manufacturer (OEM) products are altered and mislabeled to resemble retail product.
- End user licenses are altered and mislabeled to specify a higher license quantity.

Cunently, Federal law does not provide adequate civil and criminal remedies to combat such tampering activities. For example, Federal law fails to criminalize the distribution or sale of genuine authentication features to software counterfeiters. This gap in Federal law makes it increasingly difficult for copyright holders to combat counterfeiting activities.

In order to strengthen Federal intellectual property enforcement efforts to combat counterfeiting activities, legislation should be enacted that protects the authentication features of copyrighted works. Section 2318 of title 18 should be amended to (i) prohibit trafficking in authentication features that have been altered or removed from the genuine product, affixed to counterfeit products, or distributed or imported without the authorization of the copyright owner; and (ii) require forfeiture of equipment, devices or materials used to manufacture counterfeit labels or illicit authentication features. Authentication features would include holograms, certificates of authenticity, and similar physical components used by rightholders to distinguish genuine copyrighted works from counterfeits.

Senator ALLEN. So, again, I thank our witnesses. And I thank you, Mr. Chairman, especially, for your leadership in bringing this issue to the attention of all Americans. Thank you. I look forward to the testimony.

The CHAIRMAN. Thank you, Senator.

The reference made by Senator Allen to a report that we are filing today and making available is this report. And I think there are probably copies out there. If they are not, it is "Theft of American Intellectual Property, Fighting Crime Abroad and at Home," and it lays out the status of the problem, at least as we see it, and some of the attempted ways to deal with the problem.

[The report to which the Chairman referred, "Theft of American Intellectual Property, Fighting Crime Abroad and at Home," appears in the Appendix on page 93.]

Now, our first witness—and I will introduce each witness individually—well, I will introduce all three of you now, and I would ask you to testify in the order that I introduce you, if you would.

First of all, the Ambassador Peter Allgeier, is Deputy U.S. Trade Representative. He's held a variety of positions in the office of the United States Trade Representatives since joining in 1980, focusing both in Asia and European trade issues until U.S. Trade Rep. Mickey Kanter appointed him Associate U.S. Trade Representative for the Western Hemisphere in '95. President Bush appointed him Deputy Trade Representative last year. And in his current position, he supervises trade negotiation in Europe, the Middle East, and most of the Western Hemisphere. He also supervises negotiations in the World Trade Organization. We look forward to his testimony.

Our next witness, Ambassador Alan P. Larson, assumed his duties as the United States Secretary of State for Economic Business for Agricultural Affairs November 24th of 1999, and he continues to serve in that position. The Undersecretary serves as the senior economic official at the Department of State. He advises the Sec-

retary of the international economic policy and leads the work of the department on issues ranging from trade and aviation to bilateral relations of American's economic partners. Welcome back to the committee, Mr. Ambassador.

The next witness, John Gordon, currently serves as the United States Attorney for the Central District of California. Having been a Federal Prosecutor in Los Angeles for 17 years, he now serves as the chief Federal law enforcement officer in the Nation's most populous Federal District, with over 16 million residents. Previous to his current appoint, he served as Chief of the Narcotics Division and Chief of the Criminal Division in the same office. I welcome him.

So if you will proceed in the order of—you, Mr. Allgeier, then Mr. Larson, and then Mr. Gordon.

STATEMENT OF HON. PETER ALLGEIER, DEPUTY U.S. TRADE REPRESENTATIVE

Ambassador ALLGEIER. Thank you very much, Mr. Chairman. I would ask that I could summarize my remarks and have the full testimony submitted for the record.

The CHAIRMAN. Without objection, your entire statement will be placed in the record.

Ambassador ALLGEIER. Thank you. More importantly, thank you very much for offering the opportunity to testify before you and with Senator Allen on this very important issue, which is so crucial to American prosperity and international competitiveness.

Creating an environment for innovation is perhaps our strongest comparative advantage internationally. We certainly appreciate very much the support and the work together with the Congress over many years in fighting piracy internationally.

We share with you an appreciation of the immense economic importance to the United States of protecting intellectual property. The copyright industries alone, it is estimated, contributes something like $457 billion a year to our gross domestic product. That's roughly five percent of our gross domestic product. And so we also see theft of ideas as serious a crime as theft of physical assets or financial assets.

And just to give some dimension to that, just internationally alone, our copyright industry is estimated to lose between $20 and $20 billion to piracy.

The CHAIRMAN. Can you imagine if $20 billion had been taken out of the international banking system by theft, what interest that might generate here?

Ambassador ALLGEIER. That's right. Our job as USTR, and we are just part of the overall interagency approach to dealing with international piracy, is to negotiate strong intellectual property protection in our trade agreements and our investment agreements and then to ensure that those provisions of those agreements are enforced vigorously. What I would like to do is to just briefly go over the types of negotiating tools we have in carrying out this mission.

Of course, the premier trade negotiation affecting intellectual property was the TRIPs agreement in the World Trade Organization. But I want to assure you that we are not just sitting on our

laurels because of that agreement. As we continue to negotiate free-trade agreements such as the bilateral agreement we are negotiating with Singapore and Chile and the regional free trade agreement of the Americas, we are insisting that strong intellectual-property protections, even beyond what is already in the TRIPs, be included in those agreements and be subject to dispute settlement.

This, of course, I think underlines how important it is for us to obtain the trade promotion authority that will strengthen our hand in negotiations. And we are very mindful of the fact that the pending bills on trade promotion authority contain strong mandates for negotiating objectives on intellectual property, including an emphasis on protections for the—against intellectual property piracy of—aimed at the new forms of intellectual property, the high-tech forms of intellectual property that are so important to our economy.

Now, we do not just negotiate agreements. We also intercede in situations where piracy is especially prevalent in foreign countries. Two ways in which we do that, I will discuss in a minute, the Special 301 process that we have, which was provided by Congress in the Trade Act of 1988. But we also use the preference programs, the trade preference programs of GSP, the Carribean Basin Initiative, the ANDEAN Trade Preference Act, and the African Growth Opportunities Act, because they all have provisions for adherence to intellectual property protection. So we use the—frankly, the leverage of those programs to promote stronger intellectual property protection in the countries that benefit from those programs.

I mentioned the Special 301. The Special 301 provision of U.S. law is the framework in which we pursue our international intellectual-property objectives. This past year, in April, we reviewed the practices of 80 countries. I think that is more countries than we have ever reviewed before. And as a result of that review, we obtained stronger protection and stronger enforcement.

In the review, the current review of 2001, we are focusing on three areas. One is ensuring proper and timely implementation of the TRIPs agreement. The second is controlling piracy of optical media products such as music and video CDs, software, CD–ROMS and so forth. And third is ensuring that governments worldwide observe intellectual property protection in their own offices, that they are using only legitimate software. So these are our three major——

The CHAIRMAN. You mean in their government offices?

Ambassador ALLGEIER [continuing]. ——Yes. So, just to go over those priorities—with respect to the implementation of the TRIPs agreement, this is an important focus of our efforts. Many of the developing countries had until January of 2000 to implement the obligations. So since that time, an important focus of our effort has been to bring developing countries into compliance with their obligations. Part of that is working cooperatively with them on training programs and basically raising the level of political awareness of the importance of intellectual property. Part of it, however, is moving more aggressively, as I said, removing trade preferences or pursuing dispute settlement in the WTO. And we use whatever tools we feel will be most effective.

A very important focus, as I said, are the new forms of intellectual property and the pirates—as you pointed out, Mr. Chairman—

the pirates are barely a step behind the innovation of new forms of intellectual property, whether it is in software or in these optical media that we are talking about.

We have seen progress there. For example, Hong Kong has taken additional legislative and enforcement actions in this area to combat optical media piracy, but we have much work to do with other countries.

In the case of Ukraine, just recently we removed their benefits under the GSP. I think that was worth something like $40 million in trade. And we also imposed additional trade sanctions on Ukraine for failure to eliminate piracy on sound recordings and optical media piracy. And we also—these trade sanctions we imposed, in addition to the GSP removal, covered about $75 million of trade. But we are pressing other countries, as well—Russia, Thailand, Indonesia, and the Philippines—to address this important area.

Another tool that we have is the recent copyright treaties that were negotiated in the World Intellectual Property Organization. There are two treaties. The WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty. And important emphasis of our work has been to get, first of all, countries to ratify those agreements, and then to enforce them.

One of the ways we do that is—in these new free-trade agreements that I mentioned, such as with Chile and Singapore and in the FTAA, we insist that part of those agreements be the obligations that are contained in the WIPO treaties.

Now, you might say, well, why do you do that if they already have ratified the WIPO treaties? The principal reason is the WIPO treaties do not have dispute settlement, whereas our trade agreements do. And so that is—that is an important element in the new trade agreements that we are negotiating.

Similarly, we seek to have the strongest possible intellectual property commitments in the commitments that countries make as they are negotiating their accession to the World Trade Organization. We have a number of those negotiations going on now, one of the most important of which, of course, is Russia. And their intellectual property protection is a very important component.

This past year, at the Doha Ministerial, we saw China and Taiwan join the WTO. They now have obligations within the WTO that are enforceable under dispute settlement. And in the case of China, for example, we will be reviewing their enforcement each year until the 10th anniversary of their entry of the WTO.

I mentioned the government says "use of software" here. It is really "misuse of software" that we are seeking to eliminate. And in the last few years, we have worked with a number of countries, and some 19 countries have adopted decrees or regulations making it against their rules to use software illegally within government offices.

These, Mr. Chairman, are the primary vehicles that we use in the Office of the U.S. Trade Representatives to promote protection for United States intellectual property overseas.

One thing I would like to emphasize is, we are not just doing this alone. All of these efforts, whether they are negotiating in the WTO, working bilaterally with other countries, are done on an interagency context where we have the experts from the Patent Of-

fice and the Copyright Office. We have the diplomatic support from the State Department. We have the enforcement support from the Justice Department and Customs. And so it is very much a coordinated effort among the different agencies.

So, in closing, I would simply like to thank you once again for the opportunity to discuss this important subject. I do want to highlight how the Congress, over the years, has provided strong tools for us to do our job. I mentioned the 1988 Trade Act, the passage of the Special 301. There is, of course, the ratification of the WIPO treaties and the passage of the Digital Millennium Copyright Act. The strong intellectual property mandates in Trade Promotion Authority that we look forward to and hearings like this which raise the level of consciousness, not just of the American people, but of our trading partners as to the importance that we attach to this important subject. Thank you.

[The prepared statement of Ambassador Allgeier follows:]

PREPARED STATEMENT OF AMBASSADOR PETER ALLGEIER,
DEPUTY U.S. TRADE REPRESENTATIVE

Good morning, Mr. Chairman and Members of the committee. Thank you for the opportunity to speak to you today about the role played by the Office of the United States Trade Representative (USTR) in protecting intellectual property.

Mr. Chairman, as our Constitution recognizes, intellectual property rights are at the heart of scientific and technological progress and artistic creation. As part of the U.S. Government's overall dedication to ensuring respect for intellectual property, the USTR is committed to ensuring market access and fighting piracy overseas. We appreciate the support and interest we have received from Congress over the years, and today I would like to review with you our policy.

IMPORTANCE OF INTELLECTUAL PROPERTY RIGHTS

Ensuring respect for intellectual property rights is an immensely important American economic interest. According to industry estimates, the core American copyright industries—software, films, music, books and other works accounted for $457.2 billion in value added to the U.S. economy, or approximately 4.94% of the Gross Domestic Product. Virtually all of our manufacturing industries, as well as pharmaceutical firms and others, rely upon patent protection to encourage innovation. Trademark protection is equally important for firms and for protecting consumers.

The value of intellectual property rights, however, goes well beyond these issues. A system of strong intellectual property protection promotes future innovation by ensuring that artists, inventors, and scientists are rewarded for their work. Strong copyright protection for business and entertainment software, for example, is essential for a simple reason: software programs are technical marvels that require large investments to create, but can be copied at virtually no cost. Likewise, patent laws that protect inventions in pharmaceuticals and other fields encourage discovery and invention by providing exclusive rights, for a limited period, to those who disclose the results of their work. Disclosure, in turn, enables others to understand the advances made and to extend those advances both in the original field of technology and in other fields.

The results of our policy are clear in practice. Computer programs developed in the past two decades have vastly changed American life: they have improved productivity, created jobs and improved safety in our factories; created new products in countless fields; improved health treatments; made tax filing easier; developed new forms of art and entertainment; strengthened our military and much more. Innovations in drug therapies developed by our pharmaceutical industry have saved millions of lives both at home and abroad.

THE THREAT OF PIRACY

Almost all types of intellectual property, however, are highly vulnerable to piracy. The American copyright industry reported losses through piracy overseas at between $20–22 billion last year. Our patent-dependent pharmaceutical industry estimates that it loses a billion dollars annually in India and Argentina alone. Other

U.S. industries dependent on patents, trademarks, trade secrets, industrial designs and other forms of intellectual property suffer similar unquantified losses.

Toleration of piracy in America can swiftly remove incentives to create. The result would be erosion of America's comparative advantage in high technology; and ultimately loss of the benefits of new advances in health, public safety, education, defense and freedom of information for the entire world. In a sense, the intellectual property of the American economy is like a warehouse of ideas. For people to walk in and steal them is no more tolerable than theft of goods. That is why we at USTR place such an emphasis on ensuring that our trading partners enact, enforce and continue to enforce laws that ensure respect for our rights.

Toleration of piracy by our trading partners, in addition to the harm it causes American interests, can also swiftly remove incentives for their citizens to innovate. Equally important is the role intellectual property plays in developed and developing country economies by providing the foundation for promoting investment, technology transfer, and economic growth in the long run.

In this work, we consult closely with Congress on our priorities and strategies; we use domestic trade law; regional initiatives in Europe, Asia, Latin America and Africa; existing institutions, notably the World Intellectual Property Organization; and the World Trade Organization (WTO). Our goal is to control piracy through strong laws and effective enforcement worldwide, and to ensure that protection remains effective as technology develops in the future. It is complex work: effective protection of inventions in the pharmaceutical area, protection of copyrighted works like software, music, and movies, and protection of the trademark reputation of our firms requires a coordinated effort involving not only trade officials but entire governments. Effective protection of intellectual property rights involves customs, courts, prosecutors and police, commitment by senior political officials; and a general recognition that to copy is to steal and to deprive finance ministries of revenue. But although it is complex and the work is never done, the effort, over the years, has been quite successful.

Let me now review our major initiatives and policy tools.

BILATERAL INITIATIVES AND SPECIAL 301

The United States is committed to a policy of promoting intellectual property protection, in this regard we are making significant progress advancing the protection of these rights through the negotiation of free trade agreements. As part of the negotiations with Jordan, Chile and Singapore, as well as in the hemispheric Free Trade Area of the Americas, we are seeking higher levels of intellectual property protection in areas covered by the TRIPs Agreement, as well as in new areas not covered by TRIPs. This gives us the opportunity to ensure that the intellectual property provisions of these new agreements reflect the technological changes that have occurred since the TRIPs Agreement was negotiated in the late 1980s and early 1990s.

We also intercede directly in countries where piracy is especially prevalent or governments are exceptionally tolerant of piracy. Among our most effective tools in this effort is the annual "Special 301" review mandated by Congress in the 1988 Trade Act.

This tool has vastly improved intellectual property standards around the world, including for software. Publication of the Special 301 list warns a country of our concerns. And it warns potential investors in that country that the intellectual property rights in their investment may not be satisfactorily protected.

The listing process has often helped win improvements in enforcement. One fascinating aspect of the Special 301 process occurs just before we make our annual determinations, when there is often a flurry of activity in those countries desiring not to be listed or to be moved to a lower list. Intellectual property laws are suddenly passed or amended, and enforcement activities increase significantly.

In many cases, these actions lead to permanent improvement in the situation. Bulgaria is a notable example. Several years ago it was one of Europe's largest sources of pirate CDs, and a major cause of concern for us. Since then, we have worked to raise awareness and concern about the problem, and Bulgaria has at this point almost totally eliminated pirate production.

Similarly, progress has occurred in Hong Kong, Macau and Malaysia, as discussed later in my testimony.

At times, however, we must use the sanction authority granted to us for worst case offenders.

China is a prime example. In 1995 and 1996, persistent tolerance of piracy—in particular growth of pirate production for both the domestic market and export—led us to threaten $1 billion in trade sanctions. These helped us to win a bilateral

IP agreement in 1995 and further action in 1996. Our follow-up work since has been to ensure that all relevant Chinese agencies including trade, customs, judiciary, police and senior political officials are involved.

Today, China has an improved system that protects U.S. copyrights more effectively than before. Enforcement of intellectual property rights has become part of China's nationwide anti-crime campaign, involving the Chinese police and court system in fighting piracy. Production (but unfortunately not the availability) of pirated copyrighted works has dropped significantly.

Lack of enforcement of intellectual property rights remains a significant problem in China, particularly for trademarked products and copyrighted works. China's leaders recognize the need for more effective action to address this continuing problem. Ambassador Zoellick welcomed the initial progress they have made through such actions as the new anti-counterfeiting "campaigns" initiated in late 2000 and continued through today. In recent consultations, Chinese officials reported that they had seized 119 million CDs and DVDs, and shut down 15 illegal CD production lines during 2001, bringing to well over 100 the number of such lines closed since 1996.

Nevertheless, piracy and counterfeiting remain rampant in China. The United States continues to actively engage China to address these problems through bilateral consultations to ensure that the laws as enacted are consistent with China's WTO obligations and that China applies its laws in a manner that provides more effective protection of intellectual property rights. In fact, AUSTR Joseph Papovich and a full interagency team just returned from week long consultations in China. We will also be undertaking a review of China's implementation of its WTO TRIPs obligations in Geneva this year, and annually thereafter over the next 10 years.

Specifically, in this most recent visit to China, we discussed the steps China is taking to implement its commitments in the WTO on the protection of intellectual property rights. This is a normal process among WTO members. One of China's WTO commitments is to share information and consult upon request with other WTO members about such implementation efforts. In our consultations we have been stressing issues of particular importance to us.

2001 Special 301 Review

In the 2001 Special 301 review, we analyzed approximately 80 countries, the largest number of countries ever reviewed, with 49 countries recommended for specific identification and two subject to Section 306 monitoring. In this review we are focusing on three major issues:

- Ensuring proper and timely implementation of the TRIPs Agreement.
- Second, controlling piracy of optical media products (music and video CDs, and software CD-ROMs).
- Third, ensuring that government ministries worldwide ensure enforcement of the use of legitimate software.

While piracy and counterfeiting problems persist in many countries, progress has occurred in other countries. Significant positive developments are highlighted below:

- In February 2001, Turkey enacted long-awaited amendments to its Copyright Law, with the goal of bringing Turkey into compliance with the TRIPs Agreement.
- In February 2001, President Kim of Korea issued public orders to the Ministries of Information and Communications and the Ministry of Justice designed to strengthen their copyright enforcement efforts.
- On March 20, 2001, the Danish Parliament approved legislation making civil ex parte searches available. This is a particularly important enforcement tool for the U.S. software industry in fighting against unauthorized use of computer software programs by commercial entities. The legislation was signed into law on March 28, 2001.
- Hong Kong's amendments to its Copyright Ordinance, clarifying end-user software piracy as a criminal offense, became effective on April 1, 2001.
- In November 2001, Taiwan's legislature passed an optical media management law, in response to the U.S. Special 301 process. Under the bill, fines were increased and the government has the authority to seize machinery and products. Due to the six-month transition period, it will be some time before the effectiveness of Taiwan's enforcement effort will be seen.

TRIPs Implementation

Among our top priorities this year has been to ensure full implementation of World Trade Organization commitments on intellectual property. The WTO requires

all members to enact and enforce copyright and other intellectual property protection. Obligations for developing countries became effective on January 1, 2000, while least-developed Members have until 2006 to implement most of the Agreements provisions and until 2016 for certain others.

Progress continues to be made by developing countries toward full implementation of their TRIPs obligations. Nevertheless, a number of countries are still in the process of finalizing implementing legislation and establishing adequate enforcement mechanisms. The United States will continue to work with such countries and expects further progress in the very near future to complete the TRIPs implementation process. However, in those instances where additional progress is not achieved in the near term the United States will pursue our rights through WTO dispute settlement proceedings.

Not only is compliance a legal matter under the WTO TRIPs Agreement, but it is an essential element in creating a favorable climate for investment, especially in Latin American countries facing economic slowdown.

Pirate Optical Media Production

At the same time, however, our work must keep up with the very rapid advance of technology: as new software products and services develop, pirates quickly take advantage of them. Thus, we are focusing on the control of piracy in optical media—for example, music and video CDs, and software CD-ROMs.

We have had some significant successes on this issue in recent years. Hong Kong is one case in point. Our expressions of concern were joined by a number of Hong Kong artists and copyright industry figures. In part because of this, Hong Kong has taken additional legislative and enforcement actions to combat optical media piracy, having already implemented model controls on optical media production.

Malaysia, Macau and Taiwan are other examples. Having identified them as a growing source of pirate optical media production, we dispatched teams to Kuala Lumpur and Taipei to press them on the problem. As a result, Malaysia and Taiwan have enacted legislation and are completing the process of implementing controls on optical media production. Macau has also enacted such legislation and has taken important steps to reduce the magnitude of the problem.

However, in certain cases persuasion and diplomatic pressure are not sufficient to ensure our trading partners implement controls on optical media production. Last month, after several years of negotiations, we imposed $75 million in sanctions on Ukrainian exports to the United States for Ukraine's failure to crack down on sound recording and optical media piracy, particularly its failure to pass an optical disc licensing law.

We are also pressing the governments of Russia, Thailand, Indonesia, and the Philippines to implement such laws.

Internet Piracy

As serious as the problem of optical media piracy is, the Internet is potentially even more problematic in that it has provided an efficient global distribution network for pirate products. Several approaches must be taken by governments to address this problem, including full implementation of the TRIPs Agreement's enforcement obligations to provide effective action and adequate deterrence against commercial piracy whether it occurs in the on-line environment or in the physical world.

WIPO Copyright Treaties

We are actively consulting with U.S. industry to develop the best strategy to address Internet piracy. An important first step was achieved at the World Intellectual Property Organization, when it concluded two copyright treaties in 1996; the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT). These Treaties help raise the minimum standards of intellectual property protection around the world, particularly with respect to Internet-based delivery of copyrighted works.

These Treaties represent the consensus view of the world community that the vital framework of protection under existing treaties, including the TRIPs Agreement, should be supplemented to eliminate any remaining gaps in copyright protection on the Internet that could impede the development of electronic commerce.

Throughout the world, countries have recognized the importance of the Internet as a vehicle for economic expansion. In order to realize the enormous potential of the Internet a growing number of these countries are implementing the WIPO Treaties and are thus creating a legal environment conducive to investment and growth in Internet-related businesses and technologies. In the competition for foreign direct investment in these industries, these countries now hold a decided advantage. Therefore, governments should ratify and implement the two WIPO "Internet" trea-

ties, which clarify exclusive rights in the on-line environment and specifically prohibit the circumvention of technological protection measures for copyrighted works.

Of the 159 members of WIPO, 28 have ratified the WPPT and 31 countries have ratified the WCT. The United States deposited its instrument of ratification on September 14, 1999. As you know Mr. Chairman, the Senate Foreign Relations Committee was instrumental in this effort. This committee passed the resolution of ratification on October 21, 1998. Each of the Treaties requires that 30 countries ratify the treaty before it becomes effective. The WCT will come into force in March of this year. Ambassador Zoellick is committed to working internationally to promote ratification of these Treaties by our trading partners in close coordination with the Department of Commerce, the Patent and Trademark Office, the Copyright Office, and the Department of State.

We are pursuing this goal in several ways. We are seeking to incorporate the highest standards of protection for intellectual property into every bilateral and regional trade agreement. We have already had our first success in this effort by incorporating the standards of the WIPO Treaties as substantive obligations in our FTA with Jordan. The Jordan FTA has laid the foundation for pursuing this goal in the free trade agreements we currently have under negotiation with Chile and Singapore as well as the Free Trade Area of the Americas (FTAA), and other FTAs yet to be launched. Moreover, our proposals in these negotiations will further update copyright and enforcement obligations to reflect the technological challenges we know today as well as those that may exist at the time negotiations are concluded several years from now.

One additional way in which USTR is pursuing this objective is through negotiations with governments seeking to join the World Trade Organization. In accession negotiations with Albania and Croatia, for example, USTR obtained formal commitments from these governments to ratify the WIPO Copyright Treaties as a part of their protocol of accession.

Finally, one of our longer term objectives is to bring the substantive obligations of the WIPO copyright treaties into the WTO as obligations for all WTO Members under the TRIPs Agreement. At that time, we would also intend to further update the TRIPs Agreement to ensure that it provides adequate and effective protection for intellectual property in the light of technological challenges that may occur in coming years.

Other Initiatives Regarding Internet Piracy

As the next step in our effort to keep pace with the very rapid advance of technology, we are focusing our Special 301 reviews on Internet piracy. This is a major focus of the 2002 Special 301 Annual Review that we launch in March. Ambassador Zoellick will announce the results of this review at the end of April.

In part because of USG efforts to raise awareness of the need for countries to enforce against all forms of piracy, several countries are moving beyond their fight against traditional forms of piracy to address the serious and growing problem of Internet piracy.

As part of our intensive on-going interaction with China on piracy issues, in 2000 USTR wrote to Chinese Vice Premier Li Lanqing urging that China include in its current reform of its copyright law amendments to address Internet piracy, including implementation of the WIPO Copyright Treaties. China's new copyright law addresses certain of these Internet-related issues. We look forward to China's issuance of detailed implementing regulations and rules in the near future. We have identified some additional provisions which we believe will further enhance protections in the internet environment and clarify the new copyright law.

Beyond this, the Chinese Ministry of Culture has issued a circular regarding on-line business activities of audio-video (A/V) products. The circular stipulates that the A/V products sold on-line must be legal AV products and that sales of smuggled, pirated, and other illegal AV products are prohibited.

The Supreme People's Court and certain Chinese courts have issued interpretations and rendered decisions involving copyright and piracy in the internet environment which have reinforced the rights of owners in the online environment is an act of infringement under their copyright law.

Government Use of Software

The third component of this year's Special 301 initiative is government use of software. Our goal is to control "end-user" piracy—that is, the unauthorized copying of large numbers of legally obtained programs by government agencies.

In October 1998, the President of the United States issued a new Executive Order directing U.S. Government agencies to maintain appropriate, effective procedures to ensure legitimate use of software. The President directed USTR to undertake an ini-

tiative to work with other governments, particularly those in need of modernizing their software management systems or about which concerns have been expressed, regarding inappropriate government use of illegal software.

The United States has achieved considerable progress under this initiative since October of 1998. Countries that have issued decrees mandating the use of only authorized software by government ministries include China, Colombia, France, Greece, Ireland, Israel, Jordan, Hungary, Hong Kong, Lebanon, Macau, Paraguay, the Philippines, Spain, Taiwan, Thailand and the UK.

Preference Programs

Another bilateral tool is preferential tariff treatment, such as the Generalized System of Preferences, the Caribbean Basin Initiative, the Andean Trade Preferences Act, and the Africa Growth and Opportunity Act. These programs provide duty-free treatment to certain products of beneficiary countries, subject to certain conditions, including adequate and effective protection of intellectual property rights. The threat of loss of GSP and ATPA benefits has proven to be an effective point of leverage with some of our trading partners.

For example, we took action against Honduras because of the unauthorized broadcasting of U.S. satellite-carried television programing in response to a petition filed by the Motion Picture Association. After we withdrew $5 million dollars in GSP and CBI trade benefits Honduras agreed to address our concerns.

More recently, on August 7, 2001, we suspended all of Ukraine's GSP benefits in response to Ukraine's failure to crack down on rampant sound recording and optical media piracy. 2001. We are currently reviewing a petition filed by the International Intellectual Property Alliance to revoke Brazil's GSP status as a result of it's inadequate protection of intellectual property rights.

Problem Countries

We continue, however, to face serious problems in a number of countries in each part of the world.

In Eastern Europe, our concerns include the Ukraine and Russia. In January, we sanctioned Ukraine for failure to shut down pirate CD manufacturing plants.

In Latin America, we are focused on Brazil, Mexico, and Paraguay, where enforcement is dangerously weak and causes billions of dollars in losses for U.S. right holders annually. In Brazil, U.S. industry reports that in 2001 its trade losses from copyright piracy were over $900 million—the largest losses due to piracy in the hemisphere. Mexico has acted in previous years to improve its laws by enacting new legislation and has taken steps to increase its enforcement efforts. Regrettably, these efforts have not had a significant impact on reducing rampant piracy in Mexico and we will soon be reinitiating a bilateral working group with the Government of Mexico to press for more effective action.

Paraguay was identified as a Priority Foreign Country in January 1998. The subsequent Section 301 investigation terminated with the signing of a comprehensive Memorandum of Understanding (MOU) on the protection of intellectual property. Unfortunately, the implementation of the MOU has been inadequate and Paraguay continues to be a regional center for piracy and counterfeiting. The United States is concerned with these lapses in the implementation of the MOU and will seek consultations. If no progress is made on these issues in the coming year, then we may have no choice but to reactivate the Section 301 investigation.

We also remain focused on several economies in Asia, notably China, as I mentioned, but also Taiwan, Thailand, the Philippines, Indonesia, and Malaysia.

MULTILATERAL TRADE INITIATIVES

Bilateral negotiations are and will remain central to our efforts to improve intellectual property standards worldwide. However, as time has passed, our trading partners have begun to see the effect of stronger standards at home—that is, that strong intellectual property standards allow nations to develop their own high-tech and artistic industries.

This allowed us to make a fundamental advance with the TRIPs agreement at the creation of the World Trade Organization in 1995. This was an historic achievement: it has required all WTO members to pass and enforce copyright, patent and trademark laws, and given us a strong dispute settlement mechanism to protect our rights. Thus we created a set of standards enforceable between governments and subject not only to our own trade laws but to multilateral rules.

Meeting Obligations

The TRIPs Agreement granted developing countries until January 1, 2000 to implement most provisions of the Agreement, and granted least developed countries

until 2006. In past years, we have pressed countries wherever possible to accelerate implementation of these obligations. Now we are working to ensure that developing countries at a minimum are taking steps to finalize implementation of their obligations. We are also working with least-developed countries through bilateral and multilateral technical assistance to assist them in their effort to implement the agreement in a timely fashion.

Use of Dispute Settlements

In the interim, we have been aggressive and successful in using WTO dispute settlement procedures to assert our rights in developed countries of American works, beginning with our initiation of the first TRIPs-related dispute settlement ease against Japan in 1996. We have since initiated an additional twelve cases, including:

- With Portugal for failing to apply TRIPs-levels of protection to existing patents,
- Against Pakistan and India for it failure to provide a "mailbox" and exclusive marketing rights for pharmaceutical products,
- With Denmark and Sweden over the lack of *ex parte* civil search procedures,
- With Ireland for failure to pass a TRIPs-consistent copyright law,
- With Greece over rampant broadcast piracy,
- With Argentina over exclusive marketing rights and data protection,
- With Canada for failing to provide a 20-year patent term in all cases, and
- With the EU regarding regulations governing geographical indications.

We have brought complaints to address the failure of countries to implement TRIPs obligations of particular importance to the pharmaceutical, copyright, and trademark industry.

For example, a significant success for us is the ease we brought against Ireland for failure to pass a TRIPs-consistent copyright law. As a result of our dispute settlement consultations, Ireland adopted the needed amendments to its copyright law and the U.S. and Ireland announced resolution of the WTO ease brought by the United States. The new law became effective on January 1, 2001.

On March 20, 2001, the Danish Parliament approved legislation making civil *ex parte* searches available. The legislation was signed into law on March 28, 2001. In addition, the WTO Appellate Body decided in favor of the United States in a dispute with Canada regarding the term of protection for patents applied for prior to October 1, 1989, and recommended that Canada implement the recommendations of the dispute settlement panel within a reasonable time. Effective July 12, 2001, Canada announced that it had enacted an amendment to its Patent Act to bring it into conformity with its obligations under the TRIPs Agreement.

On March 22, 2001, the United States and Greece formally notified the WTO of the resolution of the dispute settlement case regarding television piracy. This was possible due to the sharp decline in the level of television piracy in Greece, passage of new legislation providing for the immediate closure of infringing stations, closure of several stations that had pirated U.S. films, and the issuance of the first criminal convictions for television piracy in Greece.

New Dispute Settlement Cases

In the year ahead, we expect to be equally active at the WTO. We are aware of U.S. industry's concerns regarding compliance problems in a number of specific countries.

We are hopeful that many of these situations can be resolved through consultations. If not, we are prepared to address the problems through dispute settlement proceedings, where necessary.

Accessions to the WTO

The year 2001 saw the completion of over fifteen years of negotiations for the WTO Membership of the People's Republic of China. Three other long-term accession applicants, Lithuania, Moldova, and Taiwan also completed the accession process in 2001, bringing total WTO Membership to 144 as of January 1, 2002.

Our negotiations on the accession of these economies and twenty-eight other applicants seeking WTO membership offer us a major opportunity to improve intellectual property standards worldwide. These include a number of the countries in which our intellectual property industries have experienced significant piracy problems over the years such as Russia. With Russia, and all other applicants, we consider acceptance of the WTO requirement for enactment and enforcement of modern intellectual property laws as set out in the TRIPs Agreement a fundamental condition of entry.

Achieving Further Progress in the WTO TRIPs

Finally, let me offer a few thoughts on the Doha Development Agenda.

The next year presents us with an opportunity to make fundamentally important advances in intellectual property protection worldwide, including through further implementation of existing WTO obligations in many developing countries and through the accession negotiations. Furthermore, under the WTO's "built-in agenda," we will complete a thorough review in TRIPs Council of developing-country implementation of TRIPs obligations. And, as I mentioned, begin a multi-year review of China's implementation of the TRIPs Agreement.

In close coordination with U.S. industry, we chose not to seek new TRIPs negotiations as a priority in Doha. At a time when we are urging WTO Members to complete their efforts to fully implement the TRIPs Agreement, we felt it was premature to launch new negotiations. That being said, like other Members, we foresee the possibility of improvements to the TRIPs Agreement, in due course. Among other things, we believe that it will be important to examine and ensure that standards and principles concerning the availability, scope, use and enforcement of intellectual property rights are adequate, effective, and are keeping pace with rapidly changing technology, including further development of the Internet and digital technologies. But first, we will seek to establish these standards bilaterally and regionally through our FTA negotiations.

We also expect that, once Members have the benefit of the experience gained through full implementation of the TRIPs Agreement, we will want to examine and ensure that Members have fully attained the commercial benefits which were intended to be conferred by the TRIPs Agreement. In any event, "no consideration will be given to the lowering of standards in any future negotiation below those set forth in the TRIPs Agreement."

CONCLUSION

Mr. Chairman, intellectual property protection is one of our most important and challenging tasks. We protect U.S. intellectual property rights to protect the research, investments and ideas of some of America's artists, authors, and private-sector and academic researchers. Protecting intellectual property rights also enhances America's comparative advantage in the highest-skill, highest-wage fields; and helps ensure that the extraordinary scientific and technical progress of the past decades continues and accelerates in the years ahead to the benefit of all mankind.

In the past century, the commitment we have shown to enforce respect for intellectual property rights at home has helped to create the world's most technologically advanced economy; a flowering of new artistic forms from films to sound recordings and computer graphic art; and inventions in fields from medicine to aerospace that have improved lives and opened new worlds of experience.

The implications of our international intellectual property policies—for prosperity, creative innovation and improved lives throughout the world—are no less. Congress, through passage of the Special 301 law in 1988, passage of the Digital Millennium Copyright Act in 2000 implementing the WIPO Internet Treaties, by providing strong intellectual property mandates in Trade Promotion Authority legislation, and in hearings such as this, deserves great credit for bringing public focus to these issues. We look forward continuing the effort together in the years ahead.

Thank you, Mr. Chairman and Members of the Committee.

The CHAIRMAN. Mr. Larson.

STATEMENT OF HON. ALAN P. LARSON, UNDER SECRETARY FOR ECONOMIC, BUSINESS, AND AGRICULTURAL AFFAIRS, DEPARTMENT OF STATE

Mr. LARSON. Mr. Chairman, I also have a written statement which, with your permission, I would submit for the record.

The CHAIRMAN. It will be placed in the record.

Mr. LARSON. Thank you. Mr. Chairman, we very strongly agree with what you and Senator Allen said at the outset, that the United States, as a knowledge-based and innovation-driven economy, has a profound interest in the protection of intellectual property rights. I would like to focus on how the State Department is part of the team that Ambassador Allgeier described by outlining

some of the things we are doing in Washington, but also in the field, to support this effort.

It begins the first day a foreign service officer walks into the State Department. We have training on IPR as an integral part of the training program. We also are training our mid- and senior-level people in IPR issues. And I am speaking with every outgoing ambassador about commercial advocacy and IPR issues. We used our awards program to draw attention to some of the success stories of both our younger officers as well as our ambassadors in pressing the case for IPR protection abroad.

We support the Special 301 process that Ambassador Allgeier described by using our embassies to monitor other countries' activities, to report to the interagency process, but we also try to use the Special 301 not just as a report card but also as leverage to get improved performance out of our trading partners.

The State Department is chairing an interagency group that is devoted to training for foreigners. This is an effort designed to prioritize and coordinate the various agencies that can contribute to training foreign government officials in IPR protection.

The CHAIRMAN. Training the foreign government officials?

Mr. LARSON. Correct.

The CHAIRMAN. Teaching them how to——

Mr. LARSON. Working with customs officials, working with regulatory officials. Some of it is just helping judges understand these issues. In Jordan, for example, we had a very effective training session that focused on judges.

The CHAIRMAN. Is it a hard sell?

Mr. LARSON. Well.

The CHAIRMAN. I am not being facetious when I ask that.

Mr. LARSON. No. I mean, I think part of what——

The CHAIRMAN. I am sorry to interrupt you.

Mr. LARSON [continuing]. ——my testimony is about is that we need a combination of pressure, but also persuasion. We profoundly believe that, for these countries, if they want to have an investment climate that works, if they want to attract foreign capital, if they also want to be an innovation economy, that they have to protect intellectual property. So we are involved in—as part of our effort—in a process of persuasion.

I received a letter—two letters, in fact—late last year—one from Jack Valenti and the other from Hilary Rosen, who you will hear more from later—about an initiative taken by our Public Affairs section in San Paolo, Brazil, which was designed to have a public-private partnership that brought in large segments of Brazilian society to discuss the benefits to Brazil of having stronger IPR protection. And it was a very successful effort, because it was really pitched from the standpoint of what was in their interests.

Another initiative we have in this vein is to launch a Web site about IPR protection. It has been in the works for awhile. By coincidence, we got it up today. But it is—I think it is very good, and it is something that obviously we can build on as we go forward.

It is important to just underscore quickly one of the points that Ambassador Allgeier raised about the international legal structure. I had the honor of testifying before this committee in 1998 on behalf of the two WIPO Internet treaties. And we do think those are

very important initiatives. We were grateful that the Senate moved promptly to give advice and consent. And the copyright—the WIPO copyright treaty, has now been ratified by enough governments that it will enter into force next month.

Without going into too much detail, Mr. Chairman, because it is outlined in my testimony, I do want to highlight that we have had a number of success stories. Ambassador Allgeier mentioned the persistent efforts that have resulted in Hong Kong in the passage of a good optical disk law and the shutting down of pirating production lines. In Greece we had an ambassador that pressed this issue strongly and was able to convince to the government to pass tougher enforcement laws. Similarly, in the United Arab Emirates, one of our ambassadors got very, very active on these issues and persuaded the government to launch raids on stores that were selling pirated computer software. In Paraguay, we had a young officer who just very, very actively pushed the government to accede to the WIPO Copyright Treaty as well as the WIPO Performances and Phonograms treaty. And there are many other examples, as well, where we are using our embassies abroad to support the government-wide effort to persuade other countries to respect intellectual property rights. We really do think we have made some progress, but we would be the first to acknowledge that we have an awful lot that we need to do in the future.

[The prepared statement of Mr. Larson follows:]

PREPARED STATEMENT OF ALAN LARSON, UNDER SECRETARY OF STATE FOR ECONOMIC, BUSINESS AND AGRICULTURAL AFFAIRS

Thank you for the opportunity to meet with you today to discuss intellectual property policy and enforcement. The United States is a knowledge-based, innovation-driven economy. The protection of intellectual property rights is critically important to our prosperity and economic leadership.

The Department of State is fully committed to the Administration's goal of advancing the protection of intellectual property worldwide. At all levels of the Department, we are actively engaged in a cooperative effort that involves other Washington agencies, the private sector, and foreign governments.

What I would like to do today is to touch on some recent trends in intellectual property protection, and then describe briefly the role of the Department of State.

RECENT TRENDS IN INTELLECTUAL PROPERTY PROTECTION

In assessing the state of intellectual property protection overseas, we see two complementary and positive trends in recent years. First, we observe a significant, if not readily quantifiable, increased appreciation of the benefits inherent in effective protection of intellectual property. More and more of our trading partners are coming to understand that their future growth and development depends in large part on their becoming active players in the knowledge-based economy. They also are coming to appreciate that strong intellectual property protection is necessary to create an attractive investment climate. In short, economic self-interest is becoming a very important factor in enhancing intellectual property protection overseas.

Recent statistics about our own economy are illustrative. The copyright industries now account for about five percent of our GDP, and this sector has grown at twice the rate of the rest of the U.S. economy. The positive impact of intellectual property protection can also be seen in India's emergence as a dynamic competitor in the world's computer software sector after that country adopted higher levels of copyright protection. However, Indian scientists do not yet enjoy similar levels of patent protection for pharmaceutical products. As a result, domestic innovation and growth in that sector remain stymied.

Although much more remains to be done, we believe we have made tangible progress in improving the level of intellectual property protection around the world. Many developing country WTO Members have passed domestic legislation and begun to implement enforcement measures to comply with their obligations under the TRIPs Agreement.

Several years ago, I testified in support of the World Intellectual Property Organization (WIPO) "Internet" Treaties. The Senate did promptly give its advise and consent to these treaties. As a result, they are expanding the protection afforded by the TRIPs Agreement to the new technological environment and are providing a legal framework to facilitate the further development of e-commerce.

I thank the members of the Committee for promptly ratifying these treaties. I am pleased to note the WIPO Copyright Treaty has been ratified by enough governments for it to enter into force in March. We continue to urge other governments to ratify as well the companion WIPO Performances and Phonograms Treaty.

Although the trends for effective intellectual property protection are positive, significant challenges remain. The focus of this year's Special 301 review will be the growing problem of piracy of optical media (music CDs, video CDs, CD-ROMs, and DVDs).

This pernicious form of piracy spreads quickly, infecting whole regions unless strong and effective measures are taken to prevent illicit operators from setting up shop. But piracy of optical media can be stopped if governments are willing to act—as did the Government of Bulgaria several years ago.

When the pirates moved into new fields of opportunity in Ukraine, the Department and our Embassy in Kiev began working intensively with USTR, other government agencies and the private sector to press the Government of Ukraine to close down pirating facilities. For a time, our efforts were somewhat successful, but the commitment of the Government of Ukraine unfortunately did not last. Last year's designation of Ukraine as a Priority Foreign Country and the recent imposition of sanctions sends a strong signal that we will not tolerate wanton piracy of our intellectual property.

Another priority will be implementing initiatives to proactively combat computer software piracy. The Department of State is working closely with USTR and the private sector to get our trading partners to require government ministries and offices to use only authorized software.

In addition, we are working closely with USTR and other Washington agencies to help ensure that WTO Members comply fully with their legislative and enforcement obligations under the TRIPs Agreement. These obligations came due for developing countries on January 1, 2000.

The success we achieve through these and other intellectual property initiatives depends on the close and constructive relationship we enjoy with the private sector. The progress we have made to date has been and will continue to be a joint enterprise.

THE STATE DEPARTMENT'S ROLE IN INTELLECTUAL PROPERTY POLICY AND ENFORCEMENT

The Department of State has as its primary mission using U.S. foreign policy tools to protect Americans' security and prosperity. The protection of intellectual property abroad figures prominently among our international economic objectives. Our Ambassadors and embassy country teams around the world are devoted to promoting the protection of intellectual property, by mobilizing government agencies in the field, host government officials and the private sector.

Internal Preparation

New Foreign Service officers learn about the Department's policy in this area as they enter on duty. Members of each orientation class are briefed on the importance of intellectual property protection, and the key place it occupies in our international economic policy agenda.

We also provide intellectual property training as part of our mid and senior level professional courses. Specialized training for economic officers includes instructional modules on intellectual property. We also provide a stand-alone course on intellectual property that is geared specifically to economic officers being assigned to positions in countries where intellectual property issues are particularly challenging.

Chiefs of Mission and Deputy Chiefs of Mission are briefed on intellectual property issues before assuming their duties. They and Economic officers headed to overseas posts receive briefings from other agencies and the private sector. A number of representatives from the intellectual property organizations we receive briefings from are testifying before the Committee today.

Finally, I have made it a practice to meet with outgoing Chiefs of Mission. The importance of intellectual property protection is high on my agenda in all these sessions.

Cooperative Activities

The Department of State plays a strong role in the annual Special 301 review of country intellectual property practices. Participating agencies rely heavily on the accurate, up-to-date information we receive from our posts abroad. The objective of the review is not simply to give our trading partners an intellectual property report card. Rather, we seek to employ Special 301 to leverage real progress with host governments. In this regard, our Ambassadors and embassy officers overseas play a critical role. They are well positioned to effectively convey our views and they have the on-the-ground contacts needed to work the issues with host governments and the private sector.

Our participation in the Special 301 process is a year-long commitment to bilateral engagement with countries worldwide. Our posts are continuously looking for ways to bring together all parties of the intellectual property community, and to help them work together more effectively.

With growing evidence of links between intellectual property crime, organized crime and funding for terrorist activities, embassy country teams are seeking to foster closer ties between U.S. Government agencies and the foreign counterparts who work these enforcement issues.

Another focus of the Department of State's work is our active participation in international negotiations. At the WTO Ministerial in Doha, I worked closely with my USTR colleagues and the private sector to reach agreement on a Declaration on TRIPs and Public Health. The Declaration fended off efforts to weaken TRIPs by reaffirming the commitment of WTO Members to the TRIPs Agreement and by drawing attention to the flexibilities the Agreement already affords WTO Members in pursuing their public health objectives.

The Department of State has joined with other U.S. Government agencies in working closely with the World Intellectual Property Organization (WIPO). WIPO saves our inventors and innovators countless dollars as well as time in registering patents overseas. WIPO also provides a valuable service in training developing countries to improve their intellectual property regulatory regimes.

Training, Technical Assistance and Public Diplomacy

As developing countries strive to improve their intellectual property regimes, the U.S. Government and the private sector are receiving an increasing number of requests for intellectual property training and technical assistance.

The U.S. Agency for International Development (USAID) estimates it provided $7.1 million in assistance over the period 1999–2001 to developing and transition countries to support their implementation of the TRIPs Agreement. The Department of State's Bureau of International Narcotics and Law Enforcement allocated about $377,000 for IPR training in FY 2001. Our Bureau of Educational and Cultural Affairs brings to the United States officials, academics, journalists and business people from developing countries to show them the benefits of protecting intellectual property rights—thereby creating advocates for stronger intellectual property protection.

The U.S. Customs Service, U.S. Patent and Trademark Office, the Federal Bureau of Investigation, the Department of Justice, the Department of Commerce, the Copyright Office of the Library of Congress, and the Office of the U.S. Trade Representative participate in these training and assistance activities by providing experts for programs funded by USAID, the Department of State, and by their own budgets. U.S. industry also funds and provides significant amounts of training to developing countries.

The Department of State chairs an Intellectual Property Rights Training Coordination Group that is working with other U.S. agencies and the private sector to prioritize program proposals and to ensure we get the most out of our training and assistance investments. It responds to training and assistance recommendations from both our embassies overseas and industry. To enable government and the private sector to more effectively pool their efforts, the Group is working to improve a database of training programs. Examples of some of these programs include;

- Seminars sponsored by USAID for the Jordanian public and private sector on benefits of intellectual property protection and training for Jordanian judges on intellectual property laws.
- International Law Enforcement Academies' IPR enforcement programs, where State provides the facility and program funding and USG enforcement agencies provide the substantive expertise.
- Conferences sponsored by the Department of Commerce under its Commercial Law Development Program (CLDP), which bring in officials from foreign governments. A recent conference in Croatia brought together officials from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, FYR Macedonia, and Romania.

Our embassies and consulates also have hosted assistance programs sponsored by the private sector. For example, in Bulgaria, the Motion Picture Association of America (MPAA) sponsored a program to train border control police and customs officers on identification of pirated product. In Croatia, the Business Software Alliance (BSA) provided training on software piracy for Croatian trade inspectors.

Some of the most effective training programs are educational efforts organized or sponsored by the Department of State's public diplomacy corps. A recent example of this was a conference organized by the Public Affairs Section of our Consulate General in Sao Paulo. The purpose of the conference was to explore ways to combat piracy in the Brazilian market, including better training and public/private collaboration.

The conference was itself a shining example of the partnering that is possible with the private sector. The Consulate General staff worked with the Brazilian government and industry representatives to organize the conference, drawing in law enforcement officials, representatives of anti-piracy groups, and leaders from the entertainment and software industries. The value of this conference—and this type of initiative—was confirmed by positive post-conference comments from both the Motion Picture Association of America (MPAA) and the Recording Industry Association of America (RIAA).

Other examples of public diplomacy efforts include:

- Sponsoring officials from developing countries to travel to the United States as part of the State Department's International Visitors Program to study intellectual property protection in the United States.
- Sending intellectual property experts abroad as speakers to various developing countries.
- Hosting our widely appreciated WorldNet interactive videoconferences, which enable intellectual property experts to reach audiences in several countries at the same time.
- Creating an intellectual property web site for foreign audiences which will include key reports, international agreements, links to relevant U.S. Government web sites, fact sheets, and original articles on current intellectual property issues. This web page will be launched today.

Success Stories

The educational work of our embassies and consulates, their reporting and their interventions with foreign government officials have helped the U.S. Government in many other instances to advance intellectual property protection. Following are several examples:

In *Hong Kong,* persistent efforts on the part of consulate officers paid off when authorities passed a good optical disk law, shut down pirating production lines and drove pirating distributors out of business.

In *Singapore,* embassy interventions convinced the local authorities to shut down "night markets" which sold pirated merchandise.

In *Greece,* ambassadorial pressure in a sustained campaign played a key role in convincing the government to pass tougher enforcement laws. As a result, audio/visual piracy—specifically TV stations showing movies without paying royalties—have declined from $100 million to near zero.

In the *UAE,* repeated representations by the Ambassador resulted in successful raids on stores selling pirated computer software. Also, the Ambassador was given the Department's Charles E. Cobb Award for helping PhRMA and the UAE reach agreement ending UAE piracy of U.S. pharmaceutical products.

In *Slovenia,* embassy interventions, using Special 301 as leverage, convinced the government to pass legislation protecting test data submitted to obtain marketing approval for pharmaceuticals.

In *Paraguay,* embassy efforts helped convince the government to accede to both the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty. The officer who led this effort was given the Department's Charles E. Cobb, Jr. Award for Initiative and Success in Trade Development.11In *South Africa,* embassy initiatives led to the founding of a group representing all intellectual property industries and companies in the country. The group then developed ways for customs agents at remote borders to better identify counterfeit goods.

In *Argentina,* the Deputy Chief of Mission was honored by PhRMA for his outstanding support as a determined advocate for adequate and effective intellectual property protection for pharmaceutical products in that country.

CONCLUSION

The State Department's contribution to intellectual property protection rests in large part on our ability and commitment to work with all relevant parties, public and private, both here and abroad. We welcome this broad responsibility and opportunity. The challenge for the United States and for other countries throughout the world to strengthen their "innovation economies" relies not only on protection of intellectual property, but also on the free flow of information and ideas that is characteristic of democracy.

The CHAIRMAN. Thank you very much. Mr. Gordon, welcome. Thanks for—did you come in today? Or yesterday?

Mr. GORDON. Yesterday.

The CHAIRMAN. Thank you for making the trip. It's a long haul. We appreciate it.

Mr. GORDON. Mr. Chairman——

The CHAIRMAN. Before you begin, I have one question. Is this job you are doing out there now easier than when you were running the drug unit?

Mr. GORDON. More political. [Laughter.]

The CHAIRMAN. Probably more interesting.

Mr. GORDON. Everyone in our side gets on the side of drug enforcement. It's harder to balance the other things when you are the U.S. Attorney.

The CHAIRMAN. Thank you.

Mr. GORDON. Thank you very much for having me.

STATEMENT OF JOHN S. GORDON, U.S. ATTORNEY, CENTRAL DISTRICT OF CALIFORNIA

Mr. GORDON. Mr. Chairman and Senator Allen, I am pleased to testify today on the efforts of the Department of the Justice and the U.S. Attorney's office in Los Angeles to combat the high-tech piracy of intellectual property.

Our country leads the world in the creation and export of intellectual property, or IP. The IP sector of our economy faces grave threats from high-tech pirates who counterfeit or copy computer chips and computer software programs, motion-picture video tapes and DVDs, and music CDs. IP criminals also manufacture and sell unauthorized access devices which allow people to receive satellite TV programs without paying for them. In each case, criminals steal the profits that rightfully belong to the creators or makers of the IP being infringed or stolen.

High-tech IP pirates operate throughout the U.S. and around the world. Based on our experience in Los Angeles, the largest-scale IP pirates operate out of Asia, and Asian organized crime is believed to bankroll and reap the lion's share of profits of many IP infringement schemes that we have uncovered in the central district.

In large part due to the funding and the personnel allocations provided by Congress to fight computer and IP crime, the Department has set up ten units around the country referred to earlier by Senator Allen, dubbed "Computer Hacking and Intellectual Property," or CHIPS units, composed of prosecutors specially trained to combat computer and IP crime. Such units have been established in San Jose, Los Angeles, San Diego, Seattle, Dallas, Atlanta, Boston, Brooklyn, Manhattan, and Alexandria, Virginia.

In Los Angeles, we formally established our CHIPS unit last year. Over the last two years our office has prosecuted more than 50 defendants for a variety of high-tech IP offenses. Those have included the trafficking of high-quality counterfeit versions of the latest Microsoft software programs, the smuggling from Far East countries of counterfeit Microsoft software and accompanying packaging and licensing paperwork, illegally copying software and high-security computer chips for arcade-style video games and illegally modifying Intel computer chips to run at higher speeds, then remarking the chips to reflect the higher speeds without informing the consumer, thereby allowing the seller to command a higher price while the consumer and Intel are both defrauded, and finally manufacturing and selling counterfeit DirecTV access cards which allow people to steal satellite programming without paying for it.

In the Central District of California, we recently convicted the first two defendants in an international anti-piracy investigation that has been directed and is being directed by DOJ's Computer Crimes and Intellectual Property Section, or CCIPS. Operation Buccaneer targeted a high-level Warez organization, an international underground network that obtains software, rips it—that is, removes the security devices that are designed to prevent unauthorized duplication—and then posts it on the Internet for use by other members of the group, sometimes before the software is commercially released—again, referring to what the Chairman talked about in his opening statement.

These organizations are believed to be responsible for the vast majority of pirated software, games, and movies available on the Internet today. In Operation Buccaneer, CCIPS is working with my office in Los Angeles, as well as several other U.S. Attorney's offices, the Customs Service, and various foreign law-enforcement agencies to mount a coordinated international attack on major Warez leaders and members. Approximately 20 foreign searches have been conducted in the U.K., Australia, Finland, Norway, and Sweden. We're working to form and solidify international relationships and interagency cooperation that are required to successfully conduct such investigations.

We're also working with industry victims such as the Motion Picture Association of America to identify and apprehend individuals using the Internet to illegally distribute copyrighted motion pictures and other creative works. We're working with DirecTV and other satellite TV companies to identify and apprehend computer hackers who circumvent the security features that allow people to steal satellite programming. We're infiltrating software piracy and trafficking rings that use the Internet to carry out crimes.

The Customs Service continues to aggressively target and intercept organized rings which smuggle goods into our country through Los Angeles and Long Beach Harbors and LAX. And in the Central District, we also intend to continue to conduct industry outreach and facilitate interagency cooperation and conduct IP crime training for our agents and prosecutors.

CCIPS at DOJ intends to continue to conduct specialized IP training for prosecutors and investigators from all over the world who both come here and are trained elsewhere. That training is de-

signed to help solidify the effective international alliances that are necessary to combat IP piracy.

I thank you for the opportunity to address the committee on these important issues, and I would be happy to answer any question you might have.

[The prepared statement of Mr. Gordon follows:]

PREPARED STATEMENT OF JOHN S. GORDON, UNITED STATES ATTORNEY, CENTRAL DISTRICT OF CALIFORNIA

COMPUTERS, CYBERSPACE, AND THE GLOBAL REACH OF IP CRIME

Mr. Chairman and Members of the Committee, my name is John Gordon. I am the United States Attorney for the Central District of California (CDCA), the nation's most populous Federal judicial district with over fifteen million residents. It is my privilege to appear before you today to discuss the national and international efforts of the Department of Justice (DOJ) as a whole and the U.S. Attorney's Office (USAO) in Los Angeles in particular to combat the infringement of intellectual property. This is an extremely important topic, and I commend the Committee for holding this hearing.

Intellectual property, often referred to as "IP," is a vital part of our economy. As we continue to shift from an industrial economy to one that is more dependent on information technology, the assets of this country, including software, music, and other digital products, are increasingly IP-based. Additionally, the health of the U.S. economy depends on consumers trusting that the products they buy are legitimate and safe, which in turn requires the vigorous protection of registered trademarks. Furthermore, the incentive of American businesses to produce innovative products and designs depends in part upon protection of their trade secrets from theft by other domestic and foreign businesses. The protection of copyright, trademark, and trade secrets is the protection of IP.

The United States leads the world in the creation and export of IP and IP-related products. Not surprisingly, the infringement of IP rights is particularly harmful to our economy. High-tech thieves counterfeit computer chips and computer software programs and accompanying packaging and pass the products off as authentic. Software pirates obtain computer source code or strip the encryption features of software, movie, or music CDs or DVDs, and unlawfully duplicate and distribute virtually identical copies of such copyrighted goods. Crooked computer programmers obtain the code used in satellite TV access device cards and manufacture and sell unauthorized access cards to people who don't want to pay monthly fees for satellite programming. In each case, criminals are stealing the profits that rightfully belong to the creators or makers of the copyrighted, trademarked, or otherwise protected property.

High-tech counterfeiters, software pirates, and those who engage in economic espionage are as different as the intellectual property they counterfeit or steal. They can be computer administrators or computer hackers, or members of organized criminal groups that have moved into the IP field. Many copyright and trademark pirates operate out of countries, often located in Asia or Eastern Europe, where counterfeit and imitation products can be made inexpensively by using underpaid laborers.

DOJ is charged with investigating and prosecuting Federal IP violations. Primary investigative and prosecutorial responsibility within DOJ rests with the USAOs and the Federal Bureau of Investigation (FBI), with the support and coordination of DOJ Criminal Division's Computer Crime and Intellectual Property Section ("CCIPS"). CCIPS is DOJ's highly specialized team of over two dozen attorneys who focus on computer and high-tech crime. CCIPS works cooperatively with the 93 USAOs across the country through the Computer and Telecommunications Coordinators (CTCs) who work in each USAO. CTCs are Assistant U.S. Attorneys who have been specially trained in investigating and prosecuting computer crime cases and IP matters. In addition to the nationwide CTC network, in July 2001, DOJ announced the formation of ten highly specialized prosecutorial units dedicated to fighting cybercrime in districts with a targeted need. These units have been dubbed Computer Hacking and Intellectual Property (or "CHIPs") units. CDCA is one of the districts that has formed a CHIPs unit to mount a focused and specialized attack on cybcrcrime.

The USAO in Los Angeles is on the front line of IP rights enforcement. Los Angeles and Long Beach are major international ports serving as the gateway for billions of dollars of imports from Asia. A significant proportion of counterfeit goods entering the country travels through those ports. Accordingly, we work closely with the U.S.

Customs Service to stem the flow of such contraband. Many high-tech industries are also located in the CDCA. Los Angeles is the entertainment capital of the world. It is home to the motion picture and recording industries, as well as numerous high-tech developers, manufacturers, and distributors, big and small. While large businesses are often victimized by IP crime, small businesses, which comprise a sizeable portion of the Southern California economy, can be devastated by organized commercial-scale piracy. Unfortunately, technology has made such large-scale piracy more common in the U.S. and around the globe.

The burgeoning use of the Internet and digital media has spurred the international growth of IP. Software, music, and movies have all benefitted from technological advancements related to computers and the Internet. However, these technological advances have also produced new means of illegally reproducing and distributing copyright and trademark protected material. Congress has responded to this mounting problem by enacting new criminal laws and amendments to the criminal copyright statute that prohibit such misappropriation. The 1997 amendments made by the No Electronic Theft (NET) Act extended Federal criminal copyright law to large-scale, not-for-profit, unlawful reproduction and distribution of copyrighted works. However, IP infringers are evolving with the pace of technology.

For example, there is a new brand of organized high-tech IP piracy, discussed in detail below, that operates internationally and engages in the large-scale infringement of digital media using the Internet. The Internet's emerging role in IP infringement virtually guarantees that we will witness a growth in such conduct, requiring many more such investigations. Furthermore, because the Internet has no borders, these cases will necessarily require a greater focus on international investigations. Fortunately, we are already experiencing success in tackling these new challenges.

THE EVOLUTION OF DOJ'S IP ENFORCEMENT PROGRAM

The enforcement of IP rights has been a DOJ priority since July 1999, when the Attorney General's Intellectual Property Rights Enforcement Initiative was announced. Since then, the USAOs, working cooperatively with DOJ, CCIPS, the FBI and Customs, have been making criminal IP enforcement a priority by increasing the number and quality of criminal IP investigations and prosecutions. Today's IP enforcement effort is a multi-pronged, multidisciplinary effort.

As I mentioned earlier, the formation of the CHIPs units represents DOJ's evolving effort to fight crime in the digital age. New CHIPs units have been established in Los Angeles, San Diego, Atlanta, Boston, New York (Brooklyn and Manhattan), Dallas, Seattle and Alexandria, Virginia. The units are based upon a model pioneered by the USAO in the Northern District of California, where the concept has proven effective in prosecuting cybercrime and IP crimes. Districts such as the CDCA were chosen for the CHIPs program because of a significant concentration or explosive growth of high-tech industry, or the presence of other likely targets for IP or computer crimes. In the CDCA, we have six prosecutors in Los Angeles and two in our Orange County branch office dedicated to prosecuting complex computer crimes, including high-tech IP offenses. The expertise of the prosecutors in these units, as well as in CCIPS, will allow us to continue the success we have had to date and to ensure that in the future, DOJ will continue to battle effectively against IP crime.

In the meantime, CCIPS has coordinated prosecutions with the USAOs, focused on creating specialized IP training courses for investigators and prosecutors, streamlined the victim-industry referral process, developed relationships with affected industries, and worked with Congress and the Sentencing Commission to improve the sentencing guidelines for IP crimes. CCIPS has also been tackling the international IP issues that are becoming increasingly important to American IP rights enforcement.

Realizing the significant international aspects of IP enforcement, the Department has concentrated its international efforts on boosting the visibility and attention given to IP enforcement in four important areas: coordinating international training efforts to address specific enforcement-related issues; identifying bilateral and multilateral forums to promote investigative cooperation; coordinating efforts with other agencies charged with promoting effective IP enforcement regimes; and integrating the latest empirical data and trends involving transborder IP crime into DOJ's enforcement operations. Where appropriate, the U.S. government has encouraged our foreign counterparts to create specialized units devoted to investigating and prosecuting IP crime. DOJ has also participated in numerous training courses sponsored by the U.S. Government and industry, both within the U.S. and overseas, especially in targeted countries where IP crime is prevalent.

These multi-pronged efforts together encompass DOJ's IP program. Together they are advancing our campaign to prevent and, where necessary, prosecute IP crime in the U.S. and abroad.

THE CDCA'S IP ENFORCEMENT EFFORTS

Over the past two years, under the IP initiative, the USAO in Los Angeles has prosecuted a wide variety of IP crime. We have prosecuted more than 50 defendants for an array of high-tech IP offenses. Summarized below are examples of cases that we have successfully prosecuted:

Software Piracy

- September 2000—a defendant from Plano, Texas was convicted of running a trafficking ring that purchased and distributed counterfeit Microsoft software through a company in Cincinnati, Ohio. The black-market value of the software was over $600,000. Defendant was sentenced to one year in prison and ordered to pay more than $650,000 in restitution to Microsoft.
- February 2001—a man who sold approximately $30,000 in counterfeit software from his home was convicted of selling counterfeit Microsoft software. The defendant previously entered into a pre-trial diversion agreement with the government to avoid the filing of charges against him if he no longer engaged in selling counterfeit software. Within weeks of signing the agreement, however, defendant once again was advertising, manufacturing and selling counterfeit software.
- June 2001—a woman was arrested by U.S. Customs agents for selling cutting-edge pirated software including Windows Millennium Edition. Search warrants were executed, resulting in the seizure of over $7 million in counterfeit software. The woman has pled guilty and is pending sentencing.
- August 2001—FBI agents raided several locations after a year-long operation to infiltrate a Microsoft software piracy ring. Agents found over 10,000 units of counterfeit Windows operating systems as well as counterfeit certificates of authenticity. Through the use of a confidential informant, investigators were able to learn of the ring's operation to import counterfeit products from Asia and sell them in the United States. Four defendants were indicted, have pled guilty to IP offenses, and are awaiting sentencing.

Counterfeit Computer Chips

- June 2000—Two defendants were arrested and later were convicted of copying software and high-security computer chips for arcade-style video games. Defendants developed a method of circumventing the security technology in the original chips which enabled the defendants to copy the software and chips.
- 1999–2000—defendants obtained low-speed Pentium II computer chips and modified the chips to enable the chips to run at a higher speed. The chips were then repackaged into counterfeit Pentium II cases and retail boxes which reflected the new higher speed and were sold to small computer retailers in Los Angeles, San Jose, Boston, and North Carolina. The counterfeit chip casings were obtained from suppliers in Taiwan. The chips were destined for or sold in the domestic retail chip market through small computer retailers. The re-markers typically set up front companies in nominee names to sell to these retailers. While the retailers often knew they were buying re-marked chips because they purchased the illegal chips at prices substantially below the normal market price, consumers purchased the chips at the full retail price and believed they were purchasing an authentic Intel product along with Intel's customer support. Intel received numerous calls from consumers who believed that they purchased an authentic Intel product. Not only did consumers get defrauded, but in some instances, the counterfeit chips may have caused computer fires because the chips were running faster than they were designed to run. In a related case, chips were stamped with a red lobster, which is the mark of a specific Taiwanese organized crime group (reminiscent of kilos of cocaine being stamped with a specific mark or word to designate the particular Colombian organization that manufactured the cocaine). Intel has seen similar marks in other cases.

Satellite Signal Theft—DirecTV

- August 2000—14 defendants in a nation-wide sweep were arrested for stealing satellite signals in connection with selling unauthorized and counterfeit DirecTV access cards. All of the defendants were convicted and received sentences ranging from probation to 15 months imprisonment.

Our newly formed CHIPs Unit has a number of other cases currently under investigation that will continue our aggressive pursuit of IP crime.

RECENT NATIONAL SUCCESS IN IP ENFORCEMENT: INTERNET SOFTWARE PIRACY

The intersection of IP infringement and the burgeoning use of the Internet has produced a new high-tech means of committing large-scale copyright infringement. International underground networks with thousands of members from countries spanning the globe have organized themselves into competitive gangs that obtain software, "up" it (that is, remove various security features designed to prevent unauthorized duplication of the software) and post it on the Internet for use by other members of the group—sometimes before the software has been commercially released. These high-level "Warez" (as in soft-warez) organizations are believed to be responsible for the vast majority of the pirated software, games and movies available on the Internet today. The top-level groups are highly structured, security-conscious organizations. Frequently, the members of these groups never meet and know each other only through their screen names. The top Warcz groups use the latest technology to expand their reach and avoid detection by law enforcement.

To provide some idea of the volume of illegal material available on these sites, many archive sites contain 2,000 gigabytes or more of pirated software. 2,000 gigabytes of software is equivalent to 1.5 million, 3 1/4-inch diskettes full of copyrighted material. The estimated retail value of the material expected to be seized from a major archive site is in the millions of dollars.

In December 2001, DOJ and the Treasury Department dealt a major blow to Warez organizations. DOJ, in conjunction with the U.S. Customs Service, the FBI, and various foreign law enforcement agencies, simultaneously executed over 100 search warrants in three operations in what is to date, the most significant Federal law enforcement action ever taken against copyright piracy on the Internet. These operations, dubbed "Buccaneer," "Bandwidth," and "Digital Piratez," struck at all aspects of the Warez illegal software, game and movie trade. The CDCA, which participated in Operation Buccaneer, recently took the first guilty pleas in the case from two defendants who used UCLA's computer systems to support the group's software piracy. As part of their pleas, the defendants agreed that their activities caused $5 million in loss to industry.

An important and unprecedented aspect of the December 2001 operations is that the investigation did not stop at this nation's borders. U.S. law enforcement worked closely with law enforcement from six foreign countries to identify, target and execute searches against major Warez leaders and membership conducting their illegal activity from overseas. Our foreign counterparts should be commended for their efforts in what has been a truly significant cooperative effort to combat global piracy. In Operation Buccaneer, over 20 foreign searches were conducted in the United Kingdom, Australia, Finland, Norway and Sweden against major players in these international syndicates. We anticipate future success in the investigation of these sorts of transborder IP crimes and are working to form and solidify the international relationships and inter-agency cooperation that are required to successfully conduct such investigations. We cannot effectively combat software piracy unless it is confronted on an international scale.

THE ROAD AHEAD

The CDCA's goal is to increase the quantity and quality of high-tech IP investigations and prosecutions. We are working with industry-victims such as the Motion Picture Association of America to identify and apprehend individuals using the Internet to illegally distribute copyrighted motion pictures and other creative works. We are working with DirecTV and other companies to identify and apprehend computer hackers who are circumventing security features to steal satellite programming and other satellite signals. We are infiltrating software piracy and trafficking rings that use the Internet to carry out their crimes. The Customs Service continues to aggressively target and intercept organized rings that smuggle goods into this country through our major ports and through our major airport—LAX. We will also continue to conduct industry outreach and facilitate inter-agency cooperation in IP enforcement, and will continue to conduct IP crime training in our district for agents and prosecutors.

The funding that Congress recently provided for additional Assistant U.S. Attorneys is greatly appreciated by the CDCA and by DOJ. It will help us more effectively pursue our law enforcement initiatives. In addition, the USA Patriot Act has provided prosecutors valuable tools to streamline the collection of essential electronic evidence and identify high-tech IP pirates. We greatly appreciate your support for our work as it continues to produce results.

Thank you for the opportunity to address this Committee on these important issues. I would be pleased to answer any questions you might have.

The CHAIRMAN. Thank you very much. With the permission of my colleagues, we will do—what time is the first vote? We could do ten-minute rounds. We'll do ten-minute rounds.

Senator, I do not know why you are so far down. You are welcome up here.

Senator BOXER. That's okay. I have got my little props, and I am ready to go.

The CHAIRMAN. You just wanted to be next to Jack in his orange shirt. [Laughter.]

Well, let me begin with you, Mr. Gordon. What can you tell us in an open session about the criminal organizations that are involved in large-scale piracy and counterfeiting? Are they the only types of activities these organizations are involved in, or do they also get involved in other criminal enterprises? Are they specialized, or are they part of broader operations? Are there any links you are aware of?

Mr. GORDON. I think it is both. I just met with the FBI and Customs people in Los Angeles who are most familiar with our current investigations and trends that they are seeing, and they tell me that in Los Angeles, on the West Coast, Asian organized crime is the number-one perpetrator. And Asian organization crime, as you are probably aware, does not limit itself to any particular type of crime. They go where the money is, and they oftentimes try to engage in a calculus of what makes the most money at the least risk, both of getting caught and, if you do get caught, how much time you are going to get.

And while drug trafficking is extremely heavily penalized in this country, IP piracy, while it is improving, is still not at that level. So it is a fairly low-cost way of making a whole lot of money.

The CHAIRMAN. Quite frankly, that was my next question, and I would invite either of our other witnesses to respond. And that is that we have, for a long time—and this is not a criticism of anyone in the Senate, in the administration, or past administrations—but for the longest time, we have seemed to look at this, I think—having been Chairman of the Judiciary Committee for so many years prior to this and Chairman of the Criminal Law Subcommittee for two decades, I am part of the problem, what I am about to say—we have viewed, in terms—there is an old expression. If you want to know what a society values most, take a look at what it punishes the harshest if that value is, in fact, infringed upon. And there is very little correlation between the punishment that flows from piracy of intellectual property and a similar punishment that would flow for doing something that affected the property value or had the same amount of money that was attendant to it if it were done in another form.

For example, you know, you go to law school—as the U.S. Attorney will tell you, and my friend from Virginia—and, you know, we learn about petty theft and grand theft that relates to the amount of the value of the thing stolen. And yet if, in fact, you were to pirate, you know, a half a million dollars worth of intellectual property, notwithstanding the fact you may not have made a half million dollars from that piracy, you get one penalty. If you were to literally go out and rob a bank or rob—if you were to burglarize

someone's home and steal a half million dollars in property, the penalty is much more severe.

Do any of you have any view on whether or not the severity of the penalty and the treatment of this as a crime more than as an economic or trade issue would have any impact on the dimension of the problem?

Mr. GORDON. I did want to say that a big change in the IP piracy fight came when the penalties under the sentencing guidelines changed from just looking at the value of the knock-off good, for example, rather than the value of the good that is being infringed. When that change was made and you start looking at how much the actual Microsoft product is worth, how much the actual movie that is being infringed, is worth, rather than the value of the knock-off, that increased penalties considerably, and I think predictably will have some greater deterrent value than just punishing someone for the value of the knock-off.

The CHAIRMAN. Gentlemen?

Ambassador ALLGEIER. Yes. I would say if you are concerned, Mr. Chairman, about the disparity in levels of punishment for intellectual property crimes in the United States, versus other crimes, that disparity is a multiple of that, internationally. And frankly, that is, I think, it is the biggest obstacle that we face in dealing with—especially in developing countries—the appreciation that this is really a crime.

And you see that very clearly—countries that adhere to the TRIPs, they have the laws in place, but the penalties —you probably could get a worse penalty by parking illegally out here in the District of Columbia.

Mr. LARSON. Yeah, I agree with that. I think it is both—the issue of the penalty and then the predictability that the penalty will be imposed, that both are a problem in many of these countries.

The CHAIRMAN. One of the things that I find when you talk to people about this issue, otherwise very decent, honorable people, people who if you dropped your wallet in the line to pay your groceries and money fell out, they would pick it up and give you your money back, those same people do not think much of whether or not they are going to tie illegally into a satellite reception for their television or whether they are going to do a lot—and there seems to be a sort of moral equivalency that is applied here, and that is the notion that, well, the amount of money these artists get is so obscene that we are really not doing really anything much at all here, that denying the artist or the company, you know, the ability to sell these additional billion dollars worth of CDs, or whatever it may be, abroad—that is not a big deal because they make so much money anyway.

When you are sitting down as a trade rep—when you are sitting down as the chief economic officer in the Department of State meeting with your counterparts, give me—and this is going to sound like a silly question, but I have been doing this job a long time—tell me what it is? What's the conversation like? You're sitting with your counterpart, whether it is in Asia or Latin America or Europe, and saying, "Look, you have got to change this. You have got to stiffen this. You have got to"—what response do you get?

Mr. LARSON. I will give you one example. You mentioned in your opening remarks, Mr. Chairman, India. Part of what I try to do is appeal to their sense of self-interest. And you mentioned that they have a movie industry. And due to pressures within their own country, they began to see this in a different light and began to strengthen some of these protections and the enforcement of them. But they have other knowledge-based industries—software, but also potentially pharmaceuticals.

And what we have tried to stress throughout is, yes, there is a—first of all, it is the law. You know, there are international regimes that you belong to. But in addition to that, you have a self-interest. And the argument that your country is poor and people can't afford to pay full price is not really a compelling argument.

The CHAIRMAN. Is that the argument that is made sometimes, too?

Mr. LARSON. Yes.

The CHAIRMAN. Go ahead. I didn't mean to interrupt you.

Mr. LARSON. No, but that is the argument that is made sometimes, and, you know, I think the industries involved do make an effort to recognize income levels when they go in and try to market their products, but they expect that their copyrights and patents will be respected. And I think what we are beginning to see, in fits and starts, is that more and more countries are recognizing that they have intellectual property, too, and they could develop even more intellectual property if they had the regime that protected it.

The CHAIRMAN. Mr. Ambassador?

Ambassador ALLGEIER. Yes. We can use the leverage of trade agreements and dispute settlement and preferential tariffs and so forth to leverage countries to a certain extent. But until they realize that it is in their own interest, they will only take that so far.

I would mention two things. One, Ambassador Larson spoke about the—convincing them that this is part of the environment for them to attract investment, especially in the high-tech area. The other thing is, it is part of having a rule of law in the society. And, you know, countries will say, "Well, we want to have the rule of law." Well, the rule of law is not divisible. You can't say we are going to have the rule of law in this area, and we are going to have rampant illegality in that area.

There are resource problems in these countries. A lot of them have judicial systems that do not operate well, even under, you know, capital crimes such as murders. That said, the solution is to improve the judicial system and to work with them on it and to convince them that—well, as the U.S. Attorney was saying, just as in the west coast, criminals who are operating in narcotics in South America, their operations in piracy are helping to fuel their narcotics operations, as well. And so it is all part of an assault on the rule of law.

The CHAIRMAN. Well, is there one area of the world—well, I will withhold my question in the interest of time. I yield to my friend from Virginia and then Senator Boxer. And there is a vote at—I guess in about 20 minutes or 15 minutes, at which time we will break, and then we will all go vote and come right back.

Senator ALLEN. Thank you, Mr. Chairman. This question is mostly addressed to Mr. Larson and Mr. Allgeier. I was looking at

an analysis. I want to hear your analysis. The Business Software Alliance had a—in 1999, there as a review of various states of our union, as far as piracy rights. I was happy to see Virginia had the lowest piracy rate, which was only—it was 16.2 percent. Delaware, the Chairman's state, was also one of the better states and had a 19.9 percent—or 19.8 piracy rate. The total in the U.S. was 25.1 percent. All of this represents a lot of dollars lost, thousands of jobs—4,290 in Virginia—in California, 13,859 jobs in Senator Boxer's state. So this had that impact in those states.

Now, also the Business Software Alliance had an international study, and they went through all sorts of countries, and they did it by region, but it had everyone, from Austria and Poland, Brazil, Chile, African countries, Australia, and so forth.

Which countries—I would ask these two gentlemen—which countries, in your view, are the biggest threat to American's copyright interests worldwide? And what are you all doing, or your agencies doing, to respond to these international pirates? I assume you have seen this Business Software Alliance report.

Ambassador ALLGEIER. I am generally aware of it, but what I --

Senator ALLEN. Well, what—in your view, from your—which country—say, the top three major concerns for those who are pirating our intellectual property, our copyrighted materials?

Ambassador ALLGEIER. First of all, let me say that I think that the types of countries in which this is the biggest problem are the more advanced developing countries, because what you have there is you have a combination of rising affluence, people who are interested, you know, in buying either the products of the entertainment industry or the computer industry. But the systems of enforcement and so forth have not kept pace, and so they are generally weaker.

Also a number of these countries—if you think of countries like China and Brazil, Mexico, and so forth—they are large countries, so the markets there are quite large, and there is quite a penetration of, frankly, U.S. cultural interest, and so there is this huge market for it. And I would say that those are the types of countries where we have the biggest challenge right now.

Senator ALLEN. Well, what are you all doing—would you agree with that, Mr. Larson?

Mr. LARSON. Broadly, yes.

Senator ALLEN. Alright. Now, what are you all specifically doing—whether it is China, whether it is Brazil, whether it is Mexico, or any others that fit that large category—I understand the trepidations and reluctance to name countries, but some of them pay no attention, maybe, to these matters of enforcing the law. What are you doing to make sure that they do enforce the law?

Ambassador ALLGEIER. Well, we pursue them through their obligations within the WTO. We pursue it through programs—if they are beneficiaries of our tariff preference programs. In the case of where we have a bilateral agreement, such as the NAFTA, we have the provisions there. And basically we work with these countries mostly to enhance the enforcement.

It's less a question of new legislation, although there is certainly improvements that can be made in legislation. And it is a long-term effort, because it is convincing them to devote the resources. It's also training people, as Ambassador Larson mentioned. Those

could be judges, they can police officials, they can be customs officials. And it is trying to convey to them their own interest in protecting their own intellectual property.

Senator ALLEN. Well, in all crime matters, in combating crime—and certainly our U.S. Attorney, Mr. Gordon, understand this—and you hit on it indirectly—is in trying to deter criminal behavior, you need to have tough penalties, clearly, and there needs to be also a certainty of punishment. You can have tougher penalties, but if it is not —they are not enforced or they are not caught, and if when the people are caught, they are not getting the full sentence, that doesn't help. So you need tougher penalties and certainty of punishment.

It sounds to me, though, from your testimony, that this is simply not happening. Not only are you trying to trying to train judges, but so often it seems like when they—when somebody may be caught, you are talking about—the guy should get a worse penalty for illegal parking or whatever sort of traffic infraction you gave as an example.

And I think that, clearly, you'd like them to enforce those laws. If not, there is going to have to be some way of those countries seeing the importance that we place on it in trade agreements, and some of them are going to have to get sanctioned, one way or the other—again, they are different treaties, whether they are multicountry treaties or bilateral agreements.

Yes, Mr. Larson?

Mr. LARSON. Just to comment very briefly, Senator, on that last point, I stressed in my remarks the importance of training, the importance of persuasion, but I also agree with you that there are times when we have to act. We worked very hard, for example, on Ukraine. I pushed them several times, talked with their trade ministers, their finance ministers, and we thought for a time that we had begun to turn around this problem of piracy. But they didn't persist and turn it around, and so we were quick to support the policy that Ambassador Allgeier discussed, which was really taking back a significant amount of trade benefits from them.

At the same time, I did want to underscore the importance of the WTO as a tool to move this process forward. This is an effort that we are going to have to make over a decade. And in the case of two very big countries—China, we have the fact that they have just joined the WTO, and so they have obligations which they have accepted, and now it is going to be very important for the WTO and, I think, the business community, as well, to work with the various provinces and localities that have the responsibility to enforce these obligations and, frankly, at this stage, may not fully understand what these obligations are. This is going to take persistence and effort.

In the case of Russia, we have a WTO accession negotiation underway where we will be pushing for them to accept fully the international obligation of the TRIPs agreement. And this gives us an opportunity to get the sort of standards written into their laws that we would like to see all over the world.

Senator ALLEN. Thank you. And you will have this Senator's and I think many other Senators' support in those efforts. That's one of the values of bringing some of these countries into the World

Trade Organization is it actually a method of enforcing their obligations and responsibilities. And I am confident that both of you two have that prioritization. Just understand you will get reinforcements here.

Well, I would like to ask Mr. Gordon a question or two, depending on the amount of time left. Do you see in other U.S. Attorneys' Offices the same sort of prioritization of intellectual-property violations? I went through the international, but I also went through the states. It's not just a problem overseas. It's a problem here in our own country. Do you see U.S. Attorneys' offices making this a priority, or not?

Mr. GORDON. The Attorney General has made clear that it is one of his priorities. And generally when the Attorney General says it is a priority, it is a priority. I will say I know that in the ten CHIPS cities, it unquestionably is a demonstrated priority. They've created—and we have created—specialized units with numerous AUSAs trained and dedicated to doing that type of work.

Even a part from that, though, I think, given the Attorney General's stated preference for prioritizing the matter, that other districts, as well, even if they are not in the middle of a high-tech or high-IP industry center, are making it more of a priority.

Senator ALLEN. Let me ask you this questions, then. Thank you. I am glad they are all listening and making it a priority. In fighting drugs, obviously you drill the drug dealers, you try to get as much—high up the chain as you can and make sure they get a penalty, but you also get after their assets, the illegal drugs, or any of the profits therefrom—art objects, yachts, cars, whatever.

In this fight against pirated intellectual property, would there be changes in the law that may make it easier for you to at least—regardless of the proving guilt beyond a reasonable doubt, if you know the property is stolen or illegal property, the destruction of that on the spot, would that help in thwarting—or would they just—it is just so much of it being made, it just—it doesn't matter?

In other words, if you see the videotapes, if you see what—maybe the software, but regardless of what it is, if you could separate that, the property, the illegal property from the criminal and the destruction of that, how would that deter or reduce the volume or frequency of this pirated intellectual property?

Mr. GORDON. Well, I do not think destruction right now is a problem. When we get it, I think it is fairly easy to destroy it. I think there are a couple of problems. Number one, in the era of digital reproductions, you can destroy 5,000 copies. But when it is digital, and they've got it electronically formatted, it can be reproduced like that all around the world, in bulk. So that is a much different world than drugs, where you can burn 10,000 kilos and really put a dent in a drug lord's inventory.

Second, we are definitely trying to get up to speed and trying to get ahead of the curve on tracing assets of the people who are running the large-scale rings. I think we are much further ahead. We've got a lot more experience doing it in the drug arena. We've learned really a lot about MOs of where they put the money, how they move the money. We do a better job, so far, of moving our way up the chain by flipping people at the lower ends—the money launderers, *et cetera.*

It's definitely proving to be a challenge for us, I think, to find the money side of the large-scale organized crime ring's IP profits. But that, of course, is part and parcel of our effort, and that is what we want to, I think, try and improve on.

And I mentioned the international cooperation that we got in a number of countries and our efforts to improve training and coordination. With all that training and coordination, we are hopeful that we will improve our efforts on the money side of IP piracy.

Senator ALLEN. Well, I hope you will do that, because I do think that the forfeiture of drug-dealer assets has worked in drug dealing, to some extent, but at least you take the profit motive out of it. And obviously it is a business—it is an illegal business, and they way to hit them is in the pocketbook, and that is one way to at least to export our judicial reach, so to speak, or our jurisdiction, to those that may be offshore in countries that may not handle it. But if you can seize those assets, then maybe here—or somehow get jurisdiction of it, at least you will get that much in denting it.

Well, my time's up. I am co-chairman of this committee, and I would like to recognize Senator Boxer, from California.

Senator BOXER. Thank you so much, Senator. I want to thank this panel very much, not only for your testimony, but for the work you do. From reports I hear, you are working hard on this, and I want to—as one Senator on this committee and one of the two from California—encourage you to continue your efforts. This is noble work and important work.

I also—I wanted to thank Chairman Biden. I thought—I read his opening statement, and I just think it is eloquent, and I was going to quote, just to underscore, a couple of sentences. "If we want to protect American innovation and, by extension, American jobs, we need to maintain a vigilant stand against intellectual-property theft. American intellectual property is an immensely valuable, perhaps our most valuable, resource. Not to protect it is equivalent to letting coal be stolen from our mines and water taken from our rivers."

And I just want associate myself with that, because, as has been stated, if you go out and ask an average person on the street, "What's intellectual property," they won't know the answer. It is up to all of us to talk about it and make the case that Senator Biden made, which is that it is property, just the same as if there was a bicycle here and somebody walked out with it.

And you know that, and you are working on it. I am particularly proud of our U.S. Attorney for the work that you are doing.

Let me say that on our next panel, we are going to hear from people who see, you know, the adverse impact of intellectual property theft. They've been working for years, and they've been trying to sound this clarion call for help for a long time. So it is good that they are here.

Intellectual property rights form the foundation of two of California's most exciting industries—the entertainment industry and the high-tech industry. And sometimes those two clash. But on this one, you know, they are together. These twin engines of commerce are far too vulnerable to theft, and their loss means lost jobs and lost tax revenues. It also means illegitimate profits for international criminal organizations.

In some cities in Asia, you can walk down main street and buy DVDs or optical disks for a couple of dollars or less. You can buy DVDs of Black "Hawk Down," "Harry Potter," "Ali," in China for the equivalent of $1.21 per copy. The software industry loses an estimated $12 billion each year—$12 billion—because of counterfeiting activities alone, and we know that since people usually pay income taxes, that means we do not have funding for some of the things we are tying to do here, like protect this country against terrorism, and all the other important things we have to do.

It's wrong that a pirated copy of a film like "Monsters, Inc." can be bought on a street in Malaysia for $3.00 before it is even available legitimately on the market in the U.S. So I have this pirated copy here from Malaysia—before it was even available, here it was.

And you also have the Microsoft Office 2000 here. I mean, you can't tell the difference between these two. This one is the counterfeit. This one is real. It's thievery.

And people, by the way, can also be caught in the situation where they are buying a counterfeited copy, and they do not think it is a counterfeited copy.

We have a lot of work to do here. I have been on this for awhile, even before I was on this committee, and this gives us a chance here to do something about it with our friends and people who are allies with us in so many areas. They have to help us. They have to help us on this. And it seems to me, as they develop, they are going to want protection for their intellectual properties. So they've got to start working with us.

Ambassador—and you may have said this before I came in, so forgive me if you answered this—but what do you think are the main reasons for the poor enforcement in these countries?

Ambassador ALLGEIER. I think there are two reasons. The first one is still a lack of appreciation of the seriousness of the crime of piracy. And the second is resources in developing countries, an overall shortage of resources, but not applying sufficient resources to this part of law enforcement and the judicial activity.

Senator BOXER. It is just not a priority. Do you have something to add to that, Mr. Larson?

Mr. LARSON. I agree with what Ambassador Allgeier said. I do think that some of the new technologies, as we have discussed, have made this a tougher problem for governments, even where they would feel it is a priority. It's easier to make these knock-off products. It's harder to police. That means you need more vigilance. And that is really the purpose that the programs that the government has been pursuing, to try to raise the profile of this issue for foreign governments, help them understand why it is in their interest to devote the resources that are needed to police and stop these sorts of activities.

Senator BOXER. Now, I do not know if this was asked. If it was, please tell me. But what is the status of free-trade negotiations with Chile and Singapore? And how will we protect intellectual property in those agreements?

Ambassador ALLGEIER. We are negotiating a chapter—intellectual property chapters in both of those agreements. And we use those agreements to seek protection even beyond the level of obligations that these countries already have in the WTO. The specific

example I will give of that is these obligations under the new WIPO copyright treaties. We are insisting on incorporating those obligations into our trade agreements with Singapore and with Chile and in the free-trade agreement of the Americas. And the advantage to that is there will be a dispute settlement mechanism in those trade agreements, where there is not in the WIPO treaties themselves.

Senator BOXER. Mr. Gordon, do you have anything you'd like to add? Is this an issue that—do you feel that—where are we on the graph of this situation? I mean, has it topped out? Is it getting worse? Where do you see the problem?

Mr. GORDON. I think, from talking to the people who run the computer crime section of our office and the FBI and Customs people who are running the investigations in the Central District, they expect the problem to get worse, far worse, before it gets better, and largely because of the digital nature of reproduction. It's just so much easier to do. You do not have to have massive amounts of inventory kept at once. You can reproduce it from a master very easily, and it is a virtually identical copy that can be sold for just about the same amount.

Senator BOXER. So this is a $12 billion problem that could be even worse for us.

Mr. GORDON. According to our people—they think it is going to get worse.

Senator BOXER. Okay. Those are all my questions, Mr. Chairman.

Senator ALLEN. Thank you, Senator Boxer. I have no further questions of this panel and would thank you, all three of you, for your insight, for your dedication to this effort.

I think what you are doing, Mr. Gordon, is an example for U.S. Attorneys elsewhere. Granted you are in some of the largest cities and probably where the problem is most prevalent. Hopefully, you will drill those folks. And if you find there is any law on the books in our country that harms you, come back, whether to this committee or to Commerce or Judiciary, because I think you will find good bipartisan support to have you drill them internationally.

Gentlemen, keep working for this. Some of these countries are so poor and just starting off, they do not make it a priority. They're worrying about other things. But to the extent that we can somehow either get jurisdiction, entice them to do what's right. It's absolutely essential.

Sometimes there will need to be sanctions. And that is not just for criminals, that is also for governments so that they understand the importance that we apply to protecting the intellectual property of the technologists, the innovators, and the creators in this country. So I thank you all so very much.

Now, what we were—what I was going to say to the second panel—we were expecting to have a vote on the Farm Bill. Gentlemen, you can be at ease. You're dismissed. You'd better get out before the Chairman gets back. [Laughter.]

If everyone would just stand down for a moment. We're trying to determine when this next vote is. It may not have been at 3:35. It may be at 4:30. So I am going to just have everyone stay at ease here. If the second panel—if you'd just be kind of wandering

around the starting gate and ready to go when the Chairman gets back. Fortunately, you all do not run your businesses the way the Senate does, as far as its timing. So everyone just be at ease for awhile and we will probably proceed shortly.

[Brief recess.]

Senator ALLEN. I tried to filibuster til you got back here.

The CHAIRMAN. I apologize. I thanked the first panel on the way out. I really did think we were going to vote at 3:45.

We have a very distinguished private panel of—beginning with—and I would like to welcome them all—with Mr. Jeffrey Raikes. He's vice president of productivity and business services for Microsoft Corporation. Obviously, you have been very productive. He joined Microsoft in 1981 when he was 3 years old as a product manager, and has risen in the ranks. In his current position, he is responsible for knowledge, worker productivity, and business process applications and services. He's a member of Microsoft's senior leadership and the business leadership teams which developed Microsoft's core direction in broad, strategic and business planning respectively. I would like to welcome Mr. Raikes.

And in full disclosure, I would like to welcome a guy I consider a personal friend, I have known him for a long time, Jack Valenti. He's president and CEO of the Motion Picture Association of America, a decorated veteran of the Second World War. He served as a special assistant to President Lyndon Johnson before taking his current position, which he has held since 1966. He also was a very young man when he took that job. His efforts through the years have played a significant role in allowing the film industry to grow as it has, and we look forward to his testimony.

Hilary Rosen has been president and CEO of the Recording Industry Association of America since 1998. Prior to joining that organization, she was a private consultant and a lobbyist. She has worked with former New Jersey Governor Brendan Byrne, and served on the transition teams of two of my colleagues here in the Senate, Bill Bradley and Dianne Feinstein. She has worked for years to nurture partnerships between the music and technology companies. We thank her very much for joining us.

Douglas Lowenstein became president of Interactive Digital Software Association in 1994 and has been instrumental in developing a world-wide anti-piracy program for the computer- and video-game software industry. Previously, he had been a journalist, legislative director for my esteemed colleague, Howard Metzenbaum, and a private strategic communications and public policy consultant. Mr. Lowenstein, I thank you, as well, for being here.

It's great to have you all. And should we just begin with the panel? Let's begin in the order that I introduced you. Jeff, please.

STATEMENT OF JEFFREY RAIKES, GROUP VICE PRESIDENT, PRODUCTIVITY AND BUSINESS SERVICES, MICROSOFT CORPORATION

Mr. RAIKES. Thank you, Mr. Chairman and members of the committee. My name is Jeff Raikes, and I am group vice president of productivity and business services at Microsoft Corporation. And I really want to thank you and the committee for holding these hearings. Microsoft commends you for recognizing that intellectual

property crime is a problem of global dimension that really undermines economic growth and legitimate international trade. At Microsoft, we work closely with other members of the IP industry, including the panelists here as well as the Business Software Alliance, and we all work to fight theft.

And I want to thank you, Senator Allen, for asking that we include the BSA's written testimony today. And, Mr. Chairman, I hope that you will accept my written testimony, as well.

The CHAIRMAN. Without objection, we will.

Mr. RAIKES. For more than a decade, the software industry has battled against software theft, recognizing that widespread piracy really threatens the existence of our industry. Now, despite these efforts, software piracy is rampant, accounting for almost 40 percent of the software that is used around the world. And in some parts of the world, piracy exceeds 80 percent in those countries.

And as a whole—and as Senator Boxer mentioned—the software industry loses almost $12 billion each year from counterfeiting and other forms of software piracy. And these revenue losses directly translate into lost jobs and, of course, opportunities for the U.S. economy.

We believe that by the end of this decade, piracy-related losses will rob the U.S. economy and its workers of 175,000 jobs and, very important to you and your goals, $1.6 billion annually in tax revenue.

Now, today I am going to focus my testimony on the proliferation of counterfeit software. Unlike Internet piracy, software counterfeiting involves the physical manufacture of fake CD-ROMs and other components that may accompany legitimate Microsoft software. Software counterfeiters go to great lengths to make products look genuine, the goal being to deceive the consumer, to avoid detection by law enforcement, and to maximize their illicit profits.

As Senator Boxer demonstrated with the two copies of retail versions of Microsoft Office 2000 Pro, one genuine, one counterfeit, even the most sophisticated consumer would have great difficulty in distinguishing the counterfeit package from the genuine item.

Now, there is no question that sophisticated counterfeits defraud consumers and displace legitimate sales of Microsoft products. And I just want to hold up this box of Microsoft Office '97 to point your attention to the fact that we estimate that our company lost more than $1.3 billion in sales on this one product alone.

Now, software counterfeiters use state-of-the-art technology to create counterfeit CD-ROMs and packaging that bear all of the hallmarks of the genuine product. For many years, Microsoft has worked to outpace counterfeiting technology by developing authentication features that help consumers and law enforcement distinguish legitimate software from sophisticated counterfeits. The certificate of authenticity on the side of the package incorporates security features—for example, special inks, micro-text—to authenticate genuine software. And another example of some of the work that we are doing to try and keep ahead of these criminals is shown here with the edge-to-edge hologram that you see on the CDs that we use for Windows and Microsoft Office.

But increasingly, the most sophisticated counterfeits combine fake CD-ROMs and packaging with some of the genuine authen-

tication features. In the past year, nearly 100,000 genuine Microsoft certificates of authenticity were stolen from authorized replicators in Southern California. Now, these certificates are then sold to counterfeiters, and they are affixed to the counterfeit software package, thus deceiving the consumers and increasing the selling price or the illicit profits for these criminals.

Currently, Federal law does not provide adequate civil and criminal remedies to combat trafficking in these software-authentication features or the combination of the stolen features with counterfeit CD-ROMs and packaging. So to close this gap, Microsoft urges Congress to enact legislation that would prohibit trafficking in the genuine authentication features.

With potential profits in the billions, it is hardly surprising that organized crime is deeply involved in the software counterfeiting trade. Software counterfeiting operations are organized in many similar respects to the global narcotics trade. Financiers will base their operations in countries with generally weak IP, or intellectual property, laws, and then they assemble a global network of low-level distributors that market the counterfeit software. What's more, these counterfeiters commit a host of other violent crimes to protect their operations.

Now, although Asia continues to be the major source of sophisticated counterfeit software, manufacturing facilities exist throughout the world, even here in the United States. Global counterfeiting flourishes because counterfeiters face little risk of prosecution or meaningful punishment.

Now, at Microsoft, we invest millions of dollars each year to investigate global counterfeiting activity and to assist law enforcement in criminal prosecutions. To win the war against counterfeiting, it is critical that law-enforcement agencies in the United States and throughout the world treat software counterfeiting as a major crime priority. That requires multilateral cooperation, a sustained commitment of resources, and a continued and deeper partnership between government and industry.

I would be happy to answer any questions, and I thank you very much for this opportunity.

[The prepared statement of Mr. Raikes follows:]

PREPARED STATEMENT OF JEFFREY RAIKES, GROUP VICE PRESIDENT, MICROSOFT CORPORATION

I. INTRODUCTION

Mr. Chairman, members of the Committee, my name is Jeff Raikes, and I am Group Vice President of Productivity and Business Services at Microsoft Corporation. I am responsible for Microsoft® Office, the Business Tools Division, Business Solutions and eMerging Technologies. Let me begin by thanking you and the Committee for holding this hearing. Microsoft commends you for focusing congressional attention on the serious threat posed by global intellectual property crimes. We appreciate the opportunity to discuss with you one aspect of intellectual property theft of particular concern to Microsoft—software counterfeiting.

Software counterfeiting and other forms of piracy cost our industry several billions of dollars each year, and yet enforcement and penalties are uniformly weak throughout the world. The highly effective Intellectual Property Rights Center cannot address the piracy problems alone. Globally, the failure to treat software theft as a serious crime is largely due to the misperception that intellectual property crime is a "victimless" crime. In fact intellectual property crime has many victims, not just the software industry or the other industries represented here today:

Lost Jobs and Tax Revenues: When you consider that one-quarter of the software used in this country is illegal, it is hardly surprising that software counterfeiting and other forms of piracy are a significant drain on our economy. ln the 1990's, software theft robbed our economy of more than 100,000 jobs and a billion dollars in tax revenues each year. These annual losses are expected to double this decade.

Consumer Fraud: Unlike the cheap fakes sold on street corners, counterfeit software is manufactured to look like the genuine product and marketed to unsuspecting consumers, who would never knowingly purchase illegal software. In fact, many victims of fraudulent software sales are legitimate businesses and government agencies.

Organized Crime: Software counterfeiting operations are controlled at the highest levels by sophisticated criminals that rely upon an organized, global network of manufacturers and distributors to produce and market massive volumes of counterfeit software CD-ROMs. These criminal networks commit a host of other crimes to protect their operations—money laundering, corruption, and violence—which exact a heavy cost on society.

Until the United States and its global trading partners treat intellectual property crime as a major law enforcement priority, counterfeiters will continue to threaten our economic prosperity, our consumers and society as a whole.

II. BACKGROUND ON SOFTWARE INDUSTRY AND COUNTERFEIT PROBLEM

A. *Economic Contributions of U.S. Software Industry*

Over the past 25 years, computer software has fundamentally reshaped every facet of our lives and helped secure this country's economic leadership. By the late 1990s, the software industry employed more than 800,000 U.S. workers with aggregate wages of $55.6 billion. By the year 2008, the software industry is expected to employ more than 1.3 million workers in the United States alone. No other high-tech industry is providing employment opportunities at such a rapidly increasing rate.

The economic contribution of the U.S. software industry can also be measured in terms of Federal and state tax dollars benefiting a host of national and community programs. Annually, the software industry contributes more than $28 billion in tax revenues to Federal and state governments. This tax contribution is expected to reach $50 billion by the year 2008. Of equal significance is the industry's contribution to the U.S. balance of payments. While the U.S. trade deficit reached new record highs, the U.S. software industry generated a trade surplus of more than $20 billion in the year 2000. The software industry's growing trade surplus means more jobs and more tax revenues for the U.S. economy.

The success of the U.S. software industry is due in large part to this country's historical commitment to strong intellectual property protection. Indeed, it is no coincidence that the United States—the world's leading advocate for intellectual property rights—is also home to the world's largest software industry. The software industry's continued growth and its continued economic contributions are directly dependent on our ability as an industry and a notion to eliminate theft of computer software.

B. *Software Counterfeiting Activity Worldwide*

(i) *Extent of Problem*

The forces that drive growth in the software industry—technology advances, high market demand, and the emergence of E-commerce—also create new opportunities for software pirates to manufacture and sell massive quantities of counterfeit software to unsuspecting consumers. The software industry estimates that 40 percent of the software used throughout the world has been illegally copied; and in many regions, the average piracy rate exceeds 60 percent. Even in the United States, which boasts a high level of intellectual property protection, the software industry confronts a 25 percent piracy rate, meaning that one out of every four copies of software is illegal.

In addition to the software industry, all industries are vulnerable, including the music, pharmaceuticals and automobile industries. The proliferation of organized criminal counterfeiting operations has reached such alarming proportions that the estimate of lost revenues to such industries has reached $328 billion annually.

(ii) *Economic Impact*

The software industry loses an estimated $12 billion in revenues because of counterfeiting activities. In one recent twelve-month period, almost 5 million units of counterfeit Microsoft software and hardware were seized worldwide, with an esti-

mated retail value of over $1.7 billion. Each year, such intellectual property crimes drain the U.S. economy of thousands of skilled high paying jobs and billions of dollars in tax revenues. According to a study conducted by the International Planning & Research Corp. annual software theft costs the U.S. economy 118,000 jobs, $5.6 billion in wages, and over $1.5 billion in tax revenues. If the U.S. were to eliminate software piracy by the year 2008, the U.S. economy would gain more than 170,000 new jobs, $7.3 billion in wages, and $1.6 billion in tax revenues.

(iii) *Trends in Growth in Software Counterfeiting Operations*

At least three converging phenomena have contributed to the explosive growth in software counterfeiting operations:

- Technological developments that make it possible to replicate cheaply and profitably large volumes of counterfeit CDs;
- Growth in global manufacturing and distribution networks; and
- The emergence of organized criminal counterfeiting enterprises, often with multinational operations and ties to criminal gangs.

a. *Technological Advances*

The manufacture and distribution of counterfeit software involves the production of fake or "look-a-like" products. Typically, the packaging or labeling of the original software product is forged as well. Computer software is uniquely susceptible to counterfeiting because with new CD-ROM technologies, near-perfect copies can be manufactured for a few dollars per copy, but resold for many times that amount.

It is particularly profitable for the counterfeiter who bears none of our research and development marketing or support costs that primarily determine the retail price of legitimate software. Accordingly, the counterfeiter is able to sell counterfeit CDs at a price that is significantly lower than it costs to produce the legal products, but far higher than the per-unit cost of replication. The accessibility of CD replicating technology, as well as the profitability of pirate sales, has made the production of counterfeit CDs attractive to large organized crime syndicates and petty criminals alike. Victims of counterfeit fraud run the gamut from small businesses to large, sophisticated government agencies, which unwittingly purchase counterfeit software believing they are getting a good deal on genuine, discounted product.

b. *Global Network of Counterfeit Manufacturers and Distributors*

Although manufacturing plants for high quality counterfeit software are located throughout the world, the major manufacturing centers appear to be in Asia, most notably China, Singapore, Malaysia, Thailand and Indonesia. Large counterfeiting facilities, however, also exist in the former Soviet Republic (the Ukraine, Russia and Bulgaria); Latin America (Paraguay, Colombia and Mexico); and even the United States (California). Plants in these areas produce hundreds of thousands of high quality counterfeit CDs, which are then distributed throughout the developed markets worldwide.

Over the past several years, Microsoft has worked closely with law enforcement agencies to initiate raids against major counterfeiting operations in southern California. In the mid-to-late 1990's, California-based criminal enterprises were a major source of the high quality counterfeit Microsoft CD-ROMs and packaging distributed throughout North America and exported to Europe, Australia, and other developed markets. Due to the success of these enforcement efforts, many of the major California-based plants were put out of business, forcing counterfeit production to move to Asia and other markets. Nevertheless. California remains a major entry and assembly point for counterfeit software CD-ROMs and other components imported from Asia.

Similarly, as law enforcement pressure has been brought to bear against operations in Hong Kong, Singapore, and in parts of China, new manufacturing centers have sprung up in other parts of Asia to meet the demand for high quality counterfeit software. We recently learned of major counterfeiting operations in Indonesia, Macau, Malaysia, and Thailand, all of which are producing high quality product for export to developed markets. There is also evidence that counterfeit manufacturing is moving into Vietnam, the Philippines, Mynamar, and Brunei.

c. *Emergence of Organized Crime*

The very nature of the business of producing and distributing high quality counterfeit software requires a high level of planning, funding and organization; and access to replicating equipment, raw materials, packaging, shipping facilities, and money laundering avenues.

Because of the enormous opportunities for profits and the low risk of prosecution or significant punishment strong evidence suggests that software counterfeiting has

become part of an intricate web of organized crime, with links to Asian gangs and drug cartels.

The Federal Government explicitly acknowledged the growing involvement of organized crime when it created a new "Intellectual Property Rights Initiative" to strengthen enforcement against intellectual property crime. At a congressional hearing, former Customs Commissioner Ray Kelly stated that—

> Our investigations have shown that organized criminal groups are heavily involved in trademark counterfeiting and copyright piracy. They often use the proceeds obtained from these illicit activities to finance other, more violent crimes. These groups have operated with relative impunity. They have little fear of being caught—for good reason. If apprehended, they face minimal punishment. We must make them pay a heavier price.

There are several examples of these threatening links:

- Over the past several years, Microsoft has worked closely with law enforcement agencies to initiate raids against major counterfeiting operations in southern California. Just last November, the Los Angeles Sheriff's office and police department, U.S. Customs Service and the U.S. Secret Service executed the most significant raid and seizure of Microsoft software and components in U.S. history. A preliminary inventory of the seized products puts the estimated retail value at $60 million. The raid has interrupted a major counterfeit software distribution pipeline that moves containers of counterfeit software and other illegal components from Taiwan.
- California police raided a suspected "stash pad" for Asian gang members. Instead of finding narcotics, the police found counterfeit Office 97 media and packaging with an estimated value of $8.5 million. Police arrested 4 alleged members of the Wah Ching.
- A Los Angeles raid netted $10.5 million in counterfeit software, holograms, shotguns, handguns, TNT and plastic explosives. Three Asian organized crime groups, including the Wah Ching, were believed to be involved.

As these cases demonstrate, counterfeit seizures often reveal an organized network of distributors and manufacturers, requiring an ongoing investigation into each arm of the distribution network and coordination between Federal and state law enforcement agencies throughout the country. Given this level of sophistication within criminal counterfeiting operations, it is imperative that the Federal Government assume a leadership role in anti-counterfeiting enforcement efforts.

III. MICROSOFT'S COMMITMENT TO COMBATING COUNTERFEITING

Microsoft invests literally millions of dollars each year to support law enforcement efforts and protect its products and the consumer from counterfeiting activities. Microsoft investigators and counterfeiting experts work closely with state and Federal law enforcement agencies to investigate and prosecute counterfeit manufacturers and resellers. In addition, Microsoft each year brings hundreds of civil actions against counterfeit resellers throughout the United States. In addition, Microsaft works with a number of industry organizatians to address the counterfeiting challenge and software piracy generally. For example, the Business Software Alliance, an organization representing the leading U.S. software publishers, pursues both criminal and civil cases on behalf of its members in over 65 countries around the world. With the Committee's permission, I would like to submit a statement by BSA's President Robert Holleyman for the record. Consumer education is a critical component of Microsoft's anti-counterfeiting efforts, particularly given the increasing sophistication of counterfeiters and the great difficulty most consumers experience in distinguishing between counterfeit and legitimate software. Many organizations and individuals—as well as Federal, state and local governments—are unaware that counterfeit software is so pervasive in the marketplace an that its use can expose the user to various business risks, such as viruses and manufacturing defects. To increase public awareness, Microsoft sponsors worldwide campaigns that teach consumers to recognize the warning signs associated with counterfeit software, disreputable resellers and fraudulent software offers.

Microsoft and other software publishers are also experimenting with a number of copyright technologies designed to prevent the unauthorized reproduction and distribution by software products. As with our law enforcement investigations. Microsoft spends millions of dollars on research and development of highly sophisticated security features, including certificates of authenticity (COAs), and inner mirror band and edge-to-edge holograms on CD-ROMs. In order to prevent counterfeiting, Microsoft relies upon a variety of these security features that are affixed to, or em-

bedded in, the software, user manuals and packaging. With each new version of our software, Microsoft incorporates state-of-the-art technologies that are extremely difficult and expensive to replicate. For a brief period, at least counterfeiters are unable to duplicate new products in a credible way.

We also are taking steps to protect against a form of piracy known as "casual copying" or "softlifting." Casual copying is the sharing of software between people in a way that infringes on the software's end user license agreement (EULA). This form of piracy is prevalent and has been estimated by industry trade groups to account for a staggering 50 percent of the economic losses due to piracy. To combat this problem, we have incorporated Product Activation technology in Microsoft® Office XP, Visio® 2002 and Windows® XP operating system in an effort to reduce software piracy as well as ensuring that Microsoft's customers are receiving the product quality that they expect.

Only software acquired as packaged product will require activation. Customers required to activate their software must complete a simple and anonymous activation process that takes less than one minute when completed over the Internet. Activatian can also be completed by telephoning Microsoft and speaking with a customer service representative. To make activation convenient, the products do not require activation immediately after installation. Office XP and its components will allow up to 50 launches before requiring activatian. Visio 2002 will allow up to 10 launches before requiring activation. Windows XP will allow 30 days from first boot before requiring activation.

As a result of Microsoft's investment in security features, however, the demand for genuine components has increased resulting in an increase in robberies, thefts and fraudulent schemes. Recently, for example, there has been a rash of thefts of COAs in Europe and the United States. These genuine COAs are then sold to counterfeiters who affix them to counterfeit products to make them appear genuine. In addition to these thefts, Microsoft now faces the pervasive practice among counterfeiters of tampering with components of our software product. Counterfeiters engage in such tampering both to make counterfeit software appear genuine and to increase the selling price of genuine software and licenses.

IV. LAW ENFORCEMENT IS CRITICAL

Given the presence of organized crime and the international scope of counterfeiting operations, there is a critical need to treat counterfeiting as a global law enforcement priority. Existing levels of commitment by law enforcement agencies are not sufficient to meet the growing challenge of global counterfeiting operations. And existing levels of civil damages and criminal penalties do not pose a serious deterrent especially to the organizers and financiers of counterfeiting operations.

There have been a few recent initiatives, however, which Microsoft appreciates and supports. Microsoft applauds the efforts at the Intellectual Property Rights Center ("IPR Center") which serves as a critical resource in coordinating multi-agency, multi-jurisdictional investigations of software counterfeiting manufacturers and distributors.

By coordinating the investigative efforts by U.S. and foreign law enforcement agencies and acting as a clearinghouse for relevant intelligence, the IPR Center strives to provide the kind of sophisticated law enforcement response necessary to combat international software counterfeiting operations.

We strongly urge Congress to maintain funding for the IPR Center and to encourage its investigators to target their efforts on organized counterfeiting operations worldwide. We appreciate Congress providing the recent increase of $5 million in funding for the U.S. Customs Service and the IPR Center that was included in the FY 2002 Treasury appropriations legislation. We look forward to learning of Custams' plans for expending the new funds. We encourage the IPR Center to use a portion of the funds to establish a clearinghouse for all intellectual property rights information gathered from other Federal, as well as state and local law enforcement agencies.

Microsoft also appreciates the increase in FY 2002 funding for additional attorney positions at the Department of Justice to augment the investigation and prosecution of intellectual property crimes. We look forward to working with the new dedicated Federal agents and prosecutors assigned to this task.

V. RECOMMENDATIONS

A. *Strengthen Federal Anti-Counterfeiting Laws*

Microsoft strongly encourages Congress to amend existing Federal anti-counterfeiting laws to prohibit trafficking in, or tampering with, the authentication features used by software publishers and other copyright owners to distinguish genuine soft-

ware. Currently, Federal law does not provide adequate civil and criminal remedies to guard against these types of tampering activities, which directly facilitate counterfeiting activity. Federal law also fails to criminalize the distribution or sale of genuine authentication features to software counterfeiters and distributors. In order to strengthen Federal intellectual property enforcement efforts, Microsoft recommends that legislation be enacted that protects authentication features of copyright works by providing adequate civil and criminal remedies for trafficking in components affixed to or embedded in software or other copyright works.

B. *Strengthen U.S. and Global Anti-Counterfeiting Enforcement*

In addition, in order to achieve greater enforcement of intellectual property laws, Microsoft urges Congress to:

- Direct our Federal law enforcement agencies, including the U.S. Customs Service and the Department of Justice, to treat software counterfeiting and other intellectual property crime as a law enforcement priority; and continue to provide these agencies with the resources needed to crack down on sophisticated criminal counterfeiting operations.
- Promote international enforcement of intellectual property crimes through training programs (e.g., the International Law Enforcement Academies) and technical assistance. These types of international initiatives are critical, particularly with respect to counterfeiting and Internet piracy, which often involve multiple jurisdictions. Training programs are particularly critical in software counterfeiting centers, including parts of Asia, Bulgaria and Paraguay, as well as counterfeit transshipment points, such as Panama, Singapore and Amsterdam.
- Promote greater mutual cooperation among national authorities: Counterfeiting networks may link financiers in Asia, manufacturers in the United States, and distributors throughout the world. Unless prosecutors and law enforcement agencies in each relevant jurisdiction have the authority and obligation to cooperate and share information without the red tape and formalities that so often hinder multi-jurisdictional investigations, there is little hope of identifying and prosecuting each of the links that farm criminal networks of counterfeiters. Microsoft urges the Federal Government to explore avenues to facilitate mutual cooperation among national law enforcement agencies and prosecutors, whether through existing multi-lateral or bilateral treaties an other cooperative agreements. Whatever the appropriate mechanism, it must allow field agents and prosecutors to operate effectively in a global environment.
- Partner with the software industry to identify and prosecute counterfeiters: Microsoft fully recognizes that the proliferation and increasing sophistication of counterfeit manufacturers and distributors calls for an even closer partnership between industry and government. To that end, Microsoft pledges to assist Federal law enforcement in identifying and investigating counterfeiters and to provide technical support and training.

Mr. Chairman, thank you again for the opportunity to appear before the Committee this afternoon. Microsoft looks forward to working with you and others on the Committee in addressing this important issue.

The CHAIRMAN. Thank you very much. Why don't we proceed in the way you were introduced. Jack.

STATEMENT OF JACK VALENTI, PRESIDENT AND CEO RECORDING INDUSTRY ASSOCIATION OF AMERICA

Mr. VALENTI. Mr. Chairman, first, I want to really thank this committee, Mr. Chairman, Senator Boxer, Senator Allen, Senator Smith, because you are illuminating an extraordinary and grotesque threat to the future life of America's greatest trade export prize, the copyright industries, which are movies, television programs, home video, music, books, and computer software is an incredible machine of growth.

We are responsible for almost five percent of the gross domestic product, I think, as Senator Allen, that you pointed out, almost $500 billion. We gather in more international revenues than aircraft, than automobiles and auto parts, and more than agriculture.

We are creating new jobs at three times the rate of the rest of the economy. And the movie industry alone has a surplus balance of trade with every single country in the world. No other American enterprise can make that statement, except in the copyright industries. And to have this huge engine of growth to be squandered by piracy, it would be more than a crime; it would be a blunder.

Now, what I want to tell you today is that we estimate that our piracy loss around the world is about three to three and a half billion dollars annually. And that, to us, is very serious money. The fact is that much of this piracy occurs in Asia. And where a new threat has reared its illegal head, it is called optical-disc piracy—optical discs where you are using very, very inexpensive technology to make the discs in the machine, although the quality of the viewing is inferior to DVD. But it has spread throughout China and Asia with the rapidity of rabbits in a warren.

Now, China, I must say, in response to our entreaties, has really tried to crack down on pirates, and they've sent most of them fleeing offshore. Pirates never die; they just change locations. Our big problem in China now is street-vendor piracy. And before I do anything else, I want to show you something. This is "Black Hawk Down." This was bought ten days ago in Southern China and, as Senator Boxer said, a "buck twenty-five." Here is "Ali"—same thing, on the streets. You can buy them by the long ton, and here is "Harry Potter."

Now, I want to show you something that is happening in this country. You have got to see this to believe it. I want to show you a Web site, just for about 20 seconds, called Morpheus. It is illegal, and I am proud to say that the recording industry of America and the MPAA are taking it court. And I want you to see this, because this was taken down by our anti-piracy forces. It is——

[Video was shown]

Mr. VALENTI [continuing]. ——This is "Black Hawk Down" and it is imminently watchable. It makes you want to cry out in frustration. Thank you very much, Troy.

As a result, though——

The CHAIRMAN. Was that downloaded?

Mr. VALENTI [continuing]. ——Downloaded by—one of our people in Encino, California, took it down I think, about three or four days ago, and its this Web site called Morpheus, and it is chock full of first-class movies. I might also add it is also brimming over with pornographic material, as well. And this is owned by a company in the Netherlands, and they have licensed American companies and people all over the world, and we are going after them in the courts of the United States.

The CHAIRMAN. Jack, how does it work? Is there a fee or can your staff tell us—is there a fee to download it?

Mr. VALENTI. No. You just go up there and download it.

Ms. ROSEN. We actually have a demonstration, Mr. Chairman, that starts from the download, if you wanted to——

The CHAIRMAN. I would like—I think we'd like to see it.

Senator ALLEN. If I may, whatever this Web site is—I hate to mention the name.

Mr. VALENTI. Well, every student in America knows about it.

Senator ALLEN. Well, some non-students, of course, aren't watching this hearing. Regardless, they did not—those who have this did not get it off the Internet. Did they get it from somebody who was filming the film?

Mr. VALENTI. It's called file sharing, and this is the unruly son of Napster that did it on music.

Senator ALLEN. But did you put this, or did whomever, did they put this on the Internet?

Mr. VALENTI. Absolutely.

Senator ALLEN. How did they get the copy?

Mr. VALENTI. Oh, I see. The copy can come from going into a theater and camcording the theater or bribing somebody in a theater and taking it overnight and reproducing it. It could be taken from many different places. The ease with which this is done, it scares you.

Senator ALLEN. But they did not get it over the Internet. They got it——

Mr. VALENTI. But it is on the Internet right now.

Senator ALLEN. I was talking to folks from Warner Brothers who were telling me how they were going to the premier in New York City of "Harry Potter," and there was someone selling the videos on a blanket on the sidewalks in New York City as he is walking to see the premier of it.

Mr. VALENTI. He probably got it from a screener or could have got it from a premier in a theater. These people are quite ingenious and quite indefatigable when they do it.

The CHAIRMAN. Jack, you know this place well, and I apologize for this interruption. One of the purposes of this hearing is to explain to our colleagues in simple terms exactly how easy this is. So please do not be hesitant about being elementary in explaining in detail how this physically happens. Most of our colleagues are so busy doing every other thing, they do not even watch television, let alone get around how to figuring out how to play with a computer, other than Pat Leahy, to download anything. [Laughter.]

He lives in his computer, and he does well on it. But all kidding aside, it is really important that you tell us and you communicate to anybody who's listening here exactly just how simple this is to get a sense of—my mother, for example, would have no notion how simple this is. She would think you had to have pretty sophisticated equipment, you'd have to be awful smart to figure out how to do this—and so as elementary as you can be, and this is the last time I will interrupt—would be useful. Don't worry about taking the committee's time.

Mr. VALENTI. Well, Mr. Chairman, I am by nature, inclination, and heritage, elementary. So it is very simple. There are lots of ways you can do it. Let me just—let me count the ways.

For example, there is a thing called "file sharing protocols," and that is like a Napster or a Morpheus, where young kids can go on here and get on top of the Web site and then open up their hard drive to all the movies they have, and they share them with other people. And it is millions and millions of these. File sharing goes on every day.

As a matter of fact, Viant, which is a Boston-based consulting firm, estimates that 350,000 movies are downloaded every day, and

all of them illegal, and that is just an estimate. My judgment is it is a half a million to a million, because it goes on all over the country.

I will give you a good example. I am not going to name the university, because it is one of the most prestigious and important universities in this country. Now, all these universities have state-of-the-art, large-type computer systems, the best you can find. All of these universities do. So many students were going on that university computer system and using Gnutella, which is also like Morpheus, file sharing—you can get movies, music, everything—that the university, in order to relive the burden on its computer system, if you can believe this, set up a separate server for Gnutella. It is kind of Enron going off the balance sheet to set up subsidiaries to relieve the pressure on their debt. And that is what the university did.

I found out about it by reading an editorial in the daily newspaper of the campus on the Internet, and I went ballistic. And I wrote a letter to the President saying, "This action of yours is a piece of disreputable plausibility which collides with the moral compact that governs this society. Is this why people go to your university, to learn this kind of ethics? Parents pay $150,000 so their children can learn to steal? What kind of a university do you have?" Well, to their credit, they took it down, but that is a good example. That is happening all over America and universities right now.

A second place is that you can get in a camcorder, you can go into a theater and camcord it, and people throw it up on the Internet just for fun, and then they share that with everybody else. And all of a sudden, it is like a viral contagion that moves around this country.

The criminals—the organized criminals will go bribe some fellow in the laboratory, get the negative overnight, reproduce it, give it back the next morning, do it with a corrupt projectionist in some theater or—sometimes you'd go in and take a Blockbuster you go in and rent legitimately and copy that, but that is not very good. You do not get that great a watchable quality on it.

But the ways are myriad, and they go up to this Internet. Now, get this. Think of—with a click of the mouse, anybody can send a two-hour movie hurtling around the globe to every nook and cranny of this weary planet, and do it at the speed of light—386,000 miles per second. Now, if that is not scary, I do not know what is.

Now, that is what we are enduring right now, and it is going on every day, and multiplying. Now, get this. If you have a regular 56K modem in your computer, which most of us have—that is what you get—isn't that right, Mr. Raikes? That's what most computers have. Mr. Raikes is the expert on this. I am going to him.

The CHAIRMAN. Well, until they change their software, and it may change.

Mr. VALENTI. If I want to bring down a move with a 56K modem, I probably would—if I went to bed at 10:00 o'clock, I would set my computer whirring, and about 12 to 24 hours later, I would have a movie. If you have got broadband access, a DSL line or a cable modem, you can bring down a two-hour movie, depending on the speed of that line or that modem, in about 45 minutes.

But the next generation of Internet that is rapidly upon us, you will be able to bring down a two-hour movie in 45 seconds. That's the kind of grotesquery we are looking at in the future. And it is very, very frightening. Now, are there any questions about this?

The CHAIRMAN. No. [Laughter.]

Got it.

Mr. VALENTI. I want to point out that Malaysia and Taiwan, because this is in your territory, Mr. Chairman, and members of this committee, are really the breeding grounds for DVD piracy, which is digital piracy—and it is high resolution, and its marvelous fidelity to sight, sound, and color. And that was the breeding ground. However, I must say those two countries have now revised and reinforced their copyright laws. However, now we have to find out if they can demonstrate the political will and the resolve to enforce those laws. They claim that they are going to try to do it, and for the time being, I am going to take them at their word and feel confident that they will do that.

But it is digital piracy, though—digital piracy that gives movie producers these multiple-Maalox moments, I can tell you that, because, as I said earlier, with a click of a mouse, you are all over the world. Now, that is something that causes us great despair.

Right now—Senator Boxer would probably know this—in California, the average cost, average total cost, of the average movie put out by the major studios—that is to make it and to market it—is a mind bending $84 million. Now, who on earth is going to continue to invest these huge sums of private-investment capital, Senator Allen? Who is going to do that if they know that movie is going to be intercepted and stolen early in its journey from domestic theatrical exhibition to cable to satellite to television stations and to international, because that is what we have to do in order to retrieve this huge investment in these various market segments. And if you can't do that, if it is stolen early in that journey, how do you get your money back? This is causing great despair, great concern, and sleepless nights on a lot of people who are in this business.

Now, we are operating on three fronts. First is in the courts. We have to go into the court to resolutely defend the copyright laws of this country. And Hilary Rosen and Doug and all of us are trying to do this to make sure these copyright laws are not loosened or shrunk or diminished, because if they are, we are gone.

No. 2, we are using a highly sophisticated search engine named Ranger Online. This is like a bloodhound that ferrets out and sniffs out illegitimate movies on the Internet. And we do that because you program this sophisticated search engine with the names—all kind of names of, say, the hundred movies that are being mostly pirated, and they are the popular movies. And we give that to this bloodhound of an Internet searcher, and it roams the Internet. And whenever it finds one of these movies, it tells us, "Uh-uh, we got one." It's like these dogs sniffing out drugs when you have got them at an airport. And then we send out cease and desist letters.

I am not a lawyer, but I always love to say lawyer-talk. It gives me a kind of sense of surreal confidence here—cease and desist letters.

Senator BOXER. Jack, you do not need any more confidence. You are the most confident person I have ever met. [Laughter.]

Mr. VALENTI. Now, we sent out last year 54,000-plus of these cease and desist letters, to 1,680 Internet service providers, ISPs. And our anti-piracy people tell me we have about 80 percent compliance with this. The ISPs have been very good and take them down.

But there is a wonderful game that kids play. And all of you who have small kids know about Whack-a-Mole where a little peg comes up and the kid hits the peg and then it pops up over here. That is what happens in piracy. You banish them in this little distance, and they pop over there. So that is why every day we have to be vigilant, because, like virtue, we are every day besieged, and it is really tough. [Laughter.]

Now, the third front, though, because none of the above is going to do this job, and now, I am getting to the really core of this, Mr. Chairman, and this is where I am really appealing to you and your colleagues. None of this is going to work until we get a really seamless protective clothing that we can put on our movies so they won't be stolen. The only way we can do that is two ways.

One is—I have been trying to get the IT community, the computer manufacturers, the chip designers, the video-device recording people—I flew to Menlo Park, California, on September 20—Silicon Valley—nine days after 9–11—with all these people assembled in a room, and I said, "Please, let us sit down and talk this thing through, see if we can't together find some common ground to form some standards that we can put in every machine around the world, in this country particularly, and then that machine will give us the kind of sturdy protection we need.

And when we do that, the Internet is going to grow faster, because movies now, legitimate movies, will be on the Internet. That is the great, glaring omission today. There are no legitimate movies up there. As I have said to the people of Sysco—and it goes to Microsoft—they will sell more software because more people will be using the Internet to bring down legitimate movies.

Now, so far, in Menlo Park, I thought I was going to get it moving, but no follow-up meetings. I haven't been able to put a follow-up meeting together. I am still trying. I am urging—I am entreating these people. Let's sit down together and then if we can find a concord, then we go to the Congress and let it be mandated by law.

Now, I am still trying, Mr. Chairman, but I am saying this, that all my Texas charm has been to no avail, because I haven't been able to put those meetings together. Now, if we can't put the meetings together, if we can't find this, what's the answer?

I remember when I was working for Lyndon Johnson, you'd go, and you'd say, "Let's do this, that," and somebody would say, "We can't do that." Then you would say, "Well, if not this, what?" The only alternative left is to go to the Congress and say, "We've tried, but you have got to do this. You have to make sure we protect this huge economic asset to this country."

Mr. VALENTI. My final comment is this. There is nothing more that movie producers and distributors want more than to have another new delivery system to send movies to consumers so they

have another choice as to how they want to watch a movie at a fair and reasonable price, which would be defined by the consumer, not by us. And then we would dispatch these movies to the customers in their home. And if they wanted to see it there, if they wanted to go to a theater, or they wanted to see it some other way—but it is the new delivery system.

To turn away from this delivery system would be fiscal lunacy. And while I think you can say a lot of things about the movie industry, they are not fiscal lunatics, I can tell you that. That's what we are about, Mr. Chairman, and that is why Hilary and Doug and Mr. Raikes are here today; it is to plead with you. We've got to find a way to save this unique, uncommon, and almost un-duplicatable asset. I am done.

The CHAIRMAN. You done good.

[The prepared statement of Mr. Valenti follows:]

PREPARED STATEMENT OF JACK VALENTI, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, THE MOTION PICTURE ASSOCIATION

A PRESENT AND FUTURE DANGER—THE POTENTIAL UNDOING OF AMERICA'S GREATEST EXPORT TRADE PRIZE

An accounting of movie thievery in the analog and digital format, in the U.S. and around the world

This text of my testimony is titled "A Present and Future Danger—The Potential Undoing of America's Greatest Export Trade Prize." And for good reason. Which is why it is entirely suitable and necessary that the Senate Committee on Foreign Relations illuminate and seriously examine the impact of any erosion of the worth of the Copyright Industries (consisting of movies, TV programs, home videos, books, music and computer software) on the economy of this country.

The Economic Worth of the Copyright Industries

The facts are these: The Copyright Industries are responsible for some five percent of the GDP of the nation. They gather in more international revenues than automobiles and auto parts, more than aircraft, more than agriculture. They are creating NEW jobs at three times the rate of the rest of the economy. The movie industry alone has a *Surplus* balance of trade *with every single country in the world.* No other American enterprise can make that statement. And all this at a time when the U.S. is bleeding from some $400 billion in *deficit* balance of trade.

The Peril Now and in the Future

Brooding over the global reach of the American movie and its persistent success in attracting consumers of every creed, culture and country is thievery, the theft of our movies in both the analog and digital formats.

Let me explain. Videocassettes, the kind we all use and enjoy, are in the analog format. Worldwide, the U.S. movie industry suffers revenue losses of more than $3 billion annually through the theft of videocassettes. That is a most conservative estimate. We are everyday vigilant in combating this analog thievery because, like virtue, we are everyday besieged. We are trying to restrain this pilfering so that its growth does not continue to rise to intolerable levels.

But it is digital piracy that gives movie producers multiple Maalox moments. It is digital thievery, which can disfigure and shred the future of American films. What we must understand is that digital is to analog as lightning is to the lightning bug. In analog, the pirate must be provisioned with equipment, dozens, even hundreds of slave-video recorders, because after repeated copying in analog on one machine, the finished product becomes increasingly un-watchable. Not so in digital format. The 1,000th digital copy is as pure and pristine as the original. The copy never wears out. It is that durability which provides the DVD (Digital Versatile Disc) with its grandest asset and at the same time provokes such anxiety within the movie industry because copying retains its high resolution.

Then there is the mysterious magic of being able, with a simple click of a mouse, to send a full-length movie hurtling with the speed of light (386,000 miles per *second*) to any part of this wracked and weary old planet. It is that uncomprehending fact of digital life that disturbs the sleep of the entire U.S. film industry.

Movies have, until recently, been sheltered from the incessant pilfering visited on the music industry. Music on the Net has no graphics and can be brought down with normal computer modems since most songs are no more than three or four minutes. Not so with movies chock full of graphics. With a normal 56K computer modem, it could take between 12 to 24 hours to bring down a two-hour movie. Or to put it another way, one movie takes up the same space on a hard drive as do 600 songs. The moat that has slowed a wide-spreading assault on movies in digital form is the languor with which American computer-homes have valued broadband access. With broadband access, a two-hour movie can be taken down, depending on the speed of the DSL line or cable modem, in 20 to 40 minutes. (But the next generation Internet will be able to download a two-hour movie in some 45 seconds!) Only some 9.5 million American computer homes have current high-speed, large pipe connections to the Internet. But that moat will gradually be drained as broadband grows, both in its speed-power and in the deployment of broadband to homes. Once that happens, the moat will flatten, and all barriers to highspeed takedowns of movies will collapse. The avalanche will have begun. It is the certainty of that scenario which concerns every movie maker and distributor in the land.

A new threat has entered the arena, called Optical Disc Piracy. This new thievery design first reared its fraudulent head in China with VCD (Video Compact Disc), a cousin to DVD though its quality is inferior to DVD but cheaper to reproduce on machines that are far less costly than those that play DVD only. China, in response to our entreaties, has cracked down on pirates, forcing them off-shore. The huge problem in China at this writing is the street vendor malady. We are working with the Chinese government to shrink this problem. Meanwhile, mostly in Asia organized thieves are busily involved in stealing DVD movies, reproducing them and distributing them everywhere. In 2001, the MPA's Anti-Piracy forces conducted 74 raids against facilities in China, Hong Kong, Indonesia, Malaysia, the Philippines, Taiwan and Thailand, happily engaged in manufacturing illegal copies of both VCD and DVD. Happily, that is, until our Anti-Piracy people, along with local law enforcement officers, moved in for the raid. In some cases arrests were made and in some cases equipment confiscated. But not in all, because of porous attention by authorities in some countries to really crack down hard on these pirates. It is an ongoing problem for us.

More ominously, just recently, with the sturdy aid of the FBI, a factory was raided in New Jersey which was illegally reproducing DVDs. This was the first time we have located a U.S. site dealing in illegitimate DVDs. But it won't be the last.

I report quite joyously that we are receiving first class assistance from the FBI, the U.S. Secret Service, the Department of Justice, U.S. Customs Service as well as local U.S. Attorneys' offices.

Comes Now the Internet, Future New Delivery System, but Now a Piracy Haven

It is the Internet, that all-embracing technological marvel, which is putting to hazard our attempts to protect precious creative property. Viant, a Boston-based consulting firm, has estimated that some 350,000+ movies are being downloaded from the Internet *every day—all of them illegal.*

We are deploying our defenses on three fronts.

First, we have taken on the task of protecting copyright in the courts. We have to insist that copyright laws cannot be casually regarded, for if those laws are shrunk or loosened, the entire fabric of costly creative works is in deep trouble. We have moved swiftly and decisively against all those Web sites which harbor and inspire theft of movies. We took on Scour, iCrave, RecordTV, all of which were either promoting the takedown of illegal movies or, as iCrave did, sucking up Canadian and U.S. television signals illegitimately, transporting them to the iCrave Web site, and then selling advertisements. iCrave was promptly shut down by the courts, but its clones will not go away. Scour, and RecordTV are no longer functioning. Whenever a new site appears whose prime allurement is the availability of movies, illegitimately file-shared or readied for download, it is our intention to move with celerity to bring them to the courtroom.

Second, we are using Ranger, a sophisticated search engine, to track down movies illegitimately on the Web. Once Ranger sniffs out an illegal site, we send "cease and desist" letters to the Internet Service Provider or the site itself. In 2001, we dispatched 54,000 such letters to 1,680 ISPs around the world.

What is even more perfidious is the ascending growth of on-campus illegitimate downloads of brand-new movies. Students operating off their university's broadband, high-speed, state-of-the-art computer systems have a merry old time bringing down movies, none of which are up there legally. We're not talking about old, classic films. These are new films, many of which are still in theaters: "Ali," "Harry Potter," "Lord of the Rings," "Monsters, Inc.," "Ocean's Eleven," "Vanilla Sky," "Brotherhood of the

Wolf," "Mothman Prophecies," "Snow Dogs," and the list goes drearily on. The result is immensely attractive to students, downloading and viewing new movies without paying for them, with fine fidelity to sight, sound and color.

Just two months ago we learned that one of America's most prestigious and pre-eminent universities, vexed by the burden of heavy persistent student use of its computer system, actually set up a special Web site for *Gnutella,* a well known mightily used site for filesharing (a discreet description of taking films which don't belong to you). This astonishing action was taken by this University to relieve the swollen student use of its computer system. I swiftly dispatched an unambiguous letter to the President of that University chiding him for "a disreputable plausibility" which collided with the moral compact that informs a stable, free, democratic society. The University, to its credit, immediately cancelled the Web site.

Just a few weeks ago, in Taiwan a new Web site came on stream. It is steadily streaming brand new movies, mostly American, all without permission of their owners. That site is charging $1 per movie, and steadfastly claiming they are protected by Taiwan copyright laws. I do not choose to give its name, else it would be overrun by the newly-minted ethics in too many young people which says that if films are available on the Net, they ought to be downloaded, no matter the illegality. We are now in the process of urging the Taiwan government to shut down the site, so plainly and clearly operating outside the copyright laws of Taiwan.

How to Transform the Net Into a Thriving New Delivery System, With More Choices for Consumers, and Full Protection for Movies

Keep in mind that movie producers and distributors are filled with optimism over the prospect of the Internet as another new delivery system to dispatch their movies to consumers, at a fair and reasonable price (the defining of "fair and reasonable" to done by the consumer). To resist or to turn away from that new Internet delivery system would be fiscal lunacy. Why? Because the movie-making cost has risen to nerve-shattering heights. In 2000, the total cost to the major studios of making and marketing their films was, on the average, some $84 million per film! Only two in ten movies ever retrieve its total investment from domestic U.S. theatrical exhibition. Each film must journey through various marketplace sequences—airlines, home video, satellite delivery, premium and basic cable, over the air TV stations and internationally—in order to break even or make a profit.

How, then, can America's most valued creative works find it possible to make those works available to consumers on the Net, giving consumers another choice for the way they want to view movies?

This brings us to the *third* front: To sit down in good faith negotiations with the Information Technology (IT) community, makers of computers and video recording devices, to search—TOGETHER—for an agreement on standards which would be part of every computer and device. Those standards would be similar to standards in so many industries and appliances in our country—all railroads have the same width, all electrical outlets accept all electrical devices, etc. These standards would allow for the protective garments of content encryption, watermarking and other necessities for guarding the life of movies. All this to the ultimate benefit of American consumers, 99.9 percent of whom are not hackers, who have moral standards which inhabit their daily conduct. Consumers would readily rent or buy movies on the Net—at fair prices. They would have an additional choice, how they want to watch movies, when they want to watch them.

I have tried, personally, to enlist others into the beginning of these talks. On September 20, 2001, I flew to Silicon Valley, in Menlo Park, California to meet with the IT community, computer makers, chip designers, etc. Disappointingly, no further meetings emerged from that first gathering. I continue to try. I have suggested that no one on either side of the table will agree to anything that is not in each other's best interests, so no one can lose by talking. If all groups could find common ground on which an agreement would sit firmly, perhaps we could then come to the Congress to mandate that concord.

Alas, so far there is no meeting in progress which is considering the all-embracing solution to what everyone knows to be a totally unacceptable morass, which offends both ethical precepts and rational business judgments.

I close this document with Mr. Churchill's exhortation: "Truth is incontrovertible; panic may ignore it, malice may distort it, ignorance may deride it, but there it is."

A singular truth exists in the movie industry: *"If you can't protect what you own, you don't own anything."*

The CHAIRMAN. Ms. Rosen.

STATEMENT OF HILARY ROSEN, PRESIDENT AND CEO, RECORDING INDUSTRY ASSOCIATION OF AMERICA

Ms. ROSEN. I just hate that I've been following this guy, my entire career.

I associate myself with everything my friend, Mr. Valenti, just said. I wanted to talk about two things. And while I can't match Jack's flash, perhaps I can add a little educational flesh around the Internet part of it. So, Mark, why don't you set up while I make a couple of points.

I want to follow up on something that Ambassador Allgeier and Al Larson said, in terms of international piracy. We have some problem countries, and it is important for this committee to know what those priority countries are and what our recommendations are for making some progress there.

Brazil—we have had a problem in the record industry in Brazil for years. It is the sixth largest music market. It is being killed by piracy. Brazilian music is loved all around the world. There's just no excuse for the lack of the Brazilian government's attention to this. And so hopefully GSP is going to be renewed quickly, but I urge this committee to continue to bolster our government's efforts with respect to Brazil, and that Brazil should be denied GSPs in—when it is renewed.

Mexico—again, another place where the laws are fine. Their problem is enforcement. We have made some progress with the Attorney General's office. We've had some raids. We can't get judges to impose any sentences. It has become sort of an unpunishable crime in Mexico, and it is a significantly important market for American products, for American Latino artists who are quite popular in Mexico, who would normally be selling significantly, just at this point do not even want to release their music there.

China—keep the pressure on. We've made some progress, because the government finally recognizes there is a problem. This is no longer a problem of export in China, which is different than several years ago. It is a problem of not being able to take advantage of how exciting and huge this domestic sales market is, because the marketplace is so piratical, so China is quite important.

And finally, I would just say something about Russia. Russia wants to be in the WTO, another place where the marketplace simply precludes American investment in any significant form because there is just too much piracy and corruption there. Russia shouldn't be allowed into the WTO until they address this problem. And this committee's support for those priorities with our administration and with government leaders as you meet with them, as I know you do on a regular basis, would be very much appreciated. This committee has always had a leadership role in intellectual property through ratification of trade treaties and copyright treaties as well as things that each of you do in other contexts in the Senate.

I want to address Senator Allen's point early on, which is why should most Americans who do not work in the entertainment industry care about piracy. And I think the answer is very simple. And Jack said it eloquently from a movie business side.

Ours is a risk-based business. Our companies spend millions of dollars taking a chance on artists that they think have the opportunity to be successful. Ninety percent of those are going to fail to

make back their costs. Ten percent of those are going to pay for all the failures. And what to the pirates want to copy? The successes. So they are essentially creaming the successes, which deny opportunity to new artists.

If you love listening to a great album by a new artist you have never heard before as much as I do, then you know how important it is to be able to continue to generate the revenue to invest in new artists. In the new technology area, businesses are clearly being stifled by the Internet piracy area, whether it is legitimate subscription services, whether it is digital rights management companies, technology-protection companies, even Internet service provider alternatives—nobody can compete with the amount of money that is being lost in opportunity to Internet piracy.

And these are hundreds of jobs in the high-tech sector. Internet music is a perfect example. Investment in Internet music has stalled. Several years ago, it was one of the biggest generators of investment and new jobs and new opportunities. It has stalled because it is virtually impossible to compete with the pirates, and all of our companies have begun their legitimate offerings. But it is still extremely difficult to get a foothold in the marketplace.

Let me try and illuminate a little bit where Jack summarized on the Internet side. I will give you an example. This company called Fast Track that Jack referred to, it is based in the Netherlands. And what they did was, they created a piece of software that they own and they then—it is a system called KaZaA.

And it is more than software, actually. It's a system that essentially maintains and profits from this web of piracy. They've licensed this system to a company in Tennessee called Music City and to a company in the West Indies called Grokster. And how it works is individuals will download onto your PC at home what's called a client software. And we downloaded it onto our system. And what that means is that now we are connected to the centralized search engine of KaZaA. So you can see up in the left, it says KaZaA. It's sort of hard to read. And, Troy or Mark, can you read there and tell me how many people were connected at the same time when this was turned on?

VOICE. 509,000.

Ms. ROSEN. So yesterday, when we went to get our sample, over 500,000 people were also online connected to this software and to this search engine, because once you download the client software, it connects everybody together, all looking for files. And how many files are available for download from those people?

VOICE. About 79 million.

Ms. ROSEN. Seventy-nine million files at one point last night. This system is generating 3.6 billion downloads a month. So now why don't we show you how it works. Once you have the system on your place, we go in and add in to the "Search For." And you can search for audio files, you can search for software, you can search for movies.

We're searching for audio files, because that is what we do. We're searching for Billy Joel. So you key in Billy Joel. You push "Search." All of those are Billy Joel's songs, that instantly come up, that are available for download.

The CHAIRMAN. Is there any cost for this?

Ms. ROSEN. No. In fact, on the bottom, you can see there is advertising. KaZaA is selling advertising space on their site, so they are making money by attracting people to the site. But they are offering the downloads for free.

If you looked closer at this, you could see that virtually Billy Joel's entire catalog is available here online. And so we picked something—I forgot what we picked. We are keying onto "Moving Out." That's the one we want to download. So you move your mouse to the "Moving Out." You click on it, and this is what comes up. And you can actually watch it being downloaded as it is happening. See, that line is—in the middle that is moving across to the right shows the download as it occurs. That is how simple it is. That's how fast it is. Unlike a motion picture, music takes two minutes to download a song.

The CHAIRMAN. How long would it take to download a full-length feature movie off of this?

Ms. ROSEN. It depends on your bandwidth size.

The CHAIRMAN. On the computer most kids have at home.

Mr. VALENTI. I mentioned earlier, Mr. Chairman, if I may, that if you have a 56K modem, it would take you 12 to 24 hours for a two-hour movie. If you have a DSL line or a cable modem that is pretty fast, you can bring it down to about 45 minutes. But within weeks and months, you have got the next generation coming where you can bring it down in 45 seconds.

The CHAIRMAN. Thank you.

Senator ALLEN. Mr. Chairman, just for the record, I visited with Napster. And I know Mr. Valenti brought them up, and I know that is a great fear of the motion picture industry is that happening, that what happened originally with Napster. As I understand, Napster's business model now, it is actually people paying for it. At least that is the way I understood what they are trying to do now.

Ms. ROSEN. I am sick of picking on Napster. Napster actually has begun to secure licenses for music. They have switched over to a legitimate business model. Ultimately, when people are in this long enough, they want to make money. These guys want to make money. They just haven't figured out—you know, they are selling advertising.

And when ultimately the force of law gets brought down on them, hopefully they will seek to make money in a legitimate way. But Napster has done that, and they are currently in negotiations. They have gotten licenses from several companies. They're in negotiations with several others.

Once you have this on your system, you can see that what it turns into is essentially a file list very much like your other software programs on your computer. You just click on it, and you can play the song.

[Playing song.]

Ms. ROSEN. Even on these speakers it sounds fine. Thanks, Mark.

Let me just tell you one more thing about this system in particular, this KaZaA system, which is owned by a company called Fast Track in the Netherlands. I said it had a World Wide Web because of the licensees in various parts of the world. Several weeks

ago, a Dutch court enjoined them to shut them down in the Netherlands to prevent their system from being used. They immediately sold the company to an Australian entity and closed down their company in the Netherlands to avoid the jurisdiction of the Dutch court.

So we are going to end up chasing these guys all around the world and doing what we can, but the pirates clearly take too much comfort in their ability to search for the lowest common denominator around the world in terms of legal protection.

That is why, unlike physical piracy, where you really are subject to the laws of the jurisdiction you are in, in Internet piracy, with a global information link, you are vulnerability is the weakest point anywhere in the world. And that is why I think the U.S. Attorney, Mr. Gordon, made the point that the digital world of piracy is a significantly different game. Thank you.

[The prepared statement of Ms. Rosen follows:]

PREPARED STATEMENT OF HILARY ROSEN, PRESIDENT AND CEO, RECORDING INDUSTRY ASSOCIATION OF AMERICA [RIAA]

Thank you, Chairman Biden and Senator Helms, for holding this hearing and asking me to appear before you today to discuss the issue of piracy, a problem that has threatened the vitality of American creative works for a very long time. The Recording Industry Association of America is comprised of hundreds of labels that produce, manufacture and distribute over 90% of the sound recordings in the United States and are affiliated with companies that produce 70% of the world market. Let me also express our sincere thanks to this Committee for its long history of protecting the intellectual property sector of our economy through the ratification of important trade and copyright treaties.

Stifling piracy levels in many parts of the globe undermine the stability and growth of U.S. entertainment industries, affecting not only U.S. creators and jobs, but also robbing other countries of much needed foreign investment and cultural and economic development. Our international affiliate, IFPI, currently estimates that the sale of pirate sound recordings exceeds $4.5 billion, a number that I view as conservative in light of the growing CD-R piracy that we confront in multiple markets around the world. Let me also point out that this number does not include losses dues to Internet piracy—a subject that I will return to later on. In any event, it should be clear that addressing this large and growing problem has fundamental importance to the U.S. economy and to our overall competitiveness. There is no country that can compete with us in the production of creative materials. We cannot permit our trading partners to openly steal this country's greatest assets.

Piracy is not a private offense. It hurts everyone by diminishing the incentive to invest in the creation of music. It should not therefore be viewed as a crime only against songwriters, performers, musicians, record companies, distributors, wholesalers and retailers, but against each of us. It deprives each of us access to diverse musical entertainment at the same time that it deprives governments of tax revenues. Pirates do not invest in recorded music and pirates do not pay taxes. And our member companies invest everywhere in the world in local artists. So, while American music represents 30% of the world market, piracy of music does not just affect American interests, it really is a global problem. And, as is often the case, where problems are global, American leadership is essential.

I would like to highlight today two distinct but equally important forms of piracy—the piracy of physical recordings, and Internet piracy.

For physical recordings, there are unfortunately many places around the world where the market for recorded music is overwhelmingly pirate—indeed piracy claims in excess of 90% of the market in all too many locations. In Russia, China and Brazil alone—the world's three leading pirate marketplaces, the music industry loses more than $1 billion per year—for our community that is a staggering sum. In each of these countries, the story is pretty familiar—sufficient, if not perfect, laws, exists, but the respective governments have simply not paid enough attention to their enforcement.

There is cause for some optimism in China, as officials are no longer denying the existence of the problem—a critical first step in the possible resolution of this longstanding concern. We have seen China ebb and flow over the years as international

pressure is great, and then subsides. Russia too has begun to address its copyright enforcement deficiencies, but it will require significant prodding from its future World Trade Organization (WTO) partners to ensure progress. I would ask that this Committee work together with the Administration to communicate to the Russian Government that WTO admission will take place only after our copyright protection issues have been addressed. I also urge you to work with the Administration in conveying to our trading partners, including Russia, China, Brazil, Taiwan and others, that compliance with the Trade Related Aspects of Intellectual Property (TRIPs) Agreement is non-negotiable.

In Brazil, the Government has demonstrated remarkably, and inexplicably, little resolve to deal with a piracy problem that is destroying its own copyright industries. Brazil is a frustrating example of years of efforts that have produced no results. Brazilian music is loved around the world, yet in Brazil, our members have given up selling cassettes to the pirates and the CD market is slowly being strangled. Brazil's neglect, unlike China and Russia whose markets are just getting started in some ways, is killing a thriving industry—formerly the sixth largest in the world.

The U.S. copyright industries have filed a petition with USTR asking for withdrawal of Brazil's benefits under the General System of Preferences (GSP). If and when the GSP program is renewed, and I certainly hope that it is, I would ask that this Committee and the Administration jointly convey a message that Brazil will not be permitted to enjoy unilaterally extended trade benefits from the U.S. if it stands idle and allows the open and notorious theft of U.S. intellectual property.

There are many other countries whose enforcement practices leave a great deal to be desired. Ukraine, Taiwan, Pakistan, Philippines, Paraguay and Thailand all harbor organized criminal syndicates that are involved in the manufacture and global distribution of pirate CDs. You may have noted that Ambassador Zoellick recently imposed sanctions on Ukraine in connection with their involvement in this illicit trade, and I want to thank USTR for the aggressive use of the tools that the Congress provided to the Administration in the 1988 Trade Act. Ukraine has been a manufacturing point for CD's that traveled throughout Western and Eastern Europe and even fed the pirate markets in Latin America. I would also like to publicly thank U.S. Ambassador to Ukraine Carlos Pascual for his superhuman efforts to persuade the Government of Ukraine to assert control over the production and export of pirate CDs. Ukraine's failure to adopt the necessary practices to control illegal CD production and exports was certainly not the consequence of a lack of effort on the part of the Ambassador and his staff, and they deserve recognition for their work.

I should point out that we, through an umbrella group of the copyright industries known as the International Intellectual Property Alliance (IIPA) (including the RIAA, the MPAA, the Business Software Alliance, the Interactive Digital Software Association, and the Association of American Publishers), will be filing a report with USTR this Friday detailing the lack of effective enforcement in key foreign markets and urging various forms of U.S. sanctions under Section 301 of the U.S. Trade Act. I will ensure that a copy of this report gets to the Committee. But you can be sure the countries mentioned will be the focus of our efforts.

While much remains to be accomplished in the fight against the piracy of music in physical forms (such as CD–R burning), a great deal must also be done to combat Internet piracy.

Internet piracy poses a global and borderless threat to the future success of American creators. The unauthorized digital transmission of a sound recording on the Internet is no less prejudicial to the financial incentives in creating music, and thus no less damaging in drying up creativity. As a consequence, today's unauthorized digital broadcast, or unauthorized Internet transmission is no less piratical than their physical counterparts. And with Internet piracy, the lack of real protection is actually stifling the development of a new marketplace. It is extremely difficult to support the investment in new on-line systems that require payment by the consumer for music when so many existing sites are providing free services without licenses or compensation to the creators of that music. There is no substitute for serving our consumers on-line and that is what we have been trying to do. But these businesses are facing classically unfair competition from the pirates. While the music industry has struggled with this question for several years and in several high profile legal cases, the situation continues to remain critical. We must be vigilant in ensuring that standards of protection are not outdated by technology, and that financial rewards remain a realizable goal for American creators of copyrighted materials.

These rewards are put at risk by commercial enterprises that develop and maintain systems that allow for the unauthorized use of recorded music. One such commercial enterprise that seeks to profit by giving away music in which others invest

is a company called FastTrack. FastTrack is based in the Netherlands, but recently, after an injunction was issued by a Dutch court prohibiting its continued operation, it was suddenly sold to an entity based in Australia. FastTrack developed, maintains and profits from a computer system that encourages the free copying of music, movies, images, software, and videogames. FastTrack's proprietary service is known to many users around the world as KaZaA. FastTrack also licensed the system to Music City, a company based in Nashville, Tennessee. That system is known as Morpheus. Finally, FastTrack licensed the system to a company in Nevis, West Indies, which operates under the name Grokster. Together, these systems are distributing 3.63 billion songs or files a month around the world. In order to protect our rights, we joined with the Motion Picture Association of America and the National Music Publishers Association in a suit against FastTrack, Music City and Grokster to prevent further theft of our recordings.

This Committee helped take a major step in combating Internet piracy when it ratified the World Intellectual Property Organization Copyright Treaty and the Phonograms Treaty.

These treaties contain four critical provisions:

(1) sound recording copyright holders must have the ability to authorize or prohibit the transmission of their works through interactive media;

(2) states must ensure that technological systems used by copyright holders to guard against unauthorized uses may not be circumvented;

(3) states must prohibit interference with rights management information used by copyright holders to identify their works; and

(4) states must, and this is especially important so I am going to quote the language of the treaty itself, provide "expeditious remedies to prevent infringements and remedies which constitute a deterrent to further infringements." This means there must be adequate penalties for those that enable and profit form the pirate activity.

Promoting international legal order through the adoption and implementation of the WIPO Treaties is a critical step in creating the conditions under which U.S. copyright owners can prevent piracy in the online environment, and I urge you to use every opportunity to convince other countries to ratify and properly implement these treaties. This Committee should pay particular attention to issues of enforcement. You can play an important role in requiring governments to understand the need to ensure that Internet Service Providers and other entities must be held to reasonable standards of liability, like they are in the U.S., ensuring that they cannot turn a blind eye to what is taking place through their systems. Partnerships and the adoption of reasonable business practices by all sectors will be critical in ensuring the vitality of America's creative sector.

If we are able to construct a new global marketplace dominated by legitimate businesses rather than pirates, we will be able to reach new markets with unprecedented efficacy. More than ever before, the music industry will become a global enterprise based on local creativity. This hinges, however, on maintaining an environment in which copyright protection is effective, and continues to fuel investment in the creation and distribution of creative materials.

Global sales of recorded music last year exceeded $40 billion. But we sold less music than we did the year before despite the fact that consumer interest in music has, according to reliable surveys, never been higher. They are getting it around the world supplied by a pirate network of services and manufacturers. Preserving markets and creating opportunities for expansion is now a primary imperative to sustain one of the worlds most vital, diverse and competitive industries. Our future is wholly dependent upon achieving adequate and effective protection for our recordings in global markets. While this task has traditionally been fraught with difficulty—witness the well-known piracy problems in China or Mexico—it becomes increasingly more complex with developments in technology that permit the instantaneous and global distribution of materials with the touch of a button.

In a global information network, protection of the creative materials that are such a critical part of this globe's economic backbone is only as strong as the weakest link in the information communication chain. Thus, there is an absolute necessity to eliminate existing gaps in the international legal structure that undermine the protection enjoyed by copyright holders in national and international channels of commerce.

I urge you to stay involved in the fight against piracy. The Congress, together with the Administration, should communicate directly with world leaders about the importance that the United States government attaches to effective copyright protection—both on and off line. Thank you very much.

The CHAIRMAN. Thank you. Mr. Lowenstein.

STATEMENT OF DOUGLAS LOWENSTEIN, PRESIDENT, INTERACTIVE DIGITAL SOFTWARE ASSOCIATION

Mr. LOWENSTEIN. Mr. Chairman, Senator Allen, Senator Boxer, Senator Smith. I think I first wanted to commend you, Mr. Chairman, for the remarkable insightful report you referred to earlier. I thought it was an extraordinary and exceptional piece of work. And if I had any sense, after listening to Jack and Hilary and reading your report, I would just say I associate myself with everything in your report and everything they said, and I would just shut up and let everybody go home. But I am going to plunge forward nonetheless.

I want to start very briefly with a word about our industry which may not be as well known as the film industry, the business software industry, and the record industry, to members of this committee.

It is now estimated by Wall Street analysts that video game sales in the United States could top $16 billion within the next four years. That is in the United States alone. World-wide, Bear Sterns estimates that the games software industry will generate $112 billion in sales over the next four years. Equity markets, as everybody knows, were depressed in 2001, but the entertainment software industry index was up 40 percent last year, which I think is another measure of how dynamic and fast-growing this industry is.

Now, the remarkable thing about the growth of this industry is that it has really occurred in essentially four areas of the world, and that is it—North America, Australia, New Zealand, Western Europe, and Japan. There are over a hundred countries around the world where our industry essentially makes no effort to market its product. It is impossible to imagine how fast this industry could grow and how much we can grow if we had access to legitimate markets around the globe.

The piracy and counterfeiting activities we face fall into the categories we have heard here today. One is hard-goods piracy—optical disc piracy, the illegal manufacturing of optical disks around the world and their distribution—and Internet piracy. And we have all the same problems that you have been hearing about.

I want to focus just for a second on the optical disk piracy problem because sometimes the sexiness of the Internet makes us lose track of this, but this still is a huge area of concern, I think, for all of our industries. And as has been alluded to here today, the optical disk piracy networks are controlled by international crime syndicates who have the money and the political muscle to build and locate pirate replication factories around the world.

They have the distribution networks required to move those goods to all corners of the globe, where they sell, as we have heard this morning, for as little as one or two dollars. We can't—our members can't compete, which is why we are not making an effort in so many countries to do so. And I want to call out some countries here today.

Senator Allen asked about it. Hilary has mentioned some. But countries like Malaysia, Thailand, Taiwan, Indonesia, the Philippines, the Ukraine, and Russia are among the winking and nod-

ding host countries for these pirate syndicates. And I do not think we should mince any words about that.

I thought one way to dramatize exactly what goes on in this area is to perhaps walk you through 24 hours in the life of a pirated game. I do not have any visual displays here, so try to use your imagination. It starts with a member of a cracker gang who will purchase a game at 9:00 a.m. on the day of its release, if they haven't already gotten a pre-release beta copy, perhaps from an internal leak from a company, perhaps a reviewed copy that went to a magazine.

But as soon as the game buyer is back home, he runs a program that produces a mirror copy of the CD, perhaps a ten- or fifteen-minute process. Then his work is done, and the pros take over. The mirror copy is transmitted, usually through a broadband connection, to the next level of the illegal scheme, a game cracker. It is now, say, about 11:00 a.m., two hours after release, and the cracker is working on breaking the copy protection. This is not easy, but it is not uncommon, depending on the skill level of the cracker, for the copy protection to be broken in 12 hours or less.

So now, run the clock ahead, we are 12, 14 hours into our day. The cracked game is now ready for distribution and use without the original disk. It is now, say, midnight, and IRC and news groups are advertising its availability on the Internet for purchase and download, and the cat is out of the bag.

Now, we are not done yet, because, assuming the game is a hot title, it will be sold by the crackers to replicators for anywhere from a few thousand dollars, because many of these crackers are kind of, they are really not in it for the money, but they will sell it for a few thousand dollars or, in some cases, considerably more, to the replication facilities that I have been talking about, the organized crime syndicates.

So now, as early as 9:00 o'clock on day two, 24 hours after the game was released, organized crime's network of pirate replicating factories in Asia and elsewhere have got the game and they are stamping out tens of thousands of copies for shipment throughout the world, and the game is off to Europe and Africa and the Middle East and even North America and Canada.

So that is kind of a quick run through of this. My testimony has some suggestions of things that I think we can do about the problem. I do not want to take too much of your time to address those. I do want to touch very quickly on two things that have come up here this afternoon.

Like Hilary, I wanted to comment on Senator Allen's point about impact and essentially echo what she said. You know, it takes two to three years now to make a video game. It takes typically not the same as a motion picture, but we are now pushing $10 million to make a typical video game. You have teams of animators, programmers, software engineers, and so forth working on this process. Many of them are in small to mid-sized development studios around the country.

Yeah, the industry is dominated by large software publishers, but we have hundreds of small developers who feed those software publishers. And so essentially when you—and the other point that is certainly important to realize about this industry is that most

games make their money in the first couple of months. If they are not selling one or two months after release, they are off the shelf. Just like the record industry, most games do not make money. It's a hits-driven business.

So when you pull all that together, what piracy is doing is it is sucking money out of the industry. It is depriving the industry of the R&D dollars required to make that next game that is going to cost $10 or $15 million. And with 145 million Americans who are playing computer games and video games, not just a bunch of adolescent boys these days, that means millions of Americans are being deprived, potentially, of entertainment options. And, of course, the economic impact that results from developers and the publishers not being able to maximize their revenue.

And with that and the lateness of the hour, I will wrap up my remarks and welcome any questions.

[The prepared statement of Mr. Lowenstein follows:]

PREPARED STATEMENT OF DOUGLAS LOWENSTEIN, PRESIDENT, INTERACTIVE DIGITAL SOFTWARE ASSOCIATION

INTRODUCTION

The Interactive Digital Software Association (IDSA) is the U.S. trade association representing the business and public affairs interests of the world's leading publishers of interactive games for video game consoles, handheld devices, personal computers, and the Internet. IDSA members collectively accounted for nearly 90 percent of the $6.35 billion in entertainment software sales in the United States in 2001, and billions more in export sales of American-made entertainment software. Our industry has just entered a new era of dynamic growth. After doubling in size between 1994 and 2000, Wall Street analysts now estimate that industry sales in the U.S. will double again to at least $12 billion by 2005, with some estimating that retail sales will reach a staggering $16 billion that year. Worldwide, Bear Stearns forecasts that the game software industry will generate $112 billion in revenue over the next four years. A recent survey by Peter Hart & Associates found that 145 million Americans now play interactive games on their PCs, their game consoles, and/or their cell phones on a regular basis.

The industry's growth has been a boon to the U.S. economy, and to our exports. Industry sales have grown at an annual rate of 15% a year over the last several years, double the rate of growth of the U.S. economy as a whole, and far outpacing the growth in other entertainment and technology industries. A recent report in "Red Herring" Magazine identified video games as one of the two or three most impressive performing sectors in U.S. equity markets in 2001, with the index of video game stocks up more than 40% for the year. All of this led journalist Ted Fishman, writing in "Worth" Magazine to conclude, "For investors, for businesses, and even for national economies, video games aren't child's play. They are becoming a dominant medium."

In today's modern era of video games, it typically costs more than $5 million to make a top game, with a development process that spans two years from start to finish. Teams of 20–30 animators, software engineers, writers, sound engineers, and other crafts come together to create an artistic achievement that is the most technologically advanced form of entertainment available, where players are the authors and directors, and where passivity, the hallmark of 20th century entertainment, is replaced by interactivity. Once the game is completed, IDSA members pour millions of marketing dollars into supporting the new title, knowing that in this hits-driven business, most games have but a month of shelf life to capture consumer mind share and take off, or else join the vast majority of titles that do not return a profit to the publishers.

The worldwide growth and expansion of the U.S. game software industry is impressive on any terms. But it's even more remarkable when you consider that this growth has largely occurred in only four markets: North America, Western Europe, Australia/New Zealand, and Japan. There are at least 100 other countries around the globe where there is virtually no legitimate market for our products due to rampant piracy. It is no exaggeration to say that the growth of the U.S. video game business is limitless if we can reduce piracy in these untapped markets to incidental

levels. The potential was vividly illustrated in a "New York Times" photograph of newly liberated Kabul in October. Here in one of the world's most repressed and isolated cities, a picture taken just a few days after the expulsion of the Taliban, showed a group of kids gathering excitedly around several Game Boy handheld video game consoles. If the kids in Kabul can't wait to get their hands on video games, it's safe to say the same is true in country after country in Asia, the Middle East, Eastern Europe, and South and Central America.

PIRACY AND COUNTERFEITING: A GLOBAL PRIMER

Interactive game software is created and distributed in digital format, making it susceptible to electronic theft, unauthorized reproduction, mass duplication and Internet transmission. To prevent such abuses, almost all game publishers seek to protect their product by incorporating into the game software one or more different technologies aimed at restricting unauthorized access to, and copying of, the digital content of these products. However, despite the millions of dollars that have been invested in such access and copy protection technologies, intrepid pirates have been able to penetrate these defenses and access the digital game content for their illicit purposes. Once these defenses have been compromised, the digital game content is then subjected to active global channels of piracy and counterfeiting that result in the almost instantaneous availability of illegal copies of this game product in all four corners of the world. This instant piracy is especially devastating because in our industry, given the hundreds of releases per year, limited retail shelf space, and the competition for consumer mindshare, a title's fate is determined within a month or two of launch. Massive piracy at launch thus can have a material impact on the financial success of a given game.

The piracy and counterfeiting activities plaguing the game industry fall into two general categories: (1) the illegal manufacture and global distribution of optical disc copies of games; and (2) the posting and worldwide transmission of illegal copies of games as digital files via the Internet.

Optical Disc Piracy

Optical discs known as CD-ROMs have for some time been the predominant format for games played on personal computers. Starting with the PlayStation in 1994, there has also been a deliberate trend towards putting console games on optical discs, as this format offers greater storage capacity on which to hold the large quantities of digital information required for the newer more powerful game platforms. The latest console technologies, such as the Xbox, PlayStation 2, and GameCube, use optical discs as the carriers for their game software. This trend for game software paralleled the rapid expansion in the use of optical discs for other entertainment media, including music CDs and motion pictures on DVD.

This universal medium has proven to be an irresistible opportunity for international crime syndicates, for which the economics of optical disc replication and global distribution has tied in comfortably with existing strengths within their organizations. These criminal enterprises have easy access to the necessary capital to acquire multiple optical replication lines and the required connections in certain countries to establish replication facilities, often in clandestine settings, where they are being allowed to operate with little interference or interruption from any government or law enforcement authorities.

Many of these criminal organizations have selected countries in Southeast Asia as the home base for these replication facilities. Optical disc facilities engaged in illegal replication activities have been found at one time or another in every country in this region. While progress in certain countries has been made in controlling illegal optical disc replication, such as in Singapore and Hong Kong, other countries continue to be active hosts of such facilities, in particular, Malaysia, Thailand, Taiwan, Indonesia and the Philippines. Pirate optical disc replication facilities are also frequently found in Eastern Europe, Russia and some of the former CIS countries, Ukraine in particular.

As our colleagues in the film and music industries have estimated, the average annual production capacity of a replication line is over 3 million discs per year, a capacity that typically far outstrips any demand for legitimate product. Given the massive mismatch between demand and capacity, it's fair to conclude that the concentrated presence of replication lines in many of these countries is indicative of the fact that their illegal output is intended for export to other markets. Of course, the criminal organizations base their manufacturing facilities in these countries because they know that they will have considerable freedom in replicating and exporting the pirate optical discs to their export markets. The host countries frequently turn a blind eye to such activity, either because of the political and economic influence of the criminal enterprises that own the facilities or because the problem is so large

and pervasive that they are reluctant to enact the measures and commit the resources to deal with the problem.

The international distribution channels of these pirate and counterfeiting operations are widespread. Pirate game product manufactured in Southeast Asia has been found in Europe, Africa, the Middle East and throughout the western hemisphere, from Argentina north through Canada. U.S. Customs seizure statistics for 2001 reveal that there were over 1,300 different seizures involving optical media product, many of these from Southeast Asian countries. And these are U.S. seizures—representing only a fraction of shipments made directly from Asia into other markets.

The criminal organizations running these operations have clearly been able to take advantage of the inadequacy of the customs operations and border controls in many countries around the world. Not only are the criminal organizations involved in the optical disc trade effective at securing the export of their pirate products from their country of manufacture, but they have also carefully arranged for multi-step shipments for such product in mapping its global distribution. On several occasions, we have found game product that had been manufactured in Asia shipped through Europe and then on to countries in South America. Frequently, such "trans-shipment" schemes are done to avoid scrutiny and detection as shipments from certain countries are more likely than others to arouse suspicion and possible inspection. In addition, the pirate exporters have also taken to reducing the number of units in each shipment as the smaller quantities are more likely to elude detection and, even if found and seized, would represent a smaller loss to the pirate trader.

The global counterfeiting operations have had a devastating effect on the distribution of legitimate game product to international markets. As these pirate "entrepreneurs" sustain neither development costs, nor royalty expenses, nor marketing costs, they enjoy untold advantages over the publishers and sellers of legitimate game product. Adding this to the fact that pirates never pay applicable taxes and import duties, it is not difficult to understand how in almost every international market a pirate copy of a game is offered at a fraction of the price that the legitimate version of the same game would command and usually reaches that market well in advance of the legitimate version. This has resulted in pirate product overwhelming legitimate sales in certain markets and even preempting legitimate market entry in others. Many IDSA members remain skeptical of their ability to compete against pirates in countries such as Thailand, Malaysia, the Philippines or Indonesia because of the huge predominance of pirate product in the marketplace. The same holds true for many countries in Eastern Europe, where IDSA members would like to establish a foothold but are reluctant to assume the risk given the current piracy climate. Even in other countries where many IDSA members are working to sell legitimate versions of their games, it is common to find piracy rates of over 90%, such as in Mexico and Argentina.

While the United States ranks as the world's largest market in the consumption of interactive game software, most IDSA members now generate 40–50% of total revenue from foreign markets. It is very clear that the international pirate and counterfeiting trade in interactive game product, if left to grow unabated, will have a profoundly harmful effect in dampening the growth of the interactive game industry.

Poland Stadium: Organized Crime Piracy Up Close and Personal

Let me take this from the abstract to the real world. An excellent example of the scope and scale of optical media piracy and its ascendance in certain countries is the ongoing presence and visibility of the 10th Anniversary Stadium in Warsaw, Poland. This stadium, a former football stadium, centrally located in Warsaw, has served as an open marketplace for the sale of a huge volume and variety of illegal goods and pirated products, whether game software, pirate movies, illegal music CDs, as well as applications software.

Sellers from Poland, Russia, Estonia and Eastern European countries come to the stadium to rent out selling space within or around the stadium and sell illegal merchandise, much of which is likely manufactured in optical disc facilities in their home countries. Each of these ethnic groups is reportedly tied in with organized crime groups who are active in the pirate trade and who use the stadium as a high volume outlet for their optical disc product. The volume of illegal transactions is huge and has been estimated at over $3 billion per year (not all of this represents sales of pirate product), helping to make the stadium, by some estimates, the second highest income producing enterprise in the country.

The most telling aspects of this story are the following facts: (1) the Stadium has been operating in this fashion for a number of years; (2) the Stadium and the European Fair operating in the Stadium are managed by an international board of for-

eign representatives under a contract that they have entered with the Stadium authority as well as the board of the local Warsaw police district; (3) the illegal activities at the Stadium are the subject of monitoring and surveillance by Polish law enforcement authorities for some time; (4) these authorities claim that, despite undertaking occasional actions against Stadium businesses, they are unable to meaningful enforcement efforts against the illegal businesses operating in the Stadium due to the control maintained by the Stadium security and police force, as well as the protection afforded the Stadium businesses by a local organized crime group; (5) the Stadium and its pirate sales of millions of dollars in infringing products has been the subject of the copyright industries' annual filings to the U.S. Trade Representative for a number of years; (6) despite the attention that the U.S. government has focused on the Stadium in response to these filings, it continues to operate freely, with local Embassy reports confirming the Polish government's refusal to close down the Stadium because of the benefits it provides to the local economy.

One last point about these organized crime syndicates. We are concerned about reports, admittedly anecdotal, that suggest that the organizations involved in the piracy and counterfeiting trade are also involved in other forms of criminal endeavors. For example, on October 13 the "Washington Post" reported that Paraguayan commandos raided a video game store linked to international terrorists in Ciudad del Este, a hotbed for video game piracy. I cannot say for sure that there is a clear link between terrorism and piracy—in contrast to the unimpeachable certainty about the link between organized crime and piracy. Unfortunately, there are limits to the resources that private industry can put to this problem and therefore concrete information in this area is hard for us to come by. In this case, only the U.S. Government has the resources and the ability to pursue this potential link between those who would endanger America's national security by undermining its economic security. I hope this Committee will encourage the U.S. Government to actively investigate this as part of its broader attack on terrorism.

Internet Piracy of Game Product

While the video game industry has been a pioneer in distributing entertainment content for free and for pay over the Internet, this medium has unfortunately proven to be a terribly effective outlet for the worldwide dissemination of pirate version of games. Here's one example of how the system works:

A member of a "cracker" gang—a gang of people who "hack" or "crack" the access and copy protection controls in games—will purchase a game the first day of its release, first thing in the morning—if they haven't already obtained a pre-release beta version. As soon as they're back home, they run a program that produces a mirror copy of the CD, perhaps a 10–15 minute process. The hacker will then transmit this mirror copy, usually through a broadband line, to a game cracker in the gang. So within an hour or two of release, the cracker is hard at work breaking the copy protection. It is not uncommon, depending on his or her skill, for the cracker to remove copy protections in 12 hours or less. The cracked game is now ready for distribution and use without an original disk. By late evening of the release day, IRC and newsgroups are advertising the cracked game's availability and, depending on demand, the cracked game may also be sold to replicators for anywhere from a few thousand dollars to considerably more. Thus, within 24 hours of release, the pirate replication factories I described earlier may be stamping out tens of thousands of illegal copies for shipment throughout the world, resulting in untold lost sales for the publisher and artists involved in making the game.

Unfortunately, law enforcement has found it difficult to investigate and penetrate these hacker rings, even more so because many of these groups' members reside and operate from overseas. However, three separate operations by U.S. Customs, the Department of Justice, the Federal Bureau of lnvestigation and the Office of the Inspector General of the Environmental Protection Agency in December 2001 targeted raids and search warrants against individual members of some of these rings. Of particular note to this Committee, and particular encouragement to us, is the fact that in two of these operations, the Federal agencies involved were able to coordinate their investigative efforts with foreign law enforcement agencies in five countries (United Kingdom, Sweden, Finland, Australia, Canada), some of whom executed search warrants against local residents. These investigations are still ongoing, but I submit to you that this is the kind of international cooperation this Committee should encourage and stimulate if we are to have a coordinated worldwide attack on pirates of all stripes.

It is fortunate that U.S. law offers IDSA members, as well as other copyright holders, the legal means to address Internet sites that feature illegal copies of their product through the remedies offered by the Digital Millennium Copyright Act (DMCA). Such remedies help facilitate a fairly rapid takedown of infringing product

from Internet sites, which is quite important given the difficulty and protracted effort required to investigate and prosecute the hacker rings described above. Unfortunately, the vast majority of foreign countries do not offer a similar system for the removal of infringing product. These countries' adoption of similar "notice-and-takedown" systems as part of their legal codes would go a long way to help the game industry and copyright holders in general pursue their own efforts to rid the Internet of infringing product.

POLICY RECOMMENDATIONS

1. *Renewal of the GSP trade benefit program*

Although there are many important considerations underlying the renewal of the Generalized System of Preferences (GSP) program, the IDSA believes that the availability of GSP trade benefits has been an effective incentive for countries to improve their efforts to protect and enforce U.S. intellectual property rights. Every year, the U.S. Trade Representative (USTR) reviews petitions submitted by the copyright industries with respect to trading partners who enjoy GSP trade benefits but who fail to provide adequate and effective enforcement of American intellectual property rights, one of the qualifying criteria for GSP eligibility. Because one of the possible sanctions available to USTR and its review of these countries' IP protection efforts is the suspension of GSP benefits, this review of GSP beneficiaries' IP performance is an effective way to pressure these countries to improve their enforcement efforts against local piracy and counterfeiting operations. The current inactive status of the GSP program has therefore removed one of the more effective mechanisms for obtaining significant improvements in countries' efforts to address local optical disc and Internet piracy. Accordingly, we would urge this Committee to play a leadership role in securing GSP renewal.

2. *Assisting law enforcement overseas/Mutual Legal Assistance Treaties (MLATs)*

As many of the significant players in the optical disc and Internet piracy trades are resident and operating overseas, Congress should consider approaches that would allow U.S. law enforcement officials to aid in the pursuit of foreign nationals for commission of U.S. IP crimes. Particularly in the optical disc piracy trade, most of the players are operating in countries where they are unlikely to fear local prosecution or efforts to curtail their pirate activities.11In this regard, there are a number of foreign law enforcement agencies who are quite active and effective in pursuing investigations against optical disc operations and, to a lesser extent, Internet pirates. Many foreign police forces have also indicated a strong interest in becoming more active in these areas. Federal law enforcement officials should develop a better level of communication and coordination with such officials as such relationships will inevitably become necessary in pursuing investigations into optical disc enterprises as well as Internet piracy rings, both of which have extensive trans-national connections and links.

These cooperative investigations are based on mutual legal assistance treaties (MLAT's) that specify the conditions under which U.S. law enforcement agencies cooperate with non-U.S. law enforcement agencies, and which require Senate ratification. We encourage this Committee to play a major role in reviewing these MLATs and, where necessary, strengthening them to ensure cooperation is forthcoming in internet-related investigations and those involving "hard-goods" piracy, particularly in those counties in Asia and Eastern Europe where factory-style production of pirate optical media product remains our greatest concern.

Still another effective way to build foundations for these relationships is through increased technical training of foreign law enforcement officials and agents. Such training should focus on the technical and forensic aspects of optical disc and Internet piracy. The IDSA is committed to participate and/or provide whatever technical support would be required to develop a technical curriculum for such training programs. In addition to such training, a greater effort needs to be made to reach out and share intelligence and information with foreign law enforcement bodies, particularly when the information implicates a local resident or national.

3. *Foreign countries' adoption of notice and takedown provisions to address Internet piracy*

As noted previously, the absence of statutory provisions on ISP liability and notice and takedown in foreign countries similar to those found in the DMCA severely limits IDSA members' abilities to address foreign Internet sites which are hosting infringing activity or offering pirate versions of their game product. Statutory recognition of the liability of an ISP for infringing product being made available through its systems has been a crucial factor underlying the effective system of notice and takedown that has enabled U.S. copyright holders to obtain ISPs' removal of pirate

product from their systems. Congress should take an active role in promoting the adoption of such measures by U.S. trading partners as this would give U.S. copyright holders a better chance to try and address instances of Internet piracy which arise overseas.

4. *More effective deployment of Federal law enforcement resources*

We have been gratified by recent stepped up efforts within the U.S. Government to focus more resources on large scale optical media and Internet piracy. Since mid-1999, we have seen an increased focus on IP-related crimes through greater allocations of dedicated manpower and resources within a number of Federal agencies, including the Department of Justice, the Federal Bureau of Investigation, the U.S. Customs Service and a number of U.S. Attorneys' Offices across the country. Attorney General Ashcroft's announcement last year of the Computer Hacking and Intellectual Property (CHIP) units within key U.S. Attorney's Offices was another helpful step towards ensuring the dedication of an appropriate amount of resources to cover this growing and complex area of economic crime.

As I said, we are certainly gratified by this increased Federal commitment. But we would like to suggest that adding manpower and other resources is not by itself sufficient to the task at hand, and therefore offer the following recommendations to enhance the efficacy of the national government's drive to defeat the worldwide pirate enterprises.

CHIP Mandate

First, the CHIP units' resources must be devoted to both "hard goods" or packaged goods piracy, not exclusively on online offenses as some statements have suggested may be the case. Such a narrow focus on the Internet will give an unfortunate free pass to the organized criminal piracy rings operating with impunity today. As optical media piracy currently poses an even greater danger to the interactive game industry, we would urge that priority also be assigned to pursuing investigations into the sources of pirate optical discs in this country, many of which will likely begin with the information derived from Customs seizures of optical disc shipments. Application of law enforcement resources to such cases could prove useful in deriving additional information on both foreign and U.S.-based sources of such optical disc product, providing a basis for additional investigations aimed at the pirate manufacturers.

Inter-Agency Coordination

While it is helpful to have increased Federal resources available to address the multiplicity of leads and intelligence on the growing optical disc and Internet piracy problems, there is a continuing need for the resources addressing these problems to be carefully coordinated, particularly establishing the business connections between different illegal operations can be more easily achieved if investigative efforts by different offices and different agencies are tracked so that shared intelligence can help facilitate building the case against individual targets. This past December's raids against Internet piracy rings were a good example of how effective such coordination can be as three separate investigations involving different Federal agencies benefited from a coordinated approach on execution of search warrants and sharing of investigative intelligence. We would like to see such coordination expanded, centralized and implemented on a more systematic basis so that we can maximize the effectiveness of the investigative and enforcement resources applied to Internet and optical disc piracy.

Training

While increasing the number of investigative and prosecutorial staff to focus specifically on IP-related offenses is valuable, it is crucial that such individuals receive the proper training and orientation in the areas of optical disc and Internet piracy, particularly in the technological facets of the problem and in computer forensics. As the offenses in these areas as well as the evidentiary aspects of the cases are heavily influenced by technological factors and considerations, it is extremely important that the agents and prosecutors assigned to work in these areas have a full understanding of the technological components of the software and the related hardware systems. IDSA and its members are prepared to provide whatever training resources are required to help provide such background and know-how to Federal law enforcement officials.

Technology

It is critical that law enforcement officials working in these areas be furnished with computers, devices, machines and other equipment that will enable them to conduct effective investigations into the activities of those engaged in Internet and

optical disc piracy. Those who are active in these pirate trades are generally technologically sophisticated and frequently well-equipped with the latest and best in computers and Internet access. It is crucial that the law enforcement agents who we task with tracking these people down and gathering evidence on their illegal activities are provided a roughly equal footing on a technological level.

CONCLUSION

Mr. Chairman, it's clear from my testimony that global piracy is both a drag on the growth of U.S. businesses, and the U.S. economy, and that it is a legitimate American foreign policy concern. In this testimony, I have tried to share with you some concrete sense of our industry, the nature of the global piracy problem, and some easily achieved ways to make an even greater dent in the pirate networks.

At the same time, it must be said that pirates tend to flourish most in countries where any potential respect for IP is overwhelmed by harsh economic realities. In this sense, the single greatest action we can take as a government is to pursue a foreign policy that seeks to raise the standard of living and build viable, sustainable, free market, national economies. I believe that if countries stamp out IP theft, they create a climate where IP-based industries can thrive; a growing IP-based economy, in turn, perfectly aligns with greater economic growth and opportunity. So while we must continue to wage the enforcement fight, we must also acknowledge that only when the underlying economic conditions around the world improve will we create an environment where incentives for piracy truly diminish. That may take decades, but it is a case where our industry's interests coincide with our national and economic security interests as well.

The CHAIRMAN. At what point does the Internet and increased access to broadband begin to pinch on the counterfeiters? In other words, at what point does it get that you can't make money setting up these counterfeiting operations that stamp out ten thousand, or fifty or hundred or two-hundred thousand of these games, movies, or CDs, records, or any other software, that because you can just pull it right out of the ether, you know? Yes, Jeff?

Mr. RAIKES. Well, Mr. Chairman, it is like Jack said, it is Whack-a-Mole. These are criminal organizations which are quite versatile, and they continue to evolve themselves. So what they do is, they prey on consumers, and so their step will be to set up what appears to the consumer to be a legitimate site to distribute software or distribute other types of technologies, yet, in fact, they will be illegal businesses, just like you are seeing today. So it would be my expectation that the criminal element will continue. It is just that they will have to change their business model.

The CHAIRMAN. The arrival and the growth of broadband strikes me as a double-sided development for all your industries. I mean, in one sense, it gives you, Jack, what the industry and all the industries have been looking for: direct access to the consumer with high-quality capability and the market will determine, absent piracy, be able to allow you to market directly to consumers. But how without—I mean it gives the pirates the same—and the counterfeiters the same access.

Mr. VALENTI. Mr. Chairman, let me speak to that, because you put your finger on something that is quite elusive, and it is a good-news-bad-news kind of thing. For every gain, there is a loss; for every loss, there is a gain, the Amazonian doctrine goes. The window of opportunity we have to protect ourselves is the languishing of broadband in this country. That is the moat that has been protecting us for some time.

Yet in order for us to really make use of the Internet, we must have more broadband. Today, there are nine and a half million broadband users in this country—66 million computer homes, only

nine and half million have broadband. That is DSL line or cable modem. We do know that the use of the Internet has begun to flatten. It's not growing with the exponential speed it once had. And I keep saying—I do not know how the rest of the world feels about this—but I am saying that the great omission on the Internet today is the lack of movies. That is what people want, and that is the thing that drives it. It is not there.

The only way we are going to do this, Mr. Chairman, and we know what is required to protect our movies. You've got to have a broadcast flag that protects over-the-air television from being retransmitted on the Internet. You have to have content encryption. You have to have watermarking, which allows you to plug what is called the analog hole.

We know the ingredients that are required to protect us. And until you get those ingredients all put together in an all-embracing solution, we are going to suffer in a lamentable way the slow undoing of one of America's great economic assets, whether they be video games or music or Microsoft software or whatever. It's going down the drain sooner or later unless we can stop it.

I am saying to you if we can't get all the IT communities and chip makers and the home recording device people together in a room and let us work it out privately then bring it to the Congress, if we can't do that, then the Congress has to do it.

Mr. LOWENSTEIN. Senator, if I may just add a couple of very quick comments. Our industry, I think, is perhaps farther ahead in its use of the Internet as a distribution tool than some of our colleagues here. We've been using the Internet to distribute game content for years, at least five years. And in the lifetime of the Internet, that is a lifetime.

Games are made available for free. Games are made available for monthly fees. They're made available for hourly charges. There are games where literally ten and twenty thousand people are playing simultaneously—several of those enormously successful commercially. There are 50 million Americans who say they play games online, anything from card games like Hearts all the way up to very intensive games. Even with a fairly proactive effort to embrace the Internet technology, our industry is obviously still facing tremendous piracy problems, nonetheless. It's not simply a question of making the content available through legitimate channels. Broadband, you have absolutely right, will compound the problem.

It is, as you say, absolutely a double-edged sword. But it is inevitable. And so as we march toward that, we are going to have to find ways, both through the legal systems and through technology. Our industry, again, if I can just say for one second—we have proprietary platforms. Again, we are a little different from our colleagues.

Microsoft has the X-Box. Sony has the Play Station. Nintendo has the Game Cube. Each one of those has hundreds of millions of dollars in R&D invested in encryption to prevent the playing of illegal games. And unfortunately, notwithstanding the investment of some of the most talented people in R&D in the world in these companies, these copy protections are routinely cracked. So I am not even as sanguine as Jack, that even if you can come up with a standard it is going to ultimately solve this problem.

That is a rather pessimistic note, but I wanted to share it with you.

Mr. RAIKES. I think we absolutely share Jack's goals, and I agree with Mr. Lowenstein that—we are a content provider, too. So, you know, we may not be really in the movie business, but we care a lot about trying to protect content. And so, therefore, we take a very proactive position on this. We're spending more than $50 million annually on digital rights management technology, the kind of technology that will help to secure content. But again, we are dealing with people who also are going to try and continue to advance their skill, their criminal skill.

And so I think one of the important things is to have the technical community working together and also the business community. And, in fact, Jack's efforts have energized a group, the Content Protection Technology Working Group are getting together and having these discussions.

The important thing to remember is that whatever sort of standards are put in place, the mechanism has to be flexible enough to encourage the innovation. You have to strike a balance that encourages people to innovate on digital rights management technology, because, again, you have to understand the criminal elements are going to be trying to crack the copy protection, the digital rights management technology, on an ongoing basis. And so we have got to keep moving, moving, moving in order to make sure that we deliver on this.

So, there is no lack of energy or enthusiasm for what Jack said, certainly from our perspective and I think many of our colleagues in the industry. The key issue is how can we make sure that we come together as an industry and get the right technologies in place and keep one step ahead of the bad guys.

The CHAIRMAN. Senator Allen.

Senator ALLEN. Thank you, Mr. Chairman. No. 1, I fully understood, having visited some of the studios and others, especially the motion-picture business, whether that is Disney or Warner Brothers or others, the tens of millions of dollars that are invested in these wonderful creations and the thousands of jobs they provide. And when they are shooting in other places other than, say, Burbank, and so forth, what the impact is on communities. And just like any other business, when one takes a risk, whether it is in the recording industry or motion picture industry or the game—my children—my son, in particular, is the one that keeps you all in business. [Laughter.]

All of that, you have to get a return on your investment. And if you are not going to get a return, if there is thievery, so to speak, you have to increase the price. But in the long run, you kill off that creativity, because they are simply not going to make those investments which are risky to begin with. And the ones that are profitable, and if you have made, like, a pharmaceutical, once you finally get something that has a market, that gets stolen, it is hardly going to be conducive to more creativity and risk taking and making a better product, whether it is music or whether it is television or whether that is also—of course, in motion pictures.

I think that this panel here is very representative, and the comments, particularly of Mr. Valenti as you were going forward, and

that of Mr. Raikes and Lowenstein and Ms. Rosen, as well, on the issue of broadband. In looking at broadband, it is interesting that all of us, at least many of us are trying to get broadband to more areas, especially to rural areas, sometimes inner-city areas. It's looked as an economic development, modern day rural electrification matter. Interestingly, I have read—and I can't remember the source—but about half the country has access to broadband, more than half. But the actual utilization and desirability is around ten percent.

And why is that? People like to get the Internet, but I think what makes the difference is, and why they do not want to pay more for broadband, whether it is cable modem or DSL, regardless, the reason they do not want to pay more is they do not see anything compelling to make a difference. Sure, you can download a newspaper a little bit quicker to read, whatever your newspaper is or maybe you get the sports scores a little bit quicker. Maybe get a better broadcast of the Raiders game or something like that. But that is still not enough to make you pay more.

The difference is the content, and that is what will make the difference, being and visiting with Microsoft and seeing their flat screen projecting Disney's "Dinosaurs," I believe it was, the movie, seeing the digital TV, the great creativity, the preciseness, the clarity, and so forth of that film and how you would enjoy it on one of those large, flat-screen digital screens. It seems to me everyone—everyone, whether you are a computer maker, whether you are a consumer of electronics, whether you are a software programmer, so to speak, software manufacturer, obviously the music industry, the recording industry, the motion-picture industry, everyone—and the Internet companies, for that matter, and those who are investing tons and tons of money into broadband—and there is a lot of dirt to dig up to put in the fiber optics if you are using fiber as opposed to wireless or satellite, there is a lot of money into that, and they've got to get a rate of return.

And so it is in every single party's interest to come to a solution. And it may not be just one solution. It may be several solutions. The folks at Warner Brothers, the folks at Disney, the folks at MGM, regardless, all have to be comfortable with it to put that risk of that production of that property on the Internet. And so I would hope that all the parties would get together as quickly as possible. My solution generally is not one of saying, "Let's get the Congress to come up with it." And I understand the frustration. Sometimes you need to have a kind of an axe over someone's head to get them to pay attention and come together. But it is really in everyone's interest for the return on the investment on broadband and also to get people utilizing broadband, not just for entertainment, but entertainment is what will drive it, but it also will be beneficial for education. It will be beneficial for economics and jobs in areas. So there is a reason for the Internet Service Providers, or the broadband whether it is again, the fiber optics to be laid, because they will say, "Hey, look. If we put this out here, folks are going to want it." And the digital rights and the innovation on it, I think is absolutely essential.

But these standards, whether it is content or whatever you want to call it—content encryption, watermarking, the point is it is pro-

tecting copyright laws, so to speak, or copyrighted property—is vitally important for this whole country.

Yes, it is great for business, but it is also very important for the development of our country. And these communities that are very concerned about getting broadband, and there is others, such as Senator Rockefeller in West Virginia and myself, have been working on various incentives. But you can have all the incentives you want, you can have these companies digging the dirt to get the fiber all over, but if the consumers aren't going to want it, why should anyone do it? Just to get a tax break? No. They need to get a return on their investment.

I would encourage each and every one of you all to listen to Mr. Valenti. I may not be exactly wanting to use that quickly the axe on it to get the government in it, but you all do need to get together as quickly as possible. To me, that will really spur on the technology sector of our economy while also providing consumers what they would want. And I think it would also help roll out the digital TV, the digital products in the consumer electronics area where they were all thrilled last year when they said, "Gosh, we sold our one-millionth digital TV, high-definition HDTV." And I said, "Well, that is great. How many TVs are out there in this country?" You know, it is hundreds and hundreds of millions.

We need to keep moving in technological advancements. And so to the extent the recording industry and the motion-picture industry is going to help, we all need to get together, and do it as quickly possible, because if you all do not get agreement on it, I think there will a great impetus to get the government developing that standard. And it is best that the innovators in the private sector are the ones whose creativity needs to solve this problem.

That's all I have to say. And I want to thank each of you all for your testimony and what you are doing to help our country along—entertain us or educate us, but mostly allow us to have a good quality of life. And I want to thank you, Mr. Chairman, for these series of hearings you have had. I have never had a chance to listen to Mr. Valenti at a hearing. What a pleasure. You could charge admission for that, as well.

The CHAIRMAN. He sort of does, but we will talk about that later. [Laughter.]

Senator ALLEN. But again, Mr. Raikes, Mr. Lowenstein, Ms. Rosen, Mr. Valenti, thank you so much, and I encourage you all to work together as quickly as possible to get that watermark or digital protection done as quickly as possible.

The CHAIRMAN. Senator Boxer.

Senator BOXER. Thanks, Mr. Chairman. I will be very brief. As I sit here looking at this again, because I have done so individually with you, but just to hear you all present it and read over my Chairman's statement which, when you were out of the room, I said was right to the point, I think it is not an overstatement to say that our economy is being threatened by this thievery of intellectual property. Now, we have been able to quantify it, and I am going to ask you again, our Microsoft person, to repeat, because I am not sure the Chairman was there—looking out into the future, what is the loss that you see to the American economy if this continues?

Mr. RAIKES. Well, at the current rate—I mean, today we are seeing annual losses of $12 billion and 100,000 jobs and $1.6 billion in tax revenue. And we would expect that to increase to 175,000 jobs and right in that range of $1.5 billion to $2 billion in tax revenues towards the end of this decade. And keep in mind a lot of——

Senator BOXER. What is the loss to the industry?

Mr. RAIKES. Well, to the industry today——

Senator BOXER. Today you said $12 billion. What did you say it would be in the future?

Mr. RAIKES. I am not sure. We're hoping that we can tread water as fast as we can.

Senator BOXER. You said something in your opening statement——

Mr. RAIKES. Today it is $12 billion. What I did estimate in the future was the amount of jobs and the annual tax revenues. And I would say that on that basis you are looking at something like potentially $20 billion just in the software industry. And we have colleagues here—we all feel a part of the community, which is the IP industry or industries—and you put us together, you are looking at $20 to $22 billion today. So I suppose you could be looking at $40–$50 billion. I do not have a precise estimate at this time for the revenue before the end of this decade.

Senator BOXER. Bit it is possible if we do nothing—and by that, Senator Allen, I am not saying government, I am saying we, Americans do not do something about protecting this property, we could be looking at annual losses to business in the range maybe of $40–60 billion—that is not an exaggeration, altogether. And you said 175,000 jobs. Was that just in software?

Mr. RAIKES. Just in the software industry.

Senator BOXER. So if you add on others, you are looking at a hefty loss of jobs. If we were threatened in some other way, we would move on this. This is huge. This is a lot of families that are going to not realize their potential. The jobs won't be available, or they will loss the job. So I think we are talking about jobs in this century.

We're talking about wealth creation. And we are frankly talking about revenues to this government to keep paying for the programs, the things that we all believe in, whether it is education or others. So we need to address this. And one of the great things about Senator Biden is he sits as the chair here, and he is the senior member on Judiciary, and so this is a wonderful, I think, opportunity to see us match our domestic laws and our foreign policy.

I just hope that we are going to do something, because thievery is thievery, and there are laws against thievery. I mean, I know, Senator, you support those laws and penalties. Now, we have to look to you to set the standard. That I agree with. I do not have a problem with that. But we are going to have to have to be tough and strong and come behind that, it seems to me, just as we would if somebody was stealing a bicycle or a car or anything else.

Let me just close by saying that every time I am subjected to this presentation, which I do voluntarily, it makes me get more and more upset, because we are really not doing anything about it, Mr. Chairman. And it is going to be like other things we have happen

in this country where we are told about something and we do not act.

We are coming to the point where we have to do something. I would like to be kept informed, as a member of this committee, on how these negotiations are going. I would offer my offices, and I am sure other colleagues would. If we can help bring the parties together in any fashion, I am happy to do so. I know that colleagues on both sides would be willing to do that because I think Senator Allen is right. You need to have all the stakeholders in the room. You have to cut to the chase. And a lot of us are pretty good at doing that because we have to be, because we write legislation, and it is hard to get it enacted. We know how to make it happen.

But I just want to say, again, thank you for this. I think this is a wake-up call and I thank you, Mr. Chairman and Senator Allen, for this. With all the problem we have in this problems we have in this country today—God knows, we have so many—and we have had to divert attention to those issues, and we will have to for a long time. We can't forget this, because if you really strip it all away, these industries are what is putting us—keeping us in economic leadership in the world.

How tragic it would be if, through foolishness, and because maybe we are just too occupied, that we just let this slip by, and then suddenly we do not have the great music and the movies—we know they are not all perfect, but many of them are great. We want to see them happen. We want to see the leadership in software—we want to retain our leadership.

And so I just say, Mr. Chairman, I want to work with you. If you consider legislation, I would like to be part of that. If you want to work and help get these groups together, I want to be part of that. My state—this is key to my state. You've come to my state a lot. So have all of you.

You know how crucial it is to my state. So I stand ready, willing, and able to help. But we just can't have this and say, "Well, we did our thing." We must follow through. And I pledge I will do that, working with my Chairman.

Mr. LOWENSTEIN. Senator, may I make a modest suggestion, just a very modest one and very brief.

The CHAIRMAN. Modesty is not required in this chamber. [Laughter.]

Mr. LOWENSTEIN. We have a very serious culture of disrespect in this country for intellectual property, and it is getting worse. The Napster situation really fed it. It is also in existence overseas. We probably have lost the generation of kids between over 16 years old, in terms of using services like that. They know it is wrong. They do not care. We do need to do something, from an educational standpoint, in this country, and maybe it is something that everybody can rally around.

Perhaps there is a role for the Department of Education. Jack has talked about this over the years. Hilary has. We need to do something to get at young kids today and create a culture of respect for intellectual property, because otherwise we are going to have another whole generation grow who do not care that it is stealing. Just as you were saying earlier, Mr. Chairman, millions of Americans would not think of stealing a toothbrush who rou-

tinely steal works of art. And I think that may be something to work cooperatively on. I just wanted to share that with you.

The CHAIRMAN. Thank you. Senator Smith?

Senator SMITH. Thank you, Mr. Chairman. I often take the subway. And this city has the Red Line out to Bethesda where I live. And as you go down Union Station there is always a guy down there playing a trumpet. And he is actually very good. And occasionally, if I have got some change I will throw it in his case there. And I think, if what I am hearing what Senator Boxer is describing—is if we do not figure this out, all the artists are going to be like that guy blowing the trumpet.

That's what you are telling us, isn't it? I think kids actually would understand that, that they are not going to have anything if we do not figure out how to reinforce what came off Mount Sinai, that thou shalt not steal. Somehow, apparently, we have lost that ethic. But how do artists get paid, how do Microsoft employees get paid, if everything that you produce is quickly stolen?

Ms. ROSEN. I think that is, particularly in music, a very interesting point, because clearly artists are not going to stop making music. If an artist is compelled to create, they are going to create. I think the issue is, will we all lose the opportunity to maybe hear that artist? Because record companies certainly do not create artists. What we do is give them a chance to have their music developed, to produce their albums, to distribute their albums, to help them develop long-term careers so maybe they can be making music full-time and not doing something else.

Senator SMITH. They will have to go to Union Station to hear it.

Ms. ROSEN. I think nobody should mistake the need for addressing the issue by saying that art will stop. Art won't stop. It's our access to art that will be limited.

Senator SMITH. Is there something we could do in terms of—see, I like the fact that, Jack, you are having these meetings. But sometimes work expands to the time allotted for its completion. If there is no deadline, maybe there is no pressure on the competing industries. Would it be helpful if we set a deadline?

Ms. ROSEN. Yes.

Mr. VALENTI. The answer is absolutely. I am always reminded—I think in movie parables—I am always reminded of the scene in "The Godfather" where Al Pacino is telling his girlfriend about a certain fellow named Lucco Brazzi and how he got to be a friend of his father. He said that his father went to a fellow, and he wanted to get one of his proteges out of a contract, and so he had Lucco Brazzi put a .357 magnum to the guy's head and made him an offer he couldn't refuse.

In a strange way, I think, Senator Allen that might have said, you need some push. I think it would be very helpful if a group of important Senators, like yourself, would make it very clear to everybody that you need to sit down and work this out in private negotiations. And it may take a few months. It is not going to take a year or two, because if you do not have a deadline, you will have the tendency to dawdle and delay and relentlessly keep speaking without ever coming to a conclusion. I think there ought to be a deadline, I really do. Congress is the absolute last resort, as Senator Allen said. He's absolutely correct. You do not want the Con-

gress, with all due respect, messing around in something that they have only a cursory knowledge of, although some of these young people sitting against the wall may have a hell of a lot more than a cursory knowledge.

But I think it needs to be done with the Microsofts of the world, with the Dells and the Compaqs and the Hewlett-Packards and with the Intels and with the hardware manufacturers. And if we could just do that in an orderly way—now, Jeff Raikes says the CPWG, and I hate these acronyms, I never can remember what the hell they mean.

But there is this working group, it is going on now, but they are discussing one thing. As you know, Jeff, they are discussing the broadcast flag. What does that mean? Over-the-air television and televison programmers worry that television programs will be redistributed on the Internet and vitiate the worth of the television program. So they are trying to avoid redistribution on the Internet. And that is called a broadcast flag, and it is inserted in the computer. It's inserted in the program. And it says to the computer, you can't redistribute this. That is all it says.

Now, there is, and I can understand this, there is some reluctance on the part of computer makers. They do not want to have anybody telling them what to put in their computer. I understand that. But when you are nearing the precipice and you are about to fall off, you hope somebody might throw you a lifeline every now and then. And this is what we need.

Senator SMITH. Mr. Raikes, is there something that Microsoft has that is imminent, and if you were already asked that question, you do not need to reanswer it, but when I was at your campus six or so months ago, I was very impressed with what I was hearing that persuaded me that government shouldn't get involved, that the marketplace would solve this. And that is my strong preference.

But I am saying perhaps a date only in the sense that we are facilitating the private sector to solve this, because we will do it much less efficiently than you will.

Mr. RAIKES. Yeah, it is a very good question, Senator Smith. And again, we share the enthusiasm that Jack and others have, but there is, if I may just offer a little bit of a ray of sunshine. Today there are legitimate movies online that are being protected by our digital rights management technology. So there are examples today of digital rights management work that is working and it is effective. But again, we have to keep going.

The CHAIRMAN. Excuse me. Give me an example of a movie that, where that is the case. And if that is the case, why don't all movie manufacturers go to you to get that done?

Mr. RAIKES. Well, there is a site—I am actually not sure of it; in fact, maybe some of other people can help with me some of the movies—but it is called Intertainer, with an I, I-n-t-e-r-t-a-i-n-e-r, dot com, which is a site that exists today.

Now, I haven't had the opportunity to hear what the movie industry might think of that particular use of the digital rights management technology, and I can understand their desire to have even higher levels of security, because we do know that there are risks here. And so some people would suggest, for example, that

you need to add things, like unique identifiers in the hardware in order to try to improve the security schemes. Those are the kinds of good discussions that our industry has underway and needs to continue to have the dialogue on.

While not everybody—not every party in the industry would agree on what is the right strategy for balancing, sort of, consumer obtrusiveness with the desire to protect the content, or standards with the desire to encourage innovation—not everybody is going to agree. But the good news is there is some promise that has already been shown by some of the technologies that are in place. We've used this same technology in our e-book area, where today we are able to secure content of authors. And to my knowledge, that system has not had a system-wide crack where people are able to take a book and then just freely distribute it after cracking that digital rights management. So there are those indicators of progress. I think the movie industry, appropriately, is setting a very high bar. And that is why I think that having the dialogue is good. I think that the challenge with, say, setting a date is—the question becomes a date for what?

Because, again, we are going to have to continue to push the progress forward. And so, you know, what we will have to do is we will have to decide what kind of progress, additional progress needs to occur by what given time? But in no situation should any one of us, or any of you, view that we hit that date, we deliver on some technology, and our work is done. That'll never be the case.

Senator SMITH. Well, I want to say, I am loathe to set a date. I am anxious to be helpful, and I think that is what we are all saying, because we are even more loathe to lose all the economy that is represented in this hearing today. If your industries go in the tank because everything is stolen and none of your employees can be paid, I think that is the real thing that we loathe.

I know, Jeff, you go after a bunch of people stealing your stuff. When you get settlements, what happens to the money there? What do you do with it?

Mr. RAIKES. You know, that is a very important point, and I am glad you bring it up because in part because it brings us back to some of the immediate things that we can also be doing. Your support for funding U.S. Customs, the Intellectual Property Rights Coordination Center, has been extremely important. It led to, in November, an arrest by a cooperation of U.S. Customs, U.S. Secret Service, and the L.A. Sheriff's office made a $60 million bust in Los Angeles—counterfeit software, certificates of authenticity. And that was an 18-month investigation.

So just to kind of give you a sense of some of the immediate things that we can be doing today and that you are supporting. And we hope, as I mentioned, with the anti-tampering action, we hope for continued support. There is progress. What we do is, we look at whatever recoveries we get from either, well, in particular from a civil actions that can occur from busting software pirates. We look at that as an opportunity to reinvest.

We are going to invest approximately $25 million back into these communities to close the digital divide. We look at this as an opportunity, these recoveries as a way to give back to the communities. We also reinvest in our support for the actions of govern-

ment and law enforcement agencies here in the United States and around the world because a big part of this is to be able to take the leads, identify the possible criminal activities that are underway and then work cooperatively in partnership with government in order to do that. So our approach, in terms of the recoveries, is to do both of those elements—give back to the communities, help close the digital divide, and to reinvest in the work that does help to keep this part of our economy vibrant.

Senator SMITH. Mr. Chairman, I know my time is up. I would suggest including in the record an editorial that was in the Washington Post by woman named Roslyn Maser about—and it is entitled "From T-shirts to Terrorism," and she makes an incredible case that piracy of these trademarks is one of the sources of revenue for Mr. Bin Laden. So it is even beyond just stealing for money; it is stealing for terrorism.

[The editorial referred to follows:]

[From the Washington Post, Sept. 30, 2001]

FROM T-SHIRTS TO TERRORISM; THAT FAKE NIKE SWOOSH MAY BE HELPING TO FUND BIN LADEN'S NETWORK

(By Roslyn A. Mazer)

It was sickening to learn that one of the World Trade Center hijackers had booked his deadly flight as an airline frequent flyer, turning a benevolent perk of our free, mobile society to such malevolent use. But we could be in for more appalling news of the ways in which terrorists turn the fruits of our economic powerhouses against us: It's highly likely that some of the funds used to finance terrorist networks are being derived from the sale of products ripping off iconic American companies, such as Microsoft or Nike.

President Bush took the first important steps last week to freeze the assets of organizations known to be financial supporters of Osama bin Laden and the al Qaeda network. But even more concerted action will be necessary to seal off the financial pipelines that nourish terrorists' activities. Recent developments suggest that many of the governments suspected of supporting al Qaeda are also promoting, being corrupted by, or at the very least ignoring highly lucrative trafficking in counterfeit and pirated products capable of generating huge money flows to terrorists and other organized criminal groups.

While serving in the Criminal Division at the Department of Justice from 1998 to 2001, I helped catalogue disturbing trends in this area. With cooperation from our copyright and trademark industries—the producers of software, music, film, books, apparel, pharmaceuticals and other highly sought-after American products—we documented the links between intellectual property (IP) crimes and the even more nefarious crimes they pay for. We found that the post-Cold War landscape of open borders has combined with the anonymity and speed of the Internet, as well as modern telecommunications and the lure of huge, risk-free profits, to give rise to some startling developments:

According to 1995 testimony before the Senate Judiciary Committee, New York's Joint Terrorist Task Force had reason to believe that high-level players who controlled a counterfeit T-shirt ring were using the proceeds to support terrorist groups such as the one that bombed the World Trade Center in 1993.

Last year, in the notorious piracy haven of Ciudad del Este, Paraguay, Ali Khalil Mehri, a naturalized Paraguayan citizen born in Lebanon, was charged with selling millions of dollars of counterfeit software, the proceeds from which he allegedly funneled to the militant Islamic group Hezbollah in Lebanon. He fled to Paris. FBI agents and their counterparts from several countries are now pursuing rumored links between groups within the city's 12,000-member Arab community and the Sept. 11 attacks.

Last December, several news organizations reported that trademark pirates based in Pakistan were filling orders from Afghanistan to produce T-shirts bearing counterfeit Nike logos and glorifying bin Laden as "The great mujahid (holy warrior) of Islam."

In April, Microsoft officials based in London alleged that counterfeiters were using the Internet to sell pirated software, and that some of the same criminals were using the proceeds to fund terrorism and drug running.

In 1999, an International Chamber of Commerce official cited "compelling evidence of the involvement of organized crime and terror groups" in commercial-scale piracy and counterfeiting, including accounts that the Irish Republican Army was financing its activities with pirated videos such as "The Lion King."

Losses at the hands of the far-flung criminal organizations that produce high-quality fakes cost U.S.-based copyright industries $20 billion to $22 billion in 2000, and cost the country in lost jobs, sales taxes and customs duties. Rivers of fakes are flooding Asia, the Middle East, China, Russia and India, as well as Pakistan, Egypt, Kazakhstan and Uzbekistan—countries believed to be harboring cells supporting al Qaeda and other terrorist groups. Eight of 10 countries identified by a trade group as having the highest business software piracy rates in the world—Pakistan, China, Indonesia, Ukraine, Russia, Lebanon, Qatar and Bahrain—have links to at Qaeda.

Eyeing the lucrative music market in Latin America, the music industry reports that organized syndicates are moving pirated optical-media products (CDs, DVDs, CD–ROMs) from Thailand, Malaysia and the Philippines to Brazil through Paraguay. The industry, which estimates that piracy cost it $4.2 billion worldwide last year, has documented links between commercial-scale piracy and organized criminal activity.

The Internet, itself a key communications tool for terrorists, also facilitates high-volume piracy, with up to $11 billion in pirated software products sluicing through computer networks worldwide last year. McAfee, the Internet security services provider, warns parents on its kids Web site that organized crime "is very involved in Internet piracy."

In the wake of the latest terrorist attacks, policy-makers are understandably focusing on the catastrophic losses to the nation's airline industry, which directly or indirectly contributed about 10 percent of the nation's gross domestic product in 2000. But consider this: The Commerce Department reports that the copyright industries generated more foreign sales and exports than the aircraft and aircraft parts industry; indeed, they generated more foreign sales than the automobile, automobile parts and agriculture sectors combined.

With the stakes so high, the 20th-century paradigm of thugs using the rackets to finance drugs and other contraband has shifted in the 21st century to include our prized exports: the cultural products noted above as well as shoddy knockoff products that endanger public health and safety, such as airplane parts and brake pads, drugs and baby formula.

As the ingenuity and productivity of our knowledge-based industries soared throughout the 1980s and 1990s, reports of large-scale counterfeiting and piracy generated growing concern on the part of industry. At first, law enforcement officials were dismissive, if not hostile to the challenge, arguing that software giants like Microsoft could use their private armies to shut down the counterfeiters, or that counterfeiting is a "victimless crime" that permits low-end consumers to purchase cheap, but adequate, goods.

Criminals were poised to exploit this period of neglect. The result: "[A] fully fledged criminal activity . . . not peripheral to other criminal activities but at the very heart of them," according to Interpol's former secretary general, R.E. Kendall.

U.S. law enforcement is only now trying to overcome the historic bias against IP crime and is playing catch-up. Since July 1999, investigators at the FBI and Customs Service have joined with Federal prosecutors in elevating IP crimes to a higher priority in regions with a high incidence of such crimes (including New York and New Jersey, Silicone Valley, Boston and other metropolitan areas) and the resources to combat them.

In February 2000, the FBI and Customs Service launched the National Intellectual Property Rights Coordination Center, designed to be a central repository for collecting and disseminating information about serious IP crimes. And the United States is carrying the message abroad as well. As a champion of the World Trade Organization's Trade-Related Aspects of Intellectual Property (TRIPs) Agreement, the U.S. trade representative presses our trading partners, with the threat of sanctions, to have the basic laws on the books, to provide necessary law enforcement training and resources, and to encourage prosecutors willing to seek—and judges willing to impose—deterrent sentences on criminals who are caught and convicted. Last year, under the auspices of the G-8 nations, the United States hosted the first meeting of law enforcement experts to explore ways of sharing investigative information and cataloguing trends.

The convergence of our economic security and our national security became starkly apparent on Sept. 11. The staggering economic losses to America's copyright and trademark industries—alarming unto themselves—now are compounded by the opportunistic trafficking in IP products to finance terrorism and other organized criminal endeavors.

We can only dismantle the links between terrorists and their financing through robust intergovernmental cooperation in the U.S., pan-industry alliances, and coordinated investigative and intelligence-sharing networks with our allies. Like the military and civil defense, for which new strategies are already in the works, law enforcement and industry alliances must be upgraded, too, if one of the feeder lines of terrorism is to be cut off and the engines of our economic prosperity are to flourish.

Mr. RAIKES. Yeah. If I may add to Senator Smith's remarks, in her article she pointed out that a counterfeiter, exactly the kind of criminal enterprise that I was describing earlier, was shut down in Paraguay and the local authorities there believed that that was funding Hezbollah. She also indicated that the—in 1995, the New York Terrorist Division indicated that the people who attempted to bomb the World Trade Center in 1993 were funded by copyright violations and T-shirts, and that is where it came from, T-shirts to terrorism.

If you look at the highest software piracy rates in the world—the highest business software piracy rates in the world—eight of those ten countries are connected to Al Qaeda.

With all due respect to the comments about focusing in on digital rights management—very important initiative—but I would also want us to not lose sight of the fact that in addition to loss of jobs, in addition to loss of tax revenues, in addition to defrauding consumers, in effect here you have a double whammy. You have a situation where not only do we have all of those negative impacts, but we also then have the support for criminal enterprises in all of the types of activities they would undertake.

The vigilance for anti-tampering, for supporting U.S. Customs, those are all extremely important initiatives, as well as the cooperative efforts of the industry. And that is why we personally at Microsoft put such a huge investment in all of these areas, because it is all about protecting intellectual property and the vibrant economy that that is going to help to build.

Senator SMITH. Thank you.

The CHAIRMAN. Let me conclude by saying that—and asking one question of each of you, the same question. But speaking of the movies, Jack, there was the movie "Cool Hand Luke" where it was said, "what we have got here is a failure to communicate." One of the problems here is that when you talk about the loss of jobs, it doesn't compute to most people, because your industries are all growing.

So what you are doing is lost opportunity. And that never works to convince people that there is a problem. To say that—I will give you an example. Years ago, there was a Senator who headed up what was then called the Public Works Committee, Jennings Randolph. And Senator Randolph, from West Virginia, a wonderful old fellow, put me on the committee and gave me a subcommittee chairmanship because I had said I wanted to make it the environmental committee. And he did not like that idea at all.

So he put me on a committee, and he gave me a subcommittee on technology so I could hold hearings but couldn't write legisla-

tion, but I could make a recommendation. He assigned me the first topic, and he said he wanted me to write a report on whether or not we should phase out lead in gasoline. And a little company called the DuPont Company—that at that time to Delaware was what Microsoft is to Redmond, not the whole state—had invested tens of millions of dollars on a copyright for a lead trap that would trap the lead, retrofit it to every automobile in the world, with projected revenues of several billion dollars. And I got to write the report. I wrote the report truly thinking I was about to enter the second edition of "Profiles in Courage"—not with great glee, because I wrote a report after six months of hearings saying we should phase out lead in gasoline. Had DuPont already been selling that retrofitted item, they would have lost several billion dollars, and I would have lost the election. But because it was projected revenues that they were losing, the management of the company disliked me for a long time, but the average DuPont employee who didn't lose a job didn't feel compelled to go campaign against Joe Biden.

I cite that as a practical problem. It does not compute to people when we say we have lost 175,000 jobs. It doesn't compute to people when all these folks show up at the Emmys and the Oscars with gowns that cost more than what people make in a year—I am not criticizing it—to say these poor artists are losing their income.

It does not compute when Microsoft's profits continue to increase, which they should, at significant numbers, and people say, "Oy veh! Microsoft, poor Microsoft." And we have a problem, a communications problem.

That is, as Hilary, you point out. If you didn't pay a single artist on the come, if you asked them to pay you their entire life savings to be able to appear at a Hollywood Bowl, they would give it to you. They'd give you all they had just to get up on the stage before two, five, ten, twenty, or fifty thousand people.

We are at a real disadvantage here. We're at a real disadvantage, in terms of being able to generate the kind of enthusiasm to deal with what is a gigantic problem. The reason I am holding these hearings is to try to get attention on this item for people to understand, not what is at stake, but what opportunity costs there are out there. The opportunity costs are astounding. Astounding.

And I do not know quite how to get my hands around this, because one of the reasons why we have such situational ethics today is people are able to rationalize. They're able to rationalize, "I am not doing much. All I am doing is"—I do not believe any of this; I am just telling you what they say, "All I am doing is keeping Gates from having fifty zillion dollars. He'll only have forty zillion dollars. All I am doing is keeping some"—with a relatively conservative person—"some rap music punk from making $60 billion instead of $40 billion. This comes from people who wear suits like we do, and dress like we do, and would not steal so much as a toothbrush.

I am really at a loss here trying to figure out what to do. I do not suggest that this committee has the primary jurisdiction. I am not trying to grab the jurisdiction from Commerce or from Judiciary or whatever. I am not interested in that at all. What I want to do, and I would like you to think about, is if we can turn this into—this is an awful thing to say, but I am going to be completely

honest with you—if we can turn this into America versus the world, we may get a very different focus on it.

Excuse me for being a Johnsonian politician here, but the truth of the matter is if it is America versus what Americans are doing to your industries, nobody's shedding a tear. Nobody. Zero. None. They could care less. But if it is in the context of the rest of the world is doing something that damages the United States of America, we may be able to get some traction on this issue.

I am not looking for whipping boys; what I am trying to do is, to the extent that we internationalize this and make it and put it in stark relief as it relates to the foreign policy consequences of what we are doing, including Al Qaeda and anything else, it is a useful thing. You all are creative people.

Separate and apart from the issue of timetables, we need a fairly creative solution here, because what is gaining some currency are the apologists for why this is not bad—why this, in fact, generates creativity. You know the arguments, the arguments they actually have on those college campuses, among the brightest of the bright young women and men. There is some cachet out there for Lawrence Lessing.

There's some cachet out there. You know, it is sort of like your point, Jeff. You indicated that—or maybe it was you—I do not know. One of you said the hackers do this not for the money. They do it like Willy Sutton, "Why do you rob banks?" "That's where the money is." Why do they do this? "It's an intellectual challenge, man, and I am going to show you how to do it."

I do not know the answer. I do not want to claim—I am proud of the report my staff put together. But if you look at Page 39—and I mean this sincerely—about the best we could come up with, if we do everything that is suggested, I have to tell you honestly, as the guy who has literally been the author of every major crime bill since 1979, every single one, one thing I never did do on the crime stuff, Jack, is over-promise—never over-promised what it was going to do.

If we do everything that exists on Page 39, which is a compilation of most of the generally accepted notions of positive things we can do, we still have ourselves a communications problem, because someone else can be taking our communications, your communications, and making a lot of money off of it. And so I do not know whether it ultimately rests in what you all are wrestling with within the jurisdiction of the Commerce Committee about the manufacturers of the hardware and the producers of the artistic content—I do not know, but it seems to me that is where a lot of this lies in terms of its ultimate resolution.

I would like to ask you all one question, if you could be more brief than we have been, and that is if you had just one thing you could have us do—just one—you get to pick one—what one thing—and if it is a generic thing, do not bother taking the time, but if there is any one specific thing on a wish list that you could have, wave a wand, and it would happen as a consequence of a legislative initiative, you know, with the President signing onto it, what is it you think is the single-most important thing we could do at this point other than try to generically educate the public as to the extent and depth of the problem? Anybody?

Ms. ROSEN. Well, I was going to say I think the points that you made before were eloquent and accurate, and that is why it is so important to distinguish the issue of physical piracy globally from this Internet piracy that so vexes the future opportunities. My industry, for one, happens to be losing money, not growing these days, and so we are particularly conscious of the distinction.

So for American music's growth, historically, has been overseas, not in the U.S. market. U.S. market, we have been growing single digits for ten years. Internationally, we have been growing significantly more than that. So the most dramatic thing you could do as the Foreign Relations Committee for our industry is to condition all international loans of the IMF and the World Bank on piracy enforcement.

The CHAIRMAN. That's the kind of thing I am asking about. Is there a distinction made between when based on your discussions with counterparts and officials from other countries, is there a distinction made between those products that have a copyrighted proprietary interest that relate to the physical well-being of people in their country and those products that relate to the psychic remuneration they get from engaging in using them—i.e. the difference between patented medicine for AIDS versus, you know, a copyright on, you know, Billy Joel's music?

Ms. ROSEN. I think the answer is no, because the consumer doesn't care if they are listening to a digital pirated copy or a digital legitimate copy of a song. Globally the issue is U.S. economic pressure on our trading partners. That is clearly the number one thing that can make a difference for us on a physical piracy basis. The Internet piracy issue, I agree with everything you said. It's so consumer based, it is so connected with other emerging technology industries, it is a much more vexing problem.

The CHAIRMAN. Doug?

Mr. LOWENSTEIN. This is vague, but the notion would be to find a way either to bring our law enforcement resources together with international law enforcement resources to go after the international crime syndicates in a way that has to happen. And I do not know whether that requires a law. Maybe it does. But ultimately that is the source of most of the hard-goods piracy we see, and they are implicated in the Internet piracy. And foreign governments lack the will and often the resources to attack the problem. And so I would suggest we find a way to facilitate that.

The CHAIRMAN. Jack?

Mr. VALENTI. Three quick things. One is, I think to encourage all the various parties in this intellectual property community to sit down and work this out privately, it can be done, with a set of standards on which Microsoft and others could build their own proprietary additions.

No. 2 is to make sure particularly this committee will not entertain any kind of a treaty where that country is indulging in discriminatory actions toward the United States. I would bring up Korea, Mr. Chairman, I have talked to you about, where we have a screen quota there that is abysmal, and yet they are trying to get a bilateral treaty with the United States. That should not happen until these discriminatory obstacles are wiped out before we sign—before you entertain it.

Third, I think Doug has a good point, and that is to make sure that we are dealing with—that the punishment fits the crime. Most of these countries in the world have a flimsy, slenderized Jenny Craig type national will to deal with piracy, nor the resolve to enforce the kind of punishment there ought to be.

The CHAIRMAN. Jeff?

Mr. RAIKES. The issue at hand is huge. You said it yourself. You drew the analogy to what would happen to the monetary system if $20 billion got sucked out of it? And so in terms of one thing, it is difficult to point to just one thing, but if there is one thing, it is resources.

You have done things that have been incredibly helpful, incredibly effective. It's resources—resources for U.S. Customs, support for the Department of Justice in this area, support for people like John Gordon, the resources that do into negotiating these trade agreements to put pressure on our partners, the resources that go into helping educate our society, our culture, about respect for intellectual property law. I am sorry it is not maybe as tangible, but I can point to the tangible use of resources and actually applaud you, your colleagues, for the impact that it has had.

I think it is very important to remember that with something you said, American intellectual property is immensely valuable, perhaps our most valuable resource. If it is that important to our country, then we have to make sure that we put in the resources in each of those areas to ensure success.

The CHAIRMAN. Quite frankly, not to in any way disparage the other recommendations, I think that is the single-most important thing. I had to struggle to get five million bucks put in to add the resource base for the U.S. Attorney's offices to train and to have people focus on this area, five million bucks.

We should—if this were a problem that related to bank robberies, I would have no problem convincing the Congress for half a billion dollar increase in the FBI's budget or in the number of prosecutors. But that is just one piece.

I truly appreciate the fact you have all given us your time. I must tell you, I do not know—I do not think there is a single answer. I do not know what it is. But I know one thing. We cannot stop trying to—notwithstanding the fact that mole is in the hole and we know he is going to pop up, we can't fail to continue to hit the sucker. So long. We're finished.

[Whereupon, at 5:30 p.m., the committee was adjourned.]

RESPONSES TO ADDITIONAL QUESTION SUBMITTED FOR THE RECORD BY THE COMMITTEE TO PETER F. ALLGEIER, DEPUTY U.S. TRADE REPRESENTATIVE

QUESTIONS SUBMITTED BY SENATOR HELMS

Question. Mr. Allgeier, I understand that U.S. proposals for Free Trade Agreements (FTAs) with Singapore and Chile include provisions that would substantially improve the standards of copyright protection in international trade agreements. I also understand that Chile, for example, is contemplating broad "cultural" carve-outs, which means that films, books, and music could be left unprotected. Can you give us a sense of what progress has been made to date on these issues in the FTAs to ensure that these agreements are beneficial ones?

Answer. We met with Chile last month, and we indicated to Chile that any such "cultural carve-out" is unacceptable. We have also made very clear to our partners

that we are seeking higher levels of protection for intellectual property rights, and that an FTA without these higher standards is not in our national interests.

Question. Because Intellectual Property (IP) protection isn't worth much unless we have access to a market to sell our products, what progress are you making in countries like Korea, which has unacceptable high quotas on the number of American movies that can be shown in their cinemas?

Answer. Removing or reducing Korea's film quotas is a major priority in our bilateral trade relationship. This issue was raised most recently in January, 2002 when Deputy USTR Huntsman met with his Korean counterpart. One clear point of leverage is in ongoing negotiations with Korea over a bilateral investment treaty, which has been a priority for Korea. In this negotiation we are insisting that Korea commit to reduce these quotas.

Question. How successful has the effort been to reduce piracy within foreign governments? Have other governments agreed to use only legitimate copies of U.S. software products and restrict improper copying within their governments?

Answer. As you know, in October 1998, the President of the United States issued a new Executive Order directing U.S. Government agencies to maintain appropriate, effective procedures to ensure legitimate use of software. In this decree, the President directed USTR to undertake an initiative to work with other governments, particularly those in need of modernizing their software managements systems or about which concerns have been expressed, regarding inappropriate government use of illegal software.

The United States has achieved considerable progress under this initiative since October of 1998. Nineteen countries so far have issued decrees mandating the use of only authorized software by government ministries. These include: China, Chile, Colombia, France, Greece, Ireland, Israel, Jordan, Hungary, Hong Kong, Lebanon, Macau, Paraguay, the Philippines, Singapore, Spain, Taiwan, Thailand and the United Kingdom.

Question. What efforts have been made to encourage more countries to ratify the WIPO copyright treaties? Why has it taken over three years for the WIPO Treaties to enter into force? Why have the European countries not yet ratified?

Answer. USTR is pursuing this goal in several ways in the trade arena. One manner in which we are pursuing this goal is by seeking to incorporate the standards of the WIPO Treaties as substantive obligations of our FTAs. We achieved this result in the Jordan FTA. The success of incorporating these standards in the Jordan FTA has laid the foundation for pursuing this goal in the free trade agreements we currently have under negotiation with Chile and Singapore as well as the Free Trade Area of the Americas (FTAA), and other FTAs yet to be launched.

We are also pursuing this objective through negotiations with governments seeking to join the World Trade Organization. In accession negotiations with Albania and Croatia, for example, USTR obtained formal commitments from these governments to ratify the WIPO Copyright Treaties as a part of their protocol of accession.

As for why it has taken over three years for the Treaties to enter into force, there are two reasons. First, it requires 30 countries to ratify each treaty before they come into force. Second, these are complicated treaties dealing with high tech issues. I believe our own legislation, the Digital Millennium Copyright Act (DMCA) (Pub. L. No. 105–304, 112 Stat. 2860), took substantial time to draft and enact.

As for the EU, all 15 Members States must ratify, and that process is not yet complete.

Question. Mr. Gordon, let me ask you a related question about "valuation" in prosecuting IP crimes—especially in pre-release cases or cases where the infringed-upon work is not commercially available to the public at retail—like when the movie is still in the theater. In order to be a felony, copyright law requires the prosecutor both to find 10 or more copies of the illegally obtained film and to prove that the total retail value of those copies is more than $2500. I am told that in many U.S. Attorney's offices, they will not even consider bringing a case unless there is at least $40,000 in harm. Now, this sort of threshold is extremely difficult to meet particularly when you don't have possession of the criminal's computer to know how many downloads there have been of a particular film, or when the movie is still in the theaters so that the $19 average retail price of a DVD grossly underestimates the actual harm to the copyright owner. Do you have any thoughts about how we better solve the "valuation" issue for film piracy? And, if not, would you be willing to work with me and this Committee to help solve the problem?

Answer. Valuation is a crucial determination in any intellectual property prosecution. It significantly affects not only the preliminary decision whether to open an

investigation or the ultimate decision whether to bring a criminal prosecution, but also the sentence the defendant will receive after conviction. We realize that, particularly in intellectual property cases, it is impossible to determine an accurate loss figure at the outset of an investigation, and that the amount of loss alone may not adequately describe the severity of the crime. It is the policy of the U.S. Attorney's Office in the Central District of California to evaluate intellectual property cases on a case-by-case basis and to work diligently to bring appropriate cases for prosecution. The Computer Crime and Intellectual Property Section at the Department of Justice has encouraged United States Attorneys nationwide to adopt a similar approach in these cases.

Determining a proper valuation for pre-release movies is a particularly complex issue. It has been, and will continue to be, the Department's goal to work closely with the motion picture industry and other copyright industries to understand the true amount of loss associated with piracy, recognizing, of course, that the amount of loss in a particular case is ultimately determined by the sentencing court. We look forward to working with you and other concerned Members of this Committee and the Congress on this important issue.

Question. What other areas of inter-agency coordination need to be improved to better enforce intellectual property?

Answer. The U.S. Attorney's Office in the Central District of California has prosecuted intellectual property offenses in cases investigated by the FBI and the U.S. Customs Service. Based on that experience, law enforcement does work effectively together in prosecuting criminal IP cases in Southern California. As mentioned in our written testimony, the Department is also working in a number of other areas, on an interagency basis, to improve the overall enforcement of intellectual property rights. We will continue to work with our colleagues in other agencies to improve the coordination of international training efforts, particularly in regard to specific criminal enforcement issues. It is essential that our training resources are used effectively. We will also continue to identify opportunities for the United States to work with foreign countries to enhance investigative cooperation, to promote the development of effective IP enforcement regimes, and to share information on trends in intellectual property crimes that will strengthen the ability of law enforcement worldwide to combat these crimes.

Question. What channels are used for the importation of pirated or counterfeit articles into the United States?

Answer. Although pirated and counterfeit articles are circulated in markets abroad in direct competition with the legitimate products of U.S. firms, counterfeiters and pirates continue to attempt to import such goods into the United States through all the channels available to otherwise legal commerce, such as airports, seaports, mail facilities, land borders and other locations where foreign imports are received. In addition, the Internet has opened up vast new opportunities for criminal enterprises which engage in counterfeiting and piracy. With a few simple keystrokes from a computer anywhere in the world, criminals can ship counterfeit trademarked goods, traffic pirated music, or download copyrighted software.

Question. Is there any commonality with those channels used for the smuggling of drugs or currency?

Answer. While there is a commonality between channels used for smuggling drugs or currency and those used for importing pirated and counterfeit articles, the Internet has become a medium particularly well suited for IPR crimes, especially copyright piracy. As globalization has enabled organized crime groups to diversify their criminal activities, these groups have become major players in all types of IPR crime.

QUESTIONS SUBMITTED BY SENATOR DODD

Question. The Office of the United States Representative has long been a champion for the protection of U.S. intellectual property rights abroad. Yet in United States Section 211 Omnibus Appropriations Act (WT/DS 176), your office expounded arguments that led a WTO panel to interpret the TRIPs Agreement and the Paris Convention for the Protection of Industrial Property in a restrictive manner that threatens to make it more difficult for U.S. nationals to protect and enforce their intellectual property rights abroad.

Please explain how the USTR reconciles its policy of promoting effective intellectual property standards with its legal arguments in favor of limiting the scope of TRIPs and the Paris Convention.

How does narrowing international obligations to protect intellectual property serve U.S. interests?

Answer. USTR and other USG agencies have a firm and long-standing commitment to protecting U.S. intellectual property rights. We have been pressing our trading partners for years to implement the provisions of the TRIPs Agreement, which we negotiated to protect U.S. intellectual property rights abroad. This commitment continues. In its challenge to section 211, which the U.S. Congress passed in 1998, the EU contended that the United States was powerless under the TRIPs Agreement and the Paris Convention to question the ownership in the United States of trademarks registered—or sought to be registered—in the United States. This interpretation of the TRIPs Agreement would have rendered fundamental aspects of U.S. trademark law—and not just section 211—inconsistent with the TRIPs Agreement, because, under U.S. law, trademark registration is not conclusive of ownership, and not everyone seeking to register a trademark is its owner. Notably, in contrast to the EU "registration-based" system of trademark protection, trademark ownership in the United States is based on use of the trademark. For this reason, the United States argued, and the panel and Appellate Body agreed, that the TRIPs Agreement and the Paris Convention did not mandate that anyone who registers a trademark be considered the owner of that trademark, and indeed did not impose exhaustive mandatory trademark ownership criteria on WTO Members. We do not consider this to be a restrictive interpretation of the TRIPs Agreement or the Paris Convention, but the correct one—and the WTO panel, WTO Appellate Body, and World Intellectual Property Organization secretariat (which administers the Paris Convention) agreed. Nor is there any indication that the TRIPs Agreement, interpreted correctly in a manner that accommodates U.S. trademark law, threatens the ability of U.S. nationals to protect and enforce their rights abroad. Therefore, we do not see any inconsistency between this view of the TRIPs Agreement obligations and our long-standing and firmly held policy of promoting effective intellectual property rules. To the contrary, interpreting the TRIPs Agreement and the Paris Convention in a manner that accommodates U.S. trademark law, as was intended by U.S. negotiators, does serve U.S. interests.

Question. The panel agreed with U.S. arguments at paragraphs 4.26, 4.27, and 4.28 that WTO members are free to deny registration and protection of exclusive rights in trademarks on grounds other than those provided in the TRIPs Agreement and the Paris Convention. In doing so, the panel acknowledged that arbitrary treatment and abuse could arise from such measures.

How does the USTR plan to curtail the arbitrary treatment or abuse that could occur from the use of this exception?

How does it serve the interests of the United States to exploit loopholes in the TRIPs obligations to protect intellectual property?

Answer. Both the TRIPs Agreement and the Paris Convention contain numerous provisions designed to prevent arbitrary treatment and abuse with respect to intellectual property rights, among them that nationals of other WTO Members cannot be treated worse than one's own nationals ("national treatment") and that nationals of WTO Members cannot be treated worse than other nationals ("most favored nation treatment"). In addition, the TRIPs Agreement contains obligations with respect to fair and equitable procedures aimed at guarding against abuse and arbitrary treatment. USTR intends to ensure that its trading partners comply with these obligations to guard against any abuse or arbitrary treatment. Further, we do not believe that the provision of the TRIPs Agreement referenced in the question—Article 15—contains "exceptions" or "loopholes." This provision prohibits Members from denying trademark registrations based on certain enumerated grounds. It expressly does not limit the right of Members to deny trademark registrations on other grounds (unless those other grounds are prohibited elsewhere).

Question. At the urging of the United States, the panel adopted a very narrow interpretation of the longstanding Paris Convention obligation to protect trademarks duly registered in the country of origin. According to the panel at paragraphs 4.44 through 4.48, the U.S. argued that this obligation is limited to instances in which a trademark registered in one WTO member might not otherwise be registrable in another member because of its form, e.g. because it is in a foreign language or comprises numbers or proper names. The U.S. also argued that nothing therein prevents a WTO member from applying other provisions of their domestic law to trademark applications.

Because such a narrow obligation would only apply to a small number of trademarks, on what provision of TRIPs do U.S. nationals rely in registering the vast majority of their trademarks in other countries?

Doesn't the panel ruling leave each WTO member complete freedom on determining who is entitled to trademark protection? What safeguards are there to prevent other countries from making trademark registration conditional upon criteria other than a U.S. trademark registration, such as use in the territory prior, to registration or approval by foreign regulators? How could national treatment be an adequate safeguard if these requirements also apply to the trading partner's own nationals? What would be the effect of such national criteria on registration abroad of trademarks owned by U.S. nationals?

Answer. As discussed above, the TRIPs Agreement and the Paris Convention contain numerous provisions with respect to the protection of trademarks, which would apply to U.S. nationals registering trademarks abroad. For instance, Article 15.3 of the TRIPs Agreement provides that "[m]embers may make registrability depend on use. However, actual use of a trademark shall not be a condition for filing an application for registration." Whether other requirements of foreign regulators are consistent with the TRIPs Agreement would depend on the requirements. In particular, as your question notes below, the principle of national treatment has operated for years to protect U.S. intellectual property right holders against discrimination, which is a bedrock principle of both the TRIPs Agreement and the Paris Convention and which offers substantial protections to U.S. intellectual property rights holders. Finally, we do not believe this is a narrow interpretation of the TRIPs Agreement obligations, but the correct one. As noted above, the interpretation adopted by the WTO panel and Appellate Body was also shared by the secretariat of the World Intellectual Property Organization, the body that administers the Paris Convention. This interpretation is based on a thorough analysis of the agreements, and accurately reflects that these agreements were intended by U.S. negotiators to accommodate fundamental elements of U.S. trademark law.

Question. The panel predicated its decision on representations by the United States that Section 211 is subject to an abandonment defense. This understanding, however, contrasts with decisions by both a U.S. district court and a U.S. court of appeals that Section 211 is not subject to an abandonment defense.

If it is the Administration's position that the question of whether a trademark was abandoned is relevant under Section 211, what steps is the Administration prepared to take to effectuate this interpretation? Does the court finding require a legislative change to Section 211 to correct its misinterpretation of the statute?

Answer. There is no finding of the WTO panel or the Appellate Body suggesting the need for an amendment of section 211 relating to "abandonment." Both the panel and the Appellate Body were aware of the judicial decisions in the United States concerning section 211, and made no findings concerning these decisions or their interpretation of section 211.

Question. Although a spokesman for the U.S. told reporters that the U.S. won the Section 211 case, it appears that the real losers in the long run will be U.S. intellectual property owners, whose ability to protect and enforce their rights will be constricted by the prevailing U.S. argument.

What are you prepared to do to ensure that U.S. intellectual property rights are not undermined by the Section 211 decision? What steps will USTR take to ensure that established U.S. public policy does not again become a victim of zealous advocacy?

Answer. As discussed above, both the TRIPs Agreement and the Paris Convention offer significant protections to U.S. intellectual property right holders, which are unaffected by the section 211 decision. USTR has for years been a champion of international intellectual property right protections, and U.S. positions in the section 211 dispute were aimed at both supporting these protections and defending the statute passed by Congress, based on correct readings of U.S. international obligations. As it has consistently in the past, USTR intends vigorously to enforce the rights of U.S. intellectual property right holders abroad under the TRIPs Agreement and to urge those Members not in compliance with the TRIPs Agreement to come into compliance.

Question. The Appellate Body concluded that key provisions of Section 211 violate two fundamental principles of WTO rules—national treatment and most-favored-nation (MFN) treatment.

For over 100 years, these principles have obligated our trading partners to protect U.S. trademark and trade name holders from discrimination abroad. The Appellate Body found, however, that Section 211 violated these longstanding U.S. obligations by imposing obstacles on foreign intellectual property right holders that do not exist for U.S. and other nationals and recommended that the United States bring its laws into conformity with its obligations under TRIPs.

Wouldn't the repeal of Section 211 in its entirety bring the U.S. back into compliance with its obligations under the TRIPs Agreement?

Answer. As the question notes, certain aspects of section 211 were found to be inconsistent with the TRIPs Agreement, but other significant aspects were not. Repeal of section 211 would of course eliminate those aspects found inconsistent, but would also eliminate aspects not found inconsistent.

Question. Section 211 calls into question the United States commitment to providing strong intellectual property protections and undermines efforts to encourage our trading partners to adopt similar protections for American intellectual property abroad. Given the potential damage to the foreign policy of the United States and the threat of possible retaliation against U.S. interests if the U.S. does not comply, wouldn't repeal of Section 211 in its entirety be preferable to any effort to merely revise Section 211?

Answer. USTR and other interested agencies are currently considering options for implementing the recommendations and rulings of the WTO Dispute Settlement Body, and will consult with Congress as to the best manner of doing so.

APPENDIX

Theft of American Intellectual Property: Fighting Crime Abroad and at Home

A Report From Senator Joseph R. Biden, Jr.

EXECUTIVE SUMMARY

American innovation—and the protection of that innovation by the government—has been a critical component of American economic growth throughout our history. The Founding Fathers had the foresight to provide for protection of intellectual property, giving Congress the power to "promote the progress of science and useful arts" by providing copyrights and patents. According to at least one source, American intellectual property represents the largest single sector of the American economy, employing 4.3 million Americans. Yet, the theft of American intellectual property, through piracy and counterfeiting, has cost American jobs numbering in the hundreds of thousands and has cost the U.S. government tax revenues and U.S. corporations billions of dollars. Piracy rates (the percentage of copies of an item that are illicit) exceed 80% in a number of countries.

Theft of intellectual property is increasing and accelerating as the medium through which companies transmit software, movies, books, music and other forms of intellectual property evolves. As the medium move from analog (audio and video cassettes) to digital (CDs, DVDs) to cybermedia (Internet downloading), the ease of piracy and counterfeiting, and the quality of the product offered, continually improves. With the advent of CDs and DVDs, a sound or video recording no longer deteriorates with each successive copy; the 100th copy is identical to the original. With the advent of the Internet, and particularly the arrival of broadband, an individual can download a full-length feature movie in less than 15 minutes, without ever stepping out the front door. As a result, it is becoming ever more difficult to fight this crime.

It is important to bear in mind that lax enforcement of intellectual property rights in a particular country does not merely harm our interests. In the long run, it harms the interests of those developing countries, because it will preclude the development of their creative industries.

Unfortunately, once a country enacts the requisite laws, summons the adequate will, and provides the necessary resources to combat piracy and counterfeiting, the criminals who profit from stealing intellectual property often simply change venue. Combating intellectual property theft is like squeezing a balloon: when you apply pressure in one area, the air inside simply adjusts and moves elsewhere. Thus, to crack down effectively, we cannot merely focus on a few egregious countries.

Federal laws have long proscribed the intentional infringement of intellectual property, including criminal and civil statutes aimed at protecting copyrights and trademarks. Congress has responded to the particular challenges posed by new and emerging technologies by enacting legislation aimed at high tech piracy. These new statutes can be used to combat, for example, the illegal copying of software, music CDs, and movie DVDs, or the dissemination of decryption codes to "unlock" protected works. Responsibility for overseeing federal law enforcement falls to the Justice Department, which uses specialized units to assist federal prosecutors around the country in bringing suits against high tech pirates.

Much international law is just now coming into effect. The Agreement on Trade-Related Aspects of Intellectual Property, or "TRIPS," concluded during the 1990s, imposes upon World Trade Organization countries obligations to adequately enforce intellectual property rights. It also provides a mechanism for resolving disputes between countries. The World Intellectual Property Organization's Copyright Treaty

and Performances and Phonograms Treaty will also add to the arsenal of international legal instruments. The former will come into force next month, while it is expected that the latter will take effect by the end of the year.

Enforcement efforts have met with some success. The Justice Department has an entire section of its Criminal Division devoted to computer crimes and intellectual property. Other agencies are coordinating their diverse efforts at prosecuting criminals domestically, stopping the influx of illicit materials from overseas, and stopping the crime in foreign countries. This is being accomplished, among other things, through special prosecutorial units in United States Attorneys' Offices, trade negotiation tools such as Special 301, and training assistance to foreign countries.

While substantial domestic and international laws exist, proposals abound to improve the working of our intellectual property system both at home and abroad. At home, we can dedicate more funding to the fight against intellectual property theft, and better coordinate among federal agencies involved in the effort, as well as between federal and state authorities. Moreover, we can do a better job of making it clear to all Americans that the theft of intellectual property is a crime, and that it hurts us all.

Abroad, we can bring pressure to bear on countries that are recalcitrant in efforts to rein in piracy and counterfeiting; we can encourage the development of intellectual property laws and enforcement through targeted foreign aid for training and equipment; and we can prevail on all countries (including our own) to eliminate the use of illicit intellectual property within their own governments.

Billions of dollars are being stolen, hundreds of thousands of jobs lost. It is worth the effort to do all we can to stem the tide.

INTRODUCTION

The *New York Times* recently reported that illegal copies of "The Lord of the Rings," a film just recently released to movie theaters here in the United States, are already on sale on the streets of Jalalabad, Afghanistan.[1] Windows XP was available for illegal use on the streets of Moscow two months before it was released in the U.S. by Microsoft.[2] Every episode of "Seinfeld" is now available for download free to anyone with access to the Internet.[3] In September of 2001 alone, 1.5 billion songs were downloaded from Grokster.com, an Internet website that enables users to steal music.[4] Video games that would cost $50 each in the United States are sold for the equivalent of 75 cents on the streets of some Chinese cities.[5]

Everyday, thieve steal millions of dollars of American intellectual property from its rightful owners, and hundreds of thousands of American jobs are lost as a result.

American innovation—and the protection of that innovation by the government—has been a critical component of American economic growth throughout our history. The Founding Fathers had the foresight to provide for protection of intellectual property, giving Congress the power to "promote the progress of science and useful arts" by providing copyrights and patents.[6] The federal government's vigilance in shielding intellectual property rights remains essential: innovation would slow, businesses would suffer, and jobs would dissolve if technological advances were left unprotected. The American arts and entertainment industry could not survive without the ability to protect and earn income from its ideas. Would U2 continue to make records and go on tour if all of their records, videos, and fan paraphernalia were given out for free? Would the tens of thousands of Americans who staff their concerts and produce their CDs keep their jobs?

Copyrights and trademarks mean nothing if government authorities fail to enforce the protections they provide intellectual property owners. It has been estimated that software piracy alone cost the U.S. economy over 118,000 jobs and $5.7 billion in wage losses in the year 2000.[7] Even more, it estimated that the government loses a billion dollars in revenue to piracy each year.[8] To put that in perspective, with the $1 billion in lost revenue, the American government could pay for child care

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[1] Chivers, C.J. "Afghan City, Free of Taliban, Returns to Rule of the Thieves." *New York Times*. January 6, 2002.

[2] Judiciary Staff briefing with the Business Software Alliance, January 17, 2002.

[3] Judiciary Staff briefing with the Motion Picture Association of America, December 17, 2001.

[4] Judiciary Staff briefing with the Recording Industry Association of America, January 14, 2002.

[5] Lazarus, David. "Lazarus at Large." *The San Francisco Chronicle*. October 19, 2001.

[6] U.S. Constitution, Art. I, Sec. 8, cl. 8.

[7] Note that this does *not* include losses incurred in the entertainment industry.

[8] International Planning and Research Corporation study for the Business Software Alliance, "U.S. Software State Piracy Study." November 2001.

services for more than 100,000 children annually.[9] Alternatively, $1 billion could be used to fund a Senate proposal to assist schools with emergency school renovation and repair projects.[10]

This report aims to (1) highlight some of the problems that have emerged in America's continuing struggle to protect innovators from those who would steal their products, and (2) list some potential solutions for combating piracy at home and abroad.

If we intend to nurture growth and development, the government will have to take a long look at how best to approach the global technological marketplace, and address those who would take advantage of American innovation.

II. The Problem

When an American owns property, the government has a responsibility to protect that property from theft. When that property is an idea, it deserves our protection no less than if it were land, or a personal object. Who among us would want to expend the effort required to develop a new product if the government were not prepared to punish those who would steal it? If we want to protect American innovation, and by extension American jobs, we need to maintain a vigilant stand against what is commonly known as "intellectual property theft."

American intellectual property is an immensely valuable—perhaps our most valuable—resource. Not to protect it is equivalent to letting coal be stolen from our mines or water taken from our rivers. With that concern in mind, the American government has developed an infrastructure to protect Americans who rightfully own pieces of intellectual property.

Copyrights protect the authors of "original works of authorship," including literary, dramatic, musical, artistic, and certain other intellectual works.[11] Trademarks provide businesses with exclusive use of "any word, name, symbol, or device" to indicate the source of the goods and to distinguish them from the goods of others.[12]

Unfortunately, the integration of the global economy and emergence of the Internet have eroded some of the walls which protect intellectual property rights from thieves: some of our efforts to protect intellectual property at home have become outmoded, and certain nations around the world are not doing enough to combat the problem. Advances in digital media have made it tremendously easy to steal and reproduce a variety of media.

This report addresses two types of intellectual property theft: (1) "piracy" is the unlawful theft of a protected product;[13] and (2) counterfeiting, a type of piracy, is the unauthorized reproduction of a good, in an attempt to pass it off as the original.[14] If criminals reproduced a copy of Microsoft Windows and sold it, they would be committing an act of piracy. If, before selling the reproduction, they also reproduced the software's packaging so as to give the purchaser the false impression that they were buying a legitimate copy of Windows, they would also be guilty of counterfeiting.[15] Both types of crime represent an enormous threat to the software and entertainment industries. It is clearly the responsibility of governments around the world to protect intellectual property owners from those who would steal their goods.

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[9] Full-day child care costs between $4,000 and $10,000 per year. At $10,000 per year, $1 billion would pay for 100,000 children. Children's Defense Fund website: [*http://www.childrensdefense.org/cc_facts.htm*], citing 13 K. Schulman (2000), Issue Brief: The High Cost of Child Care Puts Quality Care Out of Reach for Many Families. Washington, DC: Children's Defense Fund. 14 U.S. Census Bureau (2000), Money Income in the United States: 1999 (Current Population Reports, P60–209), Washington, DC: U.S. Government Printing Office.

[10] The proposal was included in the Senate's Labor-HHS-Education Appropriations bill. Senate Report 107–84 to accompany S.1536, p. 262. However, it was cut from the final Conference Agreement, presumably due to budgetary issues. House Report, 107–342, p.123.

[11] 18 U.S.C. 102.

[12] *Koppers Co.* v. *Krupp-Koppers*, 517 F. Supp. 836, 840 (W.D. Pa. 1981); *see also* 15 U.S.C. 1127.

[13] Most items generated by the software and entertainment industries are protected by copyrights. Piracy is the violation of that protection.

[14] In the case of most items generated by the software and entertainment industries, product names are protected by "trademarks."

[15] Similarly, if a criminal copies a Madonna CD and sells it, without any attempt to make it appear like the original, he is violating Madonna's "copyright" protections, and committing an act of piracy. If a different criminal manufactures fake brake pads, places a "General Motors" insignia on them, and then sells the brakepads as if they were authentic, she would be violating General Motors" "trademark protections," and committing an act of counterfeiting.

Let me begin by illustrating the breadth and pervasiveness of intellectual property theft. The International Intellectual Property Alliance estimates that the world of intellectual property represents the largest single sector of the American economy, almost 5% of the nation's gross domestic product.[16] By comparison, defense spending occupies approximately 3% of U.S. GDP.[17] While I could provide an endless list of industries affected by piracy and counterfeiting around the world, this report will focus primarily on the following industries: computer software including business applications and entertainment software; motion pictures; television programs; DVDs and home videocassettes; music, records, CDs, and audiocassettes; and textbooks, tradebooks, reference and professional publications, and journals (in both electronic and print media).[18] What makes these industries particularly vulnerable is the degree to which their products can be stolen, reproduced, and distributed with ease through emerging technologies like the Internet, CD-Rs,[19] and DVDs.[20]

The Business Software Alliance estimates that "the market value of this stolen (or 'pirated') software alone was $11.75 billion" in 2000.[21] According to the International Intellectual Property Alliance, trade losses for five industries in 58 countries amount to almost $8 billion:

Estimated Trade Losses Due to Copyright Piracy in 58 Selected Countries in 2000 *

Industry	Estimated Revenue Losses
Motion Pictures	$1,242,500,000
Sound Recordings and Musical Compositions	1,835,600,000
Business Software Applications	2,490,900,000
Entertainment Software	1,658,400,000
Books	675,100,000
Total	$7,903,300,000

* International Intellectual Property Alliance, 2001 Special 301 Report, February 16, 2001. Note that these figures do not represent piracy over the Internet. If such figures did exist, one can only assume that loss figures would be even more staggering. Also note that these figures represent only losses in the 58 nations being watched as part of the Special 301 process (discussed further below).

But what is most important is not the sheer enormity of the intellectual property sector, but rather the number of people it employs here in the United States. 4.3 million Americans are employed by the intellectual property sector, representing 3.24% of total U.S. employment.[22] To provide some perspective, intellectual property businesses export more American value to the world than the automobile, automobile parts, agricultural, and aircraft industries combined. In other words, theft of intellectual property does not just affect media moguls or software titans; it robs the American economy of valuable jobs.

[16] Stephen E. Siwek, *Copyright Industries in the U.S. Economy: The 2000 Report*, prepared for the International Intellectual Property Alliance by of Economists, Incorporated, 2000.

[17] Department of Defense. Figures are for 1999. [*www.defenselink.mil/pubs/allied_contrib 2000/chartIII-3.html.*]

[18] These are the industries represented by the International Intellectual Property Alliance. Issues affecting these industries represent only a tip of the iceberg, and I certainly look forward to delving into the issues surrounding the protection of other intellectual property.

[19] Traditionally, consumers have been unable to record or copy music or data onto CDs, or compact discs. CD-Rs are compact discs, just now becoming widely available, onto which consumers can record or copy music.

[20] Digital Versatile Discs (DVDs) are high-capacity optical discs on which movies and television shows can be recorded. They are often viewed as the next generation of video cassette.

[21] Business Software Alliance, "Software Theft—Stopping the Piracy of Intellectual Property," 2000. A note on numbers: Because the theft of intellectual property covers so many fields, takes place in so many places, and is an underground activity, numbers for losses of revenue, profits and jobs vary considerably. Although the figures in this report are consistent with their particular context, the most important point is the sense of scale they convey.

[22] *Copyright Industries in the U.S. Economy: The 2000 Report*, by Stephen E. Siwek of Economists incorporated, prepared for the International Intellectual Property Alliance. 2000.

III. PIRACY

Piracy has had a particularly dramatic effect on American businesses and the entertainment software industry. Their products are stolen via at least three distinct avenues:

- Disks and CD-ROMS are copied illegally, and then re-sold.
- A program can be transferred from one business work-station to another without the purchase of another version of the software, i.e., *intra*-business piracy. This latter form of piracy does not receive the attention it deserves, though the Business Software Alliance believes that it is the most economically damaging, accounting for as much as half of the industry's losses.[23] Some foreign governments are particularly hesitant to crack down on intra-business violations because in doing so they will inevitably interfere with firms that are doing legitimate business.[24]
- Software and entertainment can be sent illegally from one user to another through the Internet.[25] By accessing so-called "warez" sites, pirates can transfer any sort of digital media electronically.

Together, these three forms of piracy have taken a real bite out of intellectual property industry revenues. And to what degree does software affect the American economy? The Business Software Alliance estimates: "In 1998, software piracy cost the U.S. economy 109,000 jobs, $4.5 billion in wages and nearly $991 million in tax revenues. By 2008, those numbers will rise to 175,000 lost jobs, $7.3 billion in lost wages and $1.6 billion in lost tax revenues."[26] The Interactive Digital Software Association estimates that $3 billion in revenue was lost to the entertainment software industry in 2000, money which industry experts believe could have been used to develop 1,600 new games.[27]

The music industry has also been victimized by piracy. Modern technology has enabled thieves to employ inexpensive, portable, CD factories which take up no more space than a small room to manufacture illegal reproductions; such facilities, each of which can produce upwards of 100,000 CDs per year, have been built all over the world. Additionally, user-friendly, piracy-enabling websites like Grokster in the West Indies, Imesh in Israel, Morphius in Tennessee, and KaZaA in the Netherlands, allow users all over the world to download music illegally at no expense. In addition, the advent of decentralized "peer-to-peer" technology, such as that used by the Gnutella network to permit maintenance of large databases of music without any central location, makes pursuit and prosecution of these criminal activities exceedingly difficult.[28] To date, over 100 million copies have been made of commonly used peer-to-peer software for downloading music.[29] The music industry estimates that piracy cost it $4.2 billion worldwide in 2000.[30]

Finally, the movie industry is yet another victim of the growing spate of piracy. The Motion Picture Association of America estimates that as many as one million movies are downloaded illegally from the Internet each day.[31] DVD copies of "Harry Potter and the Sorcerer's Stone" were available in parts of China even before the film had hit theaters anywhere in the world, let alone been released for home viewing. Imagine the number of people who choose not to go to the movie theater or rent a film because they are able to retain a pirated copy; imagine the amount of money sapped from our economy; and imagine the number of jobs lost as a result.

IV. COUNTERFEITING

In their attempts to develop a customer base, companies often "trademark" their product names or symbols. "Coke," for instance, is the trademarked name of the popular American soft drink. Customers often purchase a product simply because

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[23] Business Software Alliance, "Software Theft—Stopping the Piracy of Intellectual Property," available at [*http://www.bsa.org/usa/policy/copyright/software_theft.phtml*].

[24] Judiciary Staff briefing with the United States Copyright Office, January 18, 2002.

[25] *Copyright Industries in the U.S. Economy: The 2000 Report*, by Stephen E. Siwek of Economists incorporated, prepared for the International Intellectual Property Alliance.

[26] Business Software Alliance, "Software Theft—Stopping the Piracy of Intellectual Property."

[27] Interactive Digital Software Association, "The IDSA's Anti-Piracy Program: Combating Piracy around the World and on the Internet," [*http://www.idsa.com/piracy.html*].

[28] Judiciary Staff Briefing with the Recording Industry Association of America, January 14, 2002.

[29] Judiciary Staff Communication with the Recording Industry of America, February 8, 2002.

[30] Mazer, Roslyn A. "From T-Shirts to Terrorism." *Washington Post* 30 Sept. 2001.

[31] Valenti, Jack. "Alert to the Senate Judiciary Committee to Protect Copyright Industries in the U.S. 1 April, 2001.

they identify with the label; the name on the product ensures its quality. For that reason, trademarks are extremely valuable. Oftentimes, criminals attempt to fool consumers into believing that their pirated wares are legitimate by reproducing the original product's trademark. In such cases, the producer is guilty not only of having "pirated" copyrighted material, but also of "counterfeiting" a trademark.

The same industries which have been victimized by piracy are getting hammered by counterfeiting. Counterfeiters flood markets with their underpriced products, and steal a great deal of revenue. Additionally, as the Anti-Gray Market Alliance explains, counterfeit goods often do not maintain the same standards of quality that an original might; for that reason, marketing is often *undermined* because consumers assume that the shoddy product they purchased is authentic.

V. Piracy Around The World—A Snap Shot

Piracy rates around the world are dispiritingly high. The International Planning and Research Corporation estimates that software piracy rates are as high as 94% in China, 81% in Bolivia, 97% in Vietnam, and 89% in the Ukraine. Brazil, Mexico, Paraguay, the Philippines, Poland, the Netherlands, the Bahamas, South Africa, Egypt and Indonesia are also known to be afflicted with widespread piracy.[32] By comparison, piracy rates in the United States hover around 24%, a figure which needs to be reduced further, but is comparatively impressive.[33]

That discrepancy points to an important problem: while the American government is relatively vigilant in trying to stem intellectual property theft, other countries have not enacted the requisite laws to prosecute intellectual property thieves. Others willingly look the other way as property is pirated and stolen, and/or lack the resources needed to police the intellectual property market adequately.

At first glance, one might assume that developing economies would benefit from loose intellectual property rights enforcement. Piracy would appear to enable firms to employ software at a diminished cost, and foreign governments often expect that any cost savings will advance economic development by increasing efficiencies and output.

In the long run, however, weak intellectual property protections stifle local innovation. Music, software, and entertainment companies simply do not invest in nations that fail to honor or protect intellectual property rights. Ultimately, that lost investment costs nations much more than pirating and counterfeiting will ever provide. As important, local innovators are provided an enormous *disincentive* to create new products if they believe that thieves will steal whatever profit they might make. It is not uncommon for native-born innovators, such as software engineers, to leave their countries reluctantly, because their government will not protect their creations. Essentially, foreign countries that fail to enact and enforce anti-piracy laws end up doing themselves more harm than good.

Unfortunately, once a country enacts the requisite laws, summons the adequate will, and provides the necessary resources to combat piracy and counterfeiting, the criminals who profit from stealing intellectual property often simply change venue. Combating intellectual property theft is like squeezing a balloon: when you apply pressure in one area, the air inside simply adjusts and moves elsewhere. For example, when Bulgaria, once rampant with illegal piracy operations, cracked down, much of its pirating industry moved to the Ukraine, which continues today to be an important haven for intellectual property thieves.[34]

When China began cracking down on some of the factories producing pirated compact discs, those production facilities (which, as noted earlier, are sometimes no more than a roomful of equipment) were largely moved to Hong Kong. When authorities in Hong Kong began to crack down, facilities sprouted in Macao and then Malaysia, where a civil case against a pirate can take six years to be heard in court.[35] Hence, the balloon squeezing analogy: when one nation's government puts pressure on intellectual property thieves, they simply move to another part of the world.

Finally, international markets are debilitated by intellectual property theft on two dimensions. First, significant damage is done when a government fails to crack down on intellectual property theft and effectively corrupts its domestic market; this aspect of the problem is restricted to within a country's borders. Unfortunately, sto-

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[32] International Planning and Research Corporation, Piracy Study Conducted for Business Software Alliance, 2001.

[33] Business Software Alliance, International Planning and Research Council, 2001 Piracy Study.

[34] Judiciary Staff Briefing with the United States Copyright Office, January 18, 2002.

[35] Judiciary Staff Briefing with the United States Copyright Office, January 18, 2002.

len material often floods across borders and into countries around the globe—even markets here in the United States—making pirated and counterfeit goods a problem even for countries doing an adequate job patrolling their own industries. As such, even when American authorities successfully prosecute copyright and trademark infringers here in the United States, our domestic market is affected by foreign production. Particularly as more theft moves onto the Internet, it will become difficult for a country to combat intellectual property theft initiated beyond its own borders. As such, it is tremendously important that every country participate in efforts to combat the problem.

VI. Advances in Technology

What is it exactly that makes intellectual property so vulnerable to theft? First, the global economy has expanded tremendously during the last 20 years, buttressing demand worldwide for international products (entertainment and software goods in particular). Second, intellectual property is now most often transferred as digital data, which pirates can duplicate easily in *identical* form. Today, criminals can reproduce discs (CDs in the music business, CD-ROMS in the software industry, and DVDs in the world of entertainment) without degrading the quality of the recorded material. In the past, criminals who reproduced analog recordings (cassette tapes and VHS cassettes, for example) unavoidably faced a significant loss in sound quality: second generation copies were not as good as the original, and after a few generations they became virtually unusable. As a result, consumers were generally willing to pay more to ensure the highest quality sound. But the sound of a reproduced CD, even after 100 generations of reproduction, is identical to that of the original. Thus, improved technology has broken a barrier that previously limited the scope of pirated products. That breakthrough has translated into an explosion in supply: in the year 2001, DVD production increased by 9% and production capacity in Asia grew by 35%.[36]

Second, technology advances enable counterfeiters to produce packaging that fools even discriminating consumers into believing that they are buying the legitimate product. Often, a counterfeit CD's packaging will be nearly identical to that of the original. Sophisticated software and printing equipment enable counterfeiters to improve their illegal reproductions of trademarks themselves, copying even the markings (such as holograms) that trademark holders place on products to deter counterfeiting. Customs officials have even seen cases where the counterfeit packaging is of a *higher* quality than that of its legitimate counterpart.

Third, digital products can not only be marketed on the Internet, they can actually be *delivered* on line. A copy of a popular song, for example, can itself be transferred immediately through the web. Certainly, the pervasiveness of Napster's successors, such as Grokster, Morphius, and Gnutella, indicates the extent to which the music industry has already been victimized by online piracy; indeed, illegal downloading of songs is now at its highest level ever, despite any chilling effect brought about by the industry's suit against Napster and, as noted earlier, is becoming more difficult to prosecute because of decentralization.[37] Until recently, only small files, such as individual songs, could be downloaded efficiently over the Internet. But the emergence of "broadband technologies," which dramatically increase the speed with which web-users can download large files,[38] empowers consumers to download entire albums, television program, and even full-length feature movies much more easily and quickly. Thanks to broadband, a full-length motion picture can be downloaded in less than 15 minutes, as compared to the four to five hours with conventional Internet access.[39]

In turn, groups of pirates who upload products to the web have developed so-called "warez" sites at which one can download all sorts of stolen digital media at little or no cost to the consumer. As broadband becomes more pervasive in the U.S., the problem of online piracy will only grow.[40] In other countries, such as South Korea and some northern European countries, where broadband is already more

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[36] Motion Picture Association of America, "2002 Trade Barriers Report."

[38] Judiciary Staff Briefing with the Recording Industry Association of America, January 14, 2002.

[39] Broadband refers to high-speed access to the Internet, such as DSL or cable modems. Broadband does to Internet access what a much larger pipe does to plumbing: it gives you much more information much quicker.

[39] Motion Picture Association of America, 2002 Trade Barrier Report.

[40] According to the Federal Communications Commission, 7% of American households had broadband as of August 2001, a three-fold increase in 18 months. Federal Communications Commission. Third Report on the Availability of High Speed and Advanced Telecommunications Capability, February 6, 2002.

widely available, the problem has already grown. A simple Internet search for the word "warez" draws over 2 million hits.[41]

VII. Current Legal Framework

A variety of laws, both domestic and international, empower governments around the world to combat, investigate, and prosecute intellectual property thieves. But the web of protection they provide is incomplete. Officials at the U.S. Copyright Office have suggested that nations intending to uphold intellectual property rights must meet three criteria:

- First, they must develop an adequate legal framework for prosecuting intellectual property theft.
- Second, they must have the political will to enforce intellectual property laws. If prosecuting authorities, or those involved in the enforcement process, are in league with those who will profit from intellectual property theft, any number of well-written laws will be ineffective.
- Third, they must devote sufficient resources to enforcement of piracy laws. Even if adequate laws are on the books, and the government retains the requisite political will, prosecutors and judicial systems which do not receive the resources they need to handle the sheer volume of crimes before them will be unable to corral the problem.

A. U.S. Laws to Protect Intellectual Property

1. In General

Congress has passed several criminal statutes which protect intellectual property rights, including copyrights, trademarks, and patents. These statutes include:

- *The No Electronic Theft (Net) Act, 17 U.S.C. 506* (*see* below).
- *Digital Millennium Copyright Act, 17 U.S.C. 1201–1205 (see* below).
- *Criminal Infringement of a Copyright, 18 U.S.C. 2319.* For willful infringement of a copyright for financial gain, an individual is subject up to five (5) years in prison and/or a fine of up to $250,000, for the reproduction or distribution of at least ten (10) copies of a copyrighted work with a retail value of more than $2,500. The penalty increases to imprisonment of up to ten (10) years for second or subsequent offenses. The penalty is imprisonment of up to one (1) year and/or a fine of $250,000 for all other cases.
- *Bootlegging Offenses, 18 U.S.C. 2319A.* For knowing, unauthorized recording and trafficking in sound recordings and music videos of live musical performances, for financial gain, an individual is subject up to five (5) years in prison and/or a fine of up to $250,000; and up to ten (10) years in prison for second or subsequent offenses.
- *Trademark Offenses, 18 U.S.C. 2320.* For knowing trafficking in counterfeit goods or services, an individual is subject up to ten (10) years in prison and/or a fine of up to $2 million ($5 million in the case of a company); and up to twenty (20) years in prison and/or a fine of up to $5 million ($20 million in the case of a company) for second or subsequent offenses.
- *Trade Secret Offense, 18 U.S.C. 1832.* For knowing theft of a trade secret for financial gain, an individual is subject up to ten (10) years in prison, and/or a fine of up to $250,000.
- *Offense Relating to Integrity of Intellectual Property Systems*:
  - *Fraudulent Copyright Notice, 17 U.S.C. 506.* For knowing use and public dissemination of a fraudulent copyright, or fraudulent removal of a legitimate copyright, an individual is subject to a fine of up to $2,500.
  - *Counterfeit Patents, 18 U.S.C. 497.* For knowing forging of a letter of patent, or attempting to pass a known forged letter of patent, an individual is subject up to ten (10) years in prison and/or a fine of up to $250,000.
  - *False Marking, 35 U.S.C. 292.* For knowing use of a patent on a product, without permission, with the intent of deceiving the public, an individual is subject to a fine of up to $500.
- *Offenses Relating to the Misuse of Dissemination Systems*:
  - *Frauds and Swindles, 18 U.S.C. 1341.* For devising a scheme to distribute counterfeit goods through the mails or interstate commerce, an indi-

[41] Search conducted on Google.com. February 10, 2002.

vidual is subject up to five (5) years in prison and/or a fine of up to $250,000 (up to thirty (30) years in prison and/or a fine of up to $1 million if the violation involves a financial institution.)

• *Fraud by Wire, Radio or Television, 18 U.S.C. 1343.* For devising a scheme to obtain money/property by false or fraudulent pretenses, which transmits through wire, radio, or television communication any signals for executing the scheme, an individual is subject up to five (5) years in prison and/or a fine of up to $250,000 (up to thirty (30) years in prison and/or a fine of up to $1 million if the violation involves a financial institution.)

• *Electronic Communication Intercepting Devices, 18 U.S.C. 2512.* For intentional manufacture, distribution, or advertising, through the mails or interstate commerce, an electronic communication intercepting device, an individual is subject up to five (5) years imprisonment and/or a fine of up to $250,000.

• *Unauthorized Reception of Cable Services, 47 U.S.C. 553.* For unauthorized, willful interception of cable services, an individual is subject up to six (6) months and/or a fine of not more than $1,000. Any person who commits such violation for the purpose of private financial gain, is subject up to two (2) years in prison and/or a fine of not more than $50,000. For second or subsequent offenses, an individual is subject up to five (5) years in prison and/or a fine of not more than $100,000.

• *Unauthorized Use or Publication of Communications, 47 U.S.C. 605.* For knowing, willful publication or use of wire or radio communications, in certain instances, an individual is subject up to six (6) months in prison and/or a fine of not more than $2,000. Any person who commits such violation for the purpose of private financial gain is subject up to two (2) years in prison and/or a fine of not more than $50,000. For second or subsequent offenses, an individual is subject up to five (5) years in prison and/or a fine of not more than $100,000. Also allows the aggrieved party to bring a federal civil action seeking injunctive relief.

2. Recent Criminal Statutes

Congress passed new laws in 1997 and 1998 to specifically target the theft of intellectual property in cyberspace. These include:

- The No Electronic Theft Act (NET Act); and
- The Digital Millennium Copyright Act.

Because both Acts have been used by the Justice Department to combat intellectual property in cyberspace in particular, they are discussed in greater detail below.

a. No Electronic Theft Act (NET Act)—17 U.S.C. 506

(1) Provisions

The No Electronic Theft Act ("NET Act"), signed into law in 1997, reflected Congress's determination to protect intellectual property rights which were being violated by a new phenomenon in cyberspace—individuals who operated websites which allowed users to download pirated products for free. Such websites were created either for the amusement of the webmaster or, in some instances, as acts of self-described "cyber civil disobedience."

A loophole in IP protection statutes was exposed in the case of *United States* v. *LaMacchia*, 871 F. Supp. 535 (D. Mass. 1994). David LaMacchia, a college student, created an Internet web site where users could obtain pirated copies of commercial software products for free. LaMacchia's website reportedly disseminated over $1 million in free software. The Justice Department could not, accordingly, charge him with criminal copyright infringement because the statute required that LaMacchia infringe a protected holder's copyright for the purpose of financial gain—which he had not done since the items were dispensed for free. Accordingly, LaMacchia was indicted on wire fraud counts. The district court granted the defendant's motion to dismiss the indictment, finding that the defendant's actions did not satisfy the criminal copyright infringement statute or the wire fraud statute.

Congress responded with the NET Act, which created a new category in the criminal copyright statute (17 U.S.C. 506(a)(2)) of criminal infringement that does not require a purpose of commercial advantage or financial gain. Rather, the willful reproduction or distribution, during any 180-day period, of copyrighted works with a retail value of more than $1,000 constitutes criminal infringement, regardless of whether the defendant enjoys financial gain from his enterprise. Criminal penalties include:

- Imprisonment of up to three (3) years and/or a fine of up to $250,000, if the offense consists of reproduction or distribution of ten (10) or more copies of a copyrighted work which has a retail value of $2,500;
- Imprisonment of up to six (6) years and/or a fine of up to $250,000, if the offense (described immediately above) is a second or subsequent offense; or
- Imprisonment of up to one (1) year and/or a fine of not more than $250,000, if the offense consists of reproduction or distribution of one (1) or more copies of a copyrighted work, which has a retail value of more than $1,000.

The NET Act also added a definition of "financial gain" (at 17 U.S.C. 101) to includes the barter of copyrighted works. This new definition was targeted at Internet "barter boards" where pirated products are traded for other copies rather than for money.[42]

(2) Recent Cases

The Justice Department has aggressively pursued cases under the NET Act. Below is a summary of some recent cases as quoted from the Department of Justice's Computer Crime and Intellectual Property Section website (http://www.usdoj.gov/criminal/cybercrime/iplaws.htm):

- The first conviction under the No Electronic Theft (NET) Act occurred on August 20, 1999 when Jeffrey Levy, a 22 year old University of Oregon senior, pled guilty to illegally posting computer software programs, musical recordings, entertainment software programs, and digitally-recorded movies on his Internet web site; he then allowed the general public to download these copyrighted products. On November 23, 1999, Levy was sentenced to a two-year period of probation with conditions.
- On May 4, 2000, seventeen defendants from across the United States and Europe were indicted in federal court in Illinois for conspiring to infringe the copyright of more than 5,000 computer software programs.
- On October 12, 2000, Brian Baltutat pled guilty in federal court in Michigan to software copyright infringement. He had offered approximately 142 software programs for free downloading on a web site called "Hacker Hurricane." Baltutat was sentenced on January 30, 2001, to 3 years probation, 180 days home confinement, restitution to software manufacturers, and 40 hours of community service.
- On December 15, 2000, Jason Spatafore pled guilty in federal court in California to criminal copyright infringement. The defendant willfully infringed a copyright by reproducing and distributing by electronic means copies of parts of the film *Star Wars Episode I: The Phantom Menace*. He did this by posting copies of parts of the film on various web sites so others could download copies of the film from the Internet. He also encouraged others to download copies of the film from those sites.
- Nine persons—who allegedly were associated with the underground software piracy group known as "Fastlane"—were indicted on February 15, 2001, for pirating more than $1 million of copyrighted computer software, games, and movies through non-public Internet sites. All nine defendants were charged in federal court in Chicago in a nine-count indictment.
- On May 11, 2001, a federal jury in the Northern District of Illinois found Christian Morley of Salem, Massachusetts, guilty of conspiracy to infringe software copyrights. Morley was indicted last year along with 16 other defendants from across the United States and Europe for conspiring to infringe the copyright of more than 5,000 computer software programs available through a hidden Internet site located at a university in Quebec, Canada.

b. Digital Millennium Copyright Act—17 U.S.C. 1201–1205

The Digital Millennium Copyright Act ("DMCA") was signed into law by President Clinton in 1998. Congress passed this statute both to implement U.S. intellectual property treaty obligations and to move the nation's copyright law into the digital age. Specifically, the DMCA implemented two 1996 World Intellectual Property Organization ("WIPO") treaties into the U.S. code: the WIPO Copyright Treaty and the WIPO Performance and PhonographsTreaty. The DMCA also addressed a number of other significant copyright-related issues. The DMCA created two new prohibitions in chapter 12 of Title 17 of the U.S. Code:

[42] U.S. Copyright Office Summary of No Electronic Theft Act (NET Act).

- Circumventing the technological measures used by copyright owners to protect their works; and
- Tampering with the integrity of copyright management information.

Civil remedies and criminal penalties are established for violating these prohibitions.

(1) Anti-Circumvention Measures

Section 1201 of the DMCA focuses on providing adequate and effective protection against circumvention of technological measures designed to protect copyrighted works. The DMCA divides technological measures into two categories:

- Measures that prohibit unauthorized *access* to a copyrighted work; and
- Measures that prohibit unauthorized *copying* of a copyrighted work.

Making or selling devices or services that are used to circumvent either category is prohibited in certain instances. (Circumvention itself is prohibited only in the first category, not the second, reflecting the doctrine of "fair use" which allows copying in certain circumstances, *e.g.*, a university professor lecturing on cinematography creates a CD-ROM for use in his class, featuring downloaded clips from several films.)

An example: a film distribution company develops encryption software which prevents motion pictures on digital versatile disks ("DVDs") from being copied. A hacker utilizing reverse engineering then discovers the encryption algorithm and keys, thus learning how to copy encrypted DVDs. The hacker then proposes to post his encryption-breaking code on the web for others to purchase or use. The DMCA forbids the hacker from disseminating the encryption-breaking code which would be used by third parties to copy DVDs.

(2) Integrity of Copyright Management Information

In addition to the anti-circumvention provisions of section 1201, section 1202 of the DMCA also grants new protection for the integrity of "copyright management information—*i.e.*, data identifying works, their creators, copyright owners, and other key facts (including licensing information). Copyright management information can be linked to or travel with works in a networked environment to facilitate detection of unauthorized uses, promote the payment of royalties, and provide similar benefits to copyright owners.

Section 1202 addresses both the dealing in false copyright management information and the removal or alteration of copyright management information.

Specifically, the section prohibits:

- The falsification, alteration or removal of copyright management information; or
- The trafficking in copies of works that are linked with copyright management information that has been falsified, altered or removed,

if the offending party knew or should have known that its actions would facilitate infringement.

(3) Civil Remedies and Criminal Penalties

Any person injured by a violation of section 1201 or section 1202 of the DMCA may bring a *civil action* in federal court. The court may, pursuant to section 1203, grant a range of equitable and monetary remedies similar to those under the Copyright Act, including statutory damages.

In addition, it is a *criminal offense* to violate section 1201 or 1202 willfully and for purposes of commercial advantage or private financial gain. Under section 1204, penalties range up to a $500,000 fine or up to five (5) years imprisonment for a first offense, and up to a $1,000,000 fine or up to ten (10) years imprisonment for second and subsequent offenses.

(4) Recent Cases

Three recent cases—one criminal and two civil—have been brought pursuant to the DMCA:

Criminal

- The first indictment under the DMCA was returned in federal court in California in August 2001 against Dmitry Sklyarov and Elcom Ltd., both of Mos-

cow.[43] The defendants allegedly conspired to develop and traffic a software program which unlocked an on-line book encryption code; the code protected the copyright holder's interest in an electronic book by limiting access to reading—rather than copying and distributing—an on-line book. The defendants posted the decryption code on a Moscow website, thus enabling consumers who purchased an encrypted book to "unlock" it, and make copies. In December 2001, the federal government entered into an agreement with Sklyarov in which the Justice Department agreed to defer prosecution of the counts against him in return for his cooperation and testimony against Elcom Ltd., the Moscow website.

Civil

• Eight major motion picture studios brought suit in 2000, after computer hackers engineered decryption software to copy the plaintiffs' motion pictures on digital versatile disks ("DVDs").[44] After a website obtained and posted the decryption software, the movie studio sought a court injunction to enjoin the website from distributing the software on the Internet. *Universal Studios* v. *Reimerdes*, 111 F. Supp. 2d 294 (S.D.N.Y. 2000), as amended, *aff'd sub. nom. Universal Studios* v. *Corley*, 273 F.3d 429 (2d Cir. 2001).

• The district court rejected the defendants' argument that the DMCA's anti-circumvention provisions, as applied to the posting and dissemination of the decryption codes, violated the First Amendment. The court held that the code-breaking software has a functional, non-speech aspect—namely, that it permitted consumers to "unlock" film DVDs, thereby bypassing the copyright protections therein. Accordingly, the district court granted a permanent injunction against posting the decryption software.

• The district judge expressed his hope that the court's ruling would "contribute to a climate of appropriate respect for intellectual property rights in an age in which the excitement of ready access to untold quantities of information has blurred in some minds the fact that taking what is not yours and not freely offered to you is stealing!"

• The Second Circuit Court of Appeals affirmed the district court, upholding the constitutionality of the DMCA.

• The recording industry issued a public challenge in the spring of 2001 to decrypt copyright protection technology designed to protect digital music.[45] Edward Felten, a Princeton professor, accepted the challenge, cracked the code, then announced his intentions to present his findings at an academic conference. The Recording Industry Association of America ("RIAA") threatened to sue Professor Felten, claiming that publication of the decryption code would violate the DMCA. Felten backed down and the RIAA dropped its law suit threat. Felten then sued the RIAA, alleging that the DMCA had a chilling effect which violated his First Amendment rights. Felten sought a declaratory judgment that publication of his findings would not violate the DMCA. The federal district court dismissed his claim, but Felten—represented by the Electronic Frontier Foundation—may appeal the dismissal.

B. INTERNATIONAL TREATIES TO PROTECT INTELLECTUAL PROPERTY

There is no such thing as "international copyrights" or "international trademarks." Rather, copyrights and trademarks are governed by national laws. That said, nations are obligated to protect copyrights and trademarks through a number of interrelated international treaties which impose minimum standards on countries party to the respective treaties. In this regard, there have been two important advancements for the international protection of copyrights and trademarks in the last decade. The first was the approval, during the Uruguay Round trade negotiations (concluded in 1994), of the Agreement on Trade-Related Aspects of Intellectual Property Rights, or "TRIPS." The second was the approval of the World Intellectual Property Organization (WIPO) Copyright Treaty and the WIPO Performances and Phonograms Treaty (concluded in 1996).

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[43] See Department of Justice Website [*http://www.usdoj.gov/criminal/cybercrime/Sklyarovindictment.htm*]; and [*http://www.usdoj.gov/criminal/cybercrime/sklyarovAgree.htm*].

[44] Jeweler, Robin and Jennings, Christopher Alan "Anticircumvention under the Digital Copyright Act: Universal Studios v. Corley." January 23, 2002.

[45] Jeweler, Robin and Jennings, Christopher Alan "Anticircumvention under the Digital Copyright Act: Universal Studios v. Corley." January 23, 2002.

1. TRIPS Agreement

Members of the World Trade Organization are required to comply with the TRIPS Agreement. Article 66 of the TRIPS Agreement, however, permits "least developed countries" a ten-year transition period for implementation of the Agreement; at present, 30 members of the WTO qualify for least developed country status.

The TRIPS Agreement requires all members to comply with substantive provisions of two baseline treaties—one on copyrights (the Berne Convention for the Protection of Literary and Artistic Works) and one on trademarks (the Paris Convention for the Protection of Industrial Property).

Equally important, the TRIPS Agreement imposes obligations on members to enforce adequately the intellectual property rights protected by it. The TRIPS Agreement also provides a means to secure enforcement, if diplomacy and persuasion prove inadequate: it incorporates by reference the dispute settlement procedures of the WTO. The Dispute Settlement Understanding provides a quasi-judicial means for a member to complain about WTO violations, a process which has often been successful for the United States in a range of trade areas. The United States has initiated several proceedings against foreign governments for TRIPS violations, including against Ireland for its deficient copyright laws, Greece for television piracy, and Denmark for its failure to make available *ex parte* search remedies in intellectual property enforcement actions. These cases have all been settled to the satisfaction of the United States.

2. WIPO Treaties

Although the Senate gave its advice and consent to ratification of the WIPO treaties in October 1998, neither treaty has entered into force. The WIPO Copyright Treaty will enter into force, however, on March 6, 2002, and it is expected that the Performances and Phonograms Treaty will enter into force in 2002 (once the necessary 30 ratifications have been achieved).

VIII. Enforcement

Jurisdiction over piracy spans across not only a host of federal agencies, but also the community of nations. The Justice Department is the lead federal law enforcement agency while the State Department currently chairs a working group of U.S. Agencies that is involved in coordinating intellectual property rights.[46]

In 1991, the Justice Department created what is now the Computer Crime and Intellectual Property Section ("CCIPS") within the Criminal Division. According to the Department, CCIPS consists of "two dozen lawyers who focus exclusively on the issues raised by computer and intellectual property crime. Section attorneys advise federal prosecutors and law enforcement agents; comment upon and proposed legislation; coordinate international efforts to combat computer crime; litigate cases; and train all law enforcement groups. Other areas of expertise possessed by CCIPS attorneys include encryption, electronic privacy laws, search and seizure of computers, e-commerce, hacker investigations, and intellectual property crimes."[47] CCIPS attorneys work closely with U.S. Attorney's Office around the country in enforcing intellectual property laws as they relate to high tech piracy.[48]

Moreover, the Justice Department has raised the profile of cybercrime, including high tech piracy, by the recent creation of specialized prosecution units to focus on cybercrimes. In July 2001, Attorney General John Ashcroft announced that nine additional units are being added to a program called the Computer Hacking and Intellectual Property ("CHIPS") Program that been premiered, to great success, in San Francisco. According to the Justice Department, "[t]hat project demonstrated the benefits of a unit of prosecutors working closely with the FBI and other agencies to establish a relationship with the local high tech community and encourage them to refer cases to law enforcement. The new CHIPS units are the next phase in the Department's ongoing efforts to combat cybercrime and Intellectual Property

[46] In addition, in the hopes of making each organization's contributions more accessible to those in and out of government, the State Department is currently working to create a website which will assist in an effort to better coordinate promotion of intellectual property rights abroad.

In addition, a 1999 Appropriations Act established the National Intellectual Property Law Enforcement Coordination Council, with participation by the Departments of State, Justice and Commerce, as well as the Patent and Trademark Office, the Customs Service, and the Office of the U.S. Trade Representative. PL 106–58 653.

[47] *See* [*http://www.usdoj.gov/criminal/cybercrime/ccips.html*].

[48] The CCIPS webpage lists numerous federal criminal prosecutions brought in intellectual piracy cases. *See* [*http://www.usdoj.gov/criminal/cybercrime/ipcases.htm*].

theft."[49] For now, the CHIPS units are limited to ten U.S. Attorney's Offices: San Francisco, Los Angeles, Dallas, San Diego, Seattle, Atlanta, Alexandria, Virginia, Boston, and New York (Brooklyn and Manhattan). Together, the 10 units will have a total of 77 positions, including 48 prosecutors.[50]

The Justice Department has worked with other federal and international law enforcement agencies in bringing criminal prosecutions against high tech pirates. For example, U.S. authorities spear-headed a 15-month investigation entitled "Operation Buccaneer." Working in collaboration with officials in the U.K., Australia, Norway and Finland, the U.S. executed 58 warrants in 27 cities against "warez" groups operators, seizing more than 140 computers. The operation struck at highly structured, security-conscious criminal groups specializing in "obtaining the latest computer software, games, and movies; stripping ("cracking") copyright protections; and releasing the final product to hundreds of Internet sites worldwide."[51]

In another ongoing investigation, entitled "Operation Bandwidth," officials at the Defense Criminal Investigative Service, the Inspector General Office of the Environmental Protection Agency, the FBI, and the U.S. Attorney for the District of Nevada set up and maintained a warez site for 2 years as part of an undercover investigation targeting online pirates. The site was accessed to transfer over 100,000 files, including over 12,000 separate software programs, movies and games. Over 200 people attempted to obtain "first-run movies, the latest computer games, and versions of notable software products even before they were publicly introduced."[52]

IX. Potential Solutions

As discussed above, substantial laws, both international and domestic, already exist to help fight intellectual property theft. It is likely, therefore, that any successful proposals at this stage would not revolutionize the legal landscape so much as enhance our abilities to enforce the laws and treaties that exist. Based on my discussions to date with government and industry representatives, it does not appear that a major sea change is needed with respect to the substantive law. With that in mind, the following suggestions have been made by experts in the field.[53]

A. DOMESTIC

We cannot neglect the needs of those enforcing intellectual property protections at home and abroad, even as more time and energy is devoted to fighting international terrorism.[54] American representatives around the world need to keep intellectual property protections high atop their list of priorities. Pirating and counterfeiting are sometimes subsumed by the variety of other challenges facing American diplomats and officials the world over. We need to remind them of the enormous

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[49] *See* [*http://www.usdoj.gov/criminal/cybercrime/enforcement.html#VIb*].

[50] *See* [*http://www.usdoj.gov/criminal/cybercrime/chipfact.htm*].

[51] U.S. Department of Justice Press Release, "Federal Law Enforcement Target International Internet Piracy Syndicates." 11 Dec 2001. U.S. Customs Service, "Operation Buccaneer Targets Software Piracy." January 2002. A useful resource for learning about the fight against intellectual property theft generally is the website of the Computer Crimes and Intellectual Property Section of the Justice Department. It can be accessed at [*www.cybercrime.gov*].

[52] U.S. Department of Justice Press Release, "Federal Law Enforcement Targets International Internet Piracy Syndicates." 11 Dec 2001.

[53] This section sets forth a variety of proposals that have been made to address the problems discussed above. The list is not meant to be comprehensive. Also, as I am still studying the issue, I have neither endorsed nor opposed any of them. My purpose in discussing these suggestions is merely to inform fully the reader.

[54] Another potential cause for concern is that some evidence is emerging that organized criminals, and perhaps even terrorist networks, may be financing themselves in part through theft of intellectual property. According to a Washington Post article in September 2001, "eight of the 10 countries identified by a trade group as having the highest business software piracy rates in the world—Pakistan, China, Indonesia, Ukraine, Russia, Lebanon, Qatar and Bahrain—have links to al Qaeda." Mazer, Roslyn A. "From T-Shirts to Terrorism." *Washington Post,* September 30, 2001. In an article in *The Industry Standard,* former Attorney General Janet Reno wrote:

> "Criminal organizations appear to be using the proceeds of intellectual property-infringing products to facilitate a variety of enterprises, including guns, drugs, pornography and even terrorism. Invariably, when there is intellectual property crime, there is tax evasion and money laundering."

So, while we ought to focus on the extent to which intellectual property theft affects the business sector, we ought not overlook the extent to which cracking down on criminal networks internationally may provide the added benefit of crippling those who would take up arms against the United States.

cost incurred when we fail to protect the interests of America's businesses and workers.

Some specific proposals which others have offered to improve the fight against piracy and counterfeiting at home include:

- Dedicating more funding to the Justice Department's effort to enforce intellectual property rights.
- Enacting statutes to prohibit individuals from tampering with authentication features.
- Requiring that courts impose civil fines on those known to be importing pirated material.
- Better supporting the intellectual property center within the U.S. Customs Service.
- Working to enhance the communication between law enforcement agencies and coordination between federal and state authorities.
- Creating a fund dedicated to financing efforts to expand intellectual property enforcement through training, legislation, and technical assistance.

Some work is already progressing. For example, for fiscal year 2002, we in Congress have given the Customs Service's Intellectual Property Rights Center an additional $5 million, and we have funded more attorney positions at the Justice Department to prosecute these crimes. Undoubtedly, however, more can be done.

B. INTERNATIONAL

On the international front, a key question is how can we in the United States convince foreign governments to join our effort to combat intellectual property theft. What will compel our counterparts around the world to institute and enforce proper intellectual property laws when many foreigners remain convinced that active enforcement will hobble their local economies?

First, we could use the type of bilateral trade negotiations and threats available to us in trade disputes, namely the "Special 301" process, authorized in Section 182 of the Trade Act of 1974.[55] That statute empowers the United States Trade Representative (USTR) to "identify and investigate" priority foreign countries that fail to provide adequate and effective protection of American intellectual property rights. When foreign countries fail to provide proper relief, the USTR is empowered to impose trade sanctions.[56] The U.S. Copyright Office notes that the process of investigation, in which foreign countries are placed on a so-called "watch list," has been a tremendously successful tool.[57] Foreign countries are often disinclined to invest in a "priority country," so governments are often anxious to avoid that designation. Hong Kong and Malaysia were recently both compelled to do more to enforce intellectual property rights because the United States promised that failure to do so would impact their designation in the Special 301 process.[58]

Second, we could use the power we wield in negotiating free trade agreements to compel foreign governments to implement and enforce adequate intellectual property protections. Under the TRIPS agreement, World Trade Organization members are required only to institute laws which are "sufficient to provide a deterrent" to intellectual property theft.[59] We in the United States know that authorities must do much more than that—most notably, they must prosecute those who violate the law. So, as we work to shape bilateral free trade agreements with nations like Peru, Brazil, Chile and Singapore, we should insist that the laws and policy instituted with our trading partners conform to the more stringent standards we apply domestically.

Third, we might provide an expanded arsenal of resources to foreign governments inclined to write and implement the type of intellectual property laws which will guarantee, with enforcement, that companies operating within their market have adequate protection. Many countries with pervasive problems simply do not have the resources or expertise necessary to prevent intellectual property theft, even when they understand that implementing the proper enforcement mechanisms will spur investment and economic growth. If American advisors, technology or financial

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[55] Trade Act of 1974, P.L. No. 93–316, as amended by the Omnibus Trade and Competitiveness Act of 1988, P.L. No. 100–418. *See* 19 U.S.C. 2242(a)(1)(A) (2001).

[56] Morrison, Wayne M. "China-U.S. Trade Agreements: Compliance Issues." Congressional Research Service, December 7, 2000.

[57] Judiciary Staff Briefing with the United States Copyright Office, January 18, 2002.

[58] Judiciary Staff Briefing with the International Intellectual Property Association, January 10, 2002.

[59] TRIPS Agreement, Article 61.

resources are provided to well-meaning foreign governments, those countries will be better equipped to produce the sort of legal framework we enjoy here in the United States.[60] The United States government provided at least $7.1 million worth of aid to developing countries in the pursuit of improving their intellectual property laws between 1999 and 2001.[61] We should make sure that such programs are effective, and if they are, make them more available to countries throughout the globe.

Fourth, developing foreign countries often lack the resources required to fund and maintain the law enforcement agencies which prosecute intellectual property thieves. Enforcement agencies are often ill-equipped to fight high tech, fast-paced, well-financed criminal enterprises, and they rarely place intellectual property crime at the top of their enforcement agendas. In turn, piracy and trademark prosecutions are often given the short shift, despite the economic cost of failing to regulate the market.[62] The United States could support foreign law enforcement, or at least foreign agencies, with some of the tools and training necessary to do an adequate job of prosecuting offending parties.

Fifth, we can encourage other countries that have already developed comparatively strong systems for protecting intellectual property to use their influence to persuade and cajole other governments to rise to their level. For example, the U.S. Government could press the European Union to do its utmost to raise the level of intellectual property protection in countries that seek to join its ranks.

Finally, governments are typically some of the largest purchasers of computers and computer-related services. Both because they are market leaders and because prosecution is more difficult when the authorities are themselves the beneficiaries of pirated goods, it is terribly important that governments here and around the world police themselves. In 1998, President Clinton issued Executive Order 13103. It directs all federal agencies (and that third-party contractors doing business with the Government) to utilize legal software exclusively. The United States Trade Representative was tasked with convincing our trading partners to enact similar decrees.[63] Despite that Order, evidence suggests that our government remains one of the largest violators of intellectual property rights.[64] As we continue to work to address that problem—and we must—we can encourage foreign governments to enact the same sort of policy President Clinton instituted four years ago. If nothing else, the action a government takes to stem internal piracy sends a signal to private sector criminals.

All of these proposals, of course, are for potential action by our government. As a Senator, that is logically my focus in reviewing this issue. Of course, any effort to fight the crime of intellectual property theft must involve substantial efforts on the part of the industries involved. For example, industries are currently working on technologies to protect their materials from illicit copying. Even as hackers and crooks become ever more sophisticated at cracking the codes, companies must continue to seek ways to thwart criminal efforts.

X. Conclusion

Intellectual property theft has, through the years, stolen billions of dollars from American businesses and hundreds of thousands of jobs from American workers. The robust global economy and the Internet have enabled worldwide commerce to flourish. As businesses struggle to adapt to the new economic landscape, we need to ensure that government authorities throughout the world, and at home, are prepared to address the new challenges before them.

As this report demonstrates, efforts to protect intellectual property are lacking, and represent an important hurdle for the development of economies around the

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[60] The State Department is already doing some work in this area. For example, in February 2002, the Department will host a three-week visit to the United States for intellectual property rights officials from numerous foreign governments.

[61] United States Agency for International Development, "United States Government Initiatives to Build Trade Related Capacity in Developing and Transition Countries, Chapter Two: WTO Awareness, Accession, and Agreements," available on the USAID website, at [*www.usaid.gov*].

[62] Those producing pirated CDs, DVDs, and CD-ROMs are dependent on a special grade of polycarbonate which is mined in only a few locations around the world. If the countries that house polycarbonate production facilities were to place better export controls, or even look into developing a way to track the polycarbonate they produce, it would be much easier to stem the production of illegal copies. For example, governments could monitor whether the amount of polycarbonate given to a disc manufacturing plant represented the amount needed to produce the discs the plant purported to produce legitimately. If those numbers were to differ significantly, a government would have good reason to suspect that pirated material was coming from the facility.

[63] Executive Order 13103, September 30, 1998.

[64] Judiciary Staff Briefing with the Business Software Alliance, January 17, 2002.

globe. If those who invest in developing new and innovative ideas are consistently exploited, they may well give up efforts to improve technology and generate the type of art, music, literature, and entertainment that animates all our lives. More than that, if we fail to address this growing problem, millions of jobs will be lost, and we will have given into thieves and pirates.

Our efforts will inevitably be buoyed by the development of intellectual property industries around the world. As software and entertainment companies begin to flourish in foreign countries, foreign governments will realize that intellectual property theft poses a significant economic threat. The Indian film industry, as it matured, became increasingly aware that its product was being pirated. It successfully pushed the Indian government to institute adequate protections. In the future, countries may come to the United States asking for assistance in developing the type of legal framework needed to combat intellectual property crime. We ought to be prepared to assist them in our mutual interest.

Here at home, we should continue the strides made by federal law enforcement in waging an effective battle against high tech piracy. We must make sure that law enforcement has the legal tools and monetary resources to investigate fully and aggressively pursue high tech pirates—including both those who produce the pirated goods, as well as those that traffic them. We must ensure that federal laws are sufficient to prosecute all variations of high tech piracy, including appropriate civil and criminal provisions. We must maximize coordination among all the federal agencies with oversight for this crime. And we must make sure that all our citizens know that taking someone else's protected property through cyberspace is stealing, plain and simple.

Only by being vigilant in investigating and prosecuting those who steal intellectual property will we be successful in continuing to nurture the development of the music, software, and entertainment industries which employ so many people both here and around the world. I look forward to assisting our government here at home in its battle against high tech pirates, as well as urging nations around the world join the United States in the fight against intellectual property theft, and I hope that I can continue to be helpful in that endeavor. Inevitably, the landscape will change, and I intend to reevaluate and readdress new problems in the coming years to ensure that creators and innovators are fully protected under the law.