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Addressing Global Scope of Intellectual Property Law

By

Hedi Nasheri

Prepared for the National Institute of Justice, The International Center

Department of Justice

November 2004

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Introduction

The use of intellectual property (IP) is a growing concern in both the criminal and civil justice systems due to the growing number of products that can be reproduced quickly and inexpensively with little chance of detection. The economic impact of the misuse and theft of intellectual property is far-reaching. The copying of software, movies, video games, and music in ways that deny publishers and authors their legal rights have drawn the most attention, but trademark and patent infringement, corporate espionage, computer intrusions, theft and sale of trade secrets, copyright violations, and international smuggling and transmission of copyrighted materials also have been identified as problems. The National Institute of Justice sponsored several studies to examine the nature of this problem, to discover what is known about its extent and the major justice-related issues it creates, and to develop recommendations for future research in this area. As part of its International Center's research agenda to enhance understanding of intellectual property crimes (IPC) and its implications for practice, funding was provided to analyze the current state of law and enforcement efforts for protection of intellectual property rights (IPRs), and its actual and potential uses.

In essence, this study represents an assessment of the "state of the art," as well as concrete evidence of weaknesses in current law, its enforcement domestically and internationally, problems of application, training issues, and other matters that can be used to assist NIJ in its research agenda in this untapped area by researchers. While the broader interest of this project was to examine the policy issues associated with protection and enforcement of IPRs, the results of the current project provide a starting point for a critical analysis of the current state of laws, law enforcement, and potential threats of IPC in a global context. This study is not intended to provide solutions to all the problems that it identifies and it is my hope that the NIJ

provides adequate funding and resources so that a comprehensive study in this area can be conducted.

Research Methodology

Two research methods were utilized for this study:

A. Archival Review – An extensive review of federal regulations, case reports, journal articles, speeches, testimony, arrest records, indictments, court records, GAO reports, Congressional hearings reports, agency reports, seminar reports and newspaper articles.

B. Primary Source Interviews– Interviews with selected interest groups, including corporate security professionals, security consultants and federal prosecutors other government officials in the Department of Justice and the FBI who play key roles in prosecution and investigation of criminal activities in this area were conducted.

The following questions were raised with officials and agencies interviewed:

1. What is IP and what are IPRs?
2. How can IP be misappropriated?
3. Does IP misappropriation constitutes a crime?
4. What law enforcement initiatives domestically and internationally have taken place?
5. Why criminalize IP violations?
6. What future research is needed in this area?

The following organizations were contacted in connection with this project:

Federal Law Enforcement Contacts

Computer Crime and Intellectual Property Section (CCIPS), Department of Justice
Intellectual Property Rights Coordination Center
Financial Crimes Section, Federal Bureau of Investigation
U.S. Customs Service, Intellectual Property Rights Program & Intellectual Property Rights Branch

Trademark Organization Contacts

United State Patent and Trademark Office (USPTO)
International Anti-Counterfeiting Coalition (IACC)

International Trademark Association (INTA)

Copyright Organization Contacts

Library of Congress Copyright Office
Business Software Alliance (BSA)
Interactive Digital Software Association (IDSA)
International Intellectual Property Alliance (IIPA)
International Intellectual Property Institute (IPI)
Intellectual Property Owners Association (IPO)

The World Intellectual Property Organization (WIPO)



“Imagination is more important than knowledge”¹ (Albert Einstein)

We must acknowledge at the outset that, for most people, IP is either an unknown, misunderstood or mysterious term. Technology and creative arts pervade modern society, yet few actually realize that their daily lives are surrounded by IP creations from which legal rights of all sorts, including their own, arise. Building public awareness of the role of IP is key to fostering a broad understanding of what IP is and respect for the system that promotes and protects IPRs.

What Is Intellectual Property?

IP is the term that describes the ideas, inventions, technologies, artworks, music and literature, that are intangible when they are first created, but become valuable and tangible as they become products. The word “property” is used to describe this value, because the term applies to inventions, works and names for which a person or group of persons claims ownership. Ownership in this context is important because prospect of potential economic gain provides a powerful incentive to innovate. IP, very broadly, means the legal rights which result from intellectual activity in the industrial, scientific, literary and artistic fields.

According to the World Intellectual Property Organization (WIPO) IP shall include rights relating to the following:

- literary, artistic and scientific works,
- performances of performing artists, phonograms, and broadcasts,
- inventions in all fields of human endeavor,
- scientific discoveries,
- industrial designs,
- trademarks, service marks, and commercial names and designations,
- protection against unfair competition,
- and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.”²



Protectable property interests are present in both real property and IP. Real property is a commonly understood concept; it is any physical or tangible property, such as a house, a watch, or a piece of land.³ IP on the other hand is not usually something you can touch, but it exists and has the same value. Copyrights, patents, trademarks and trade secrets are all forms of IP.⁴ IPRs refers to the legal rights that correspond to intellectual activity in the industrial, scientific, and artistic fields. These legal rights, most commonly in the form of

patents, trademarks, and copyright, protect the moral and economic rights of the creators, in addition to the creativity and dissemination of their work.

Different Categories Of Intellectual Property

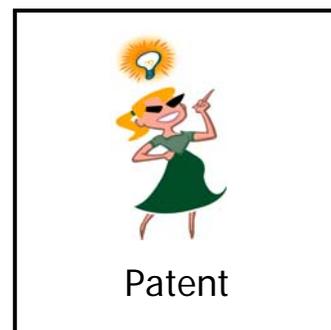
IP is divided into two categories: industrial property and copyright.⁵ Industrial property, which is part of IP, extends protection to inventions and industrial designs. Industrial property includes patents, trademarks, industrial design, and geographic indications of source.⁶ Whereas copyright protects literary and artistic works such as novels, poems, plays, films, musical works, drawings, paintings, photographs, sculptures and architectural designs.⁷

Industrial Property

Industrial property rights make it possible for the creators of innovations (goods, processes, apparatus, etc.) to establish themselves more readily, to penetrate new markets with a minimum of risk, and to amortize the investments made in the research that led to the innovations in the first place. In a practical sense, these innovations become the spearhead of some of the most advanced technology. This is becoming more and more apparent in a modern world increasingly dominated by technology.

Patent (Invention)

A patent is an exclusive right granted for an invention (a product or a process that provides a new way of doing something, or offers a new technical solution to a problem). It provides protection for the invention for a limited period, generally 20 years from the filing date, in the country or countries in which it is patented, in exchange for the inventor's public disclosure of the invention.



Trademark

A trademark or “mark” is a distinctive name, logo or sign⁸ identifying the source of goods or services. Trademarks help consumers distinguish a product or service from one source from those produced by another source. A mark provides protection to its owner by preventing confusion as to source in connection with the distribution of goods or services or licensing others to use them. The period of protection varies, but a mark can remain valid indefinitely through continued commercial use or a registration and renewal process.



What is a Trademark?

- Any word, name, symbol, or device, or any combination thereof -
 - (1) used by a person, or
 - (2) which a person has a bona fide intention to use in commerce and applied to register on the Principal Register established by this Act,
- to identify and distinguish his or her goods, including a unique product, from those manufactured or sold by others and to indicate the source of the goods, even if that source is unknown.

Trademark examples

- single or multiple words
- letters or numbers
- combination
- slogan
- design
- color
- shape of product or container
- building appearance
- sound
- fragrance

Copyright and Related Rights

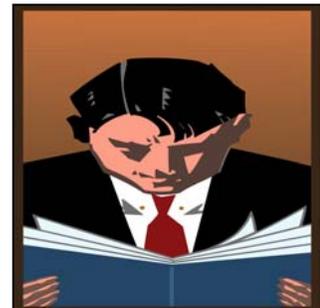
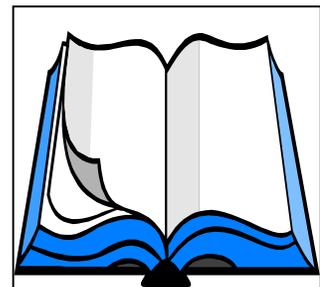
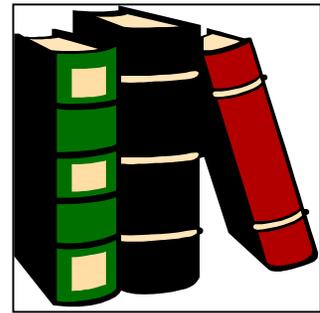
Copyright consists of a bundle of rights given to creators in their literary and artistic works. These creators, and their heirs, hold the exclusive rights to use or license others to use the work on agreed terms. The creator of a work can prohibit or authorize,⁹ for example:

- its reproduction in various forms, such as a printed publication or a phonorecord;
- its public performance, as in a play or musical work;
- its broadcasting, including by radio, television, or satellite;
- its translation into other languages, or its adaptation, such as the adaptation of a novel into a screenplay.

Copyright applies to many different types of artistic works, including paintings, music, poems, plays, books, architecture and choreography, as well as to works that are generally not considered artistic such as computer software, maps and technical drawings.

Related rights are rights that have evolved in the last 50 years or so “around” copyright, and include the right of a performer in his/her performance, the right of a producer of a sound recording in the recording, and the right of a broadcaster in a broadcast.

Many creative works protected by copyright generally require mass distribution, communication, and financial investment for their dissemination (for example, publications, sound recordings, and films). Hence, creators often sell the rights to their works to individuals or companies that can package, market, and distribute the works in return for payment (lump sum or royalties). These economic rights have a time limit according to the relevant WIPO treaty of the life of the author plus 50 years after the authors death. In some countries that term has been



extended to 70 years Copyright may also include moral rights which involve the right to claim authorship of a work and the right to oppose changes to it that could harm the creators reputation.

IPRs have come to occupy an increasingly important position in international trade and development. In the last decade, the importance of IPRs has led to the inclusion of IP provisions in international agreements. IP in itself has always been an integral part of general economic, social and cultural development worldwide, but these new challenges emphasize all the more how globally interlinked national and regional IP systems have become.

IP theft is now one of the foremost international concerns that affect global economies and governments. Although not as high-profile as terrorism, smuggling, human and drug trafficking, infringement and counterfeiting have been feared to weaken legitimate business systems that would result in international economic disasters.¹⁰

Intellectual Property Crimes

IPC are serious crimes in their own right, not typically because they inflict physical injury or death upon a person, but rather because they steal a creative work from its owner.¹¹ IPC refers to counterfeited and pirated goods, manufactured and sold for profit without the consent of the patent or trademark holder.¹² The terms “piracy” and “counterfeiting” are often used interchangeably. However, piracy is generally related to the theft of IPRs by some form of copying the original.¹³ Whereas, counterfeiting is the copying of a product’s trademark or the distinctive way the package looks.¹⁴ IPC involve a wide range of criminal actors ranging from individuals to organized criminal groups and terrorist organizations.

There is now a strong belief that there is an even greater threat posed by the organizations involved in counterfeiting and piracy. IPC includes the manufacturing, transporting, storing and sale of counterfeit or pirated goods. Organized crime involvement in the manufacture, distribution and

sale of counterfeit and pirated merchandise is no longer denied. The link between terrorist groups and IPC is not the focus of this study, however, the following Congressional Testimony helps illustrate the importance of this topic in the context of other concerns with respect to IPC. Ron Noble, Interpol Secretary, gave the following testimony in July 2003:

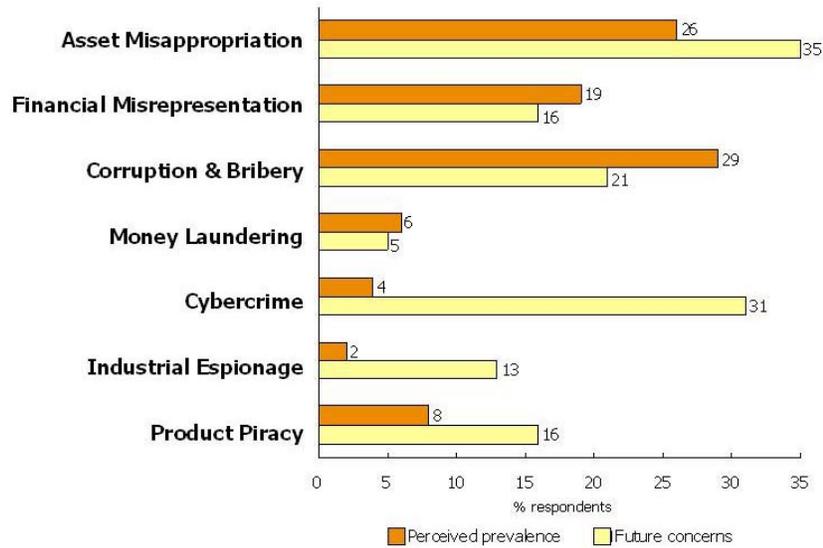
Intellectual Property Crime is becoming the preferred method of funding for a number of terrorist groups. There are enough examples now of the funding of terrorist groups in this way for us to worry about the threat to public safety. We must take preventative measures now. In general, law enforcement does not treat IPC [Intellectual Property Crimes] as a high priority crime. Law enforcement does not always investigate IPC cases. Investigations when initiated often tend to be seizure-based and do not extend to following onward flows of money. Even if law enforcement were to follow onward flows of money, given the high level of cash-based transactions involved, it is difficult to establish with precision the end destination of the financial flows. . . . Terrorist financing is difficult to investigate due to the complex flows of money often in cash form and often laundered. This is facilitated by complicated associations of individuals through which the money transits before becoming available to the relevant terrorist group. All of the above complicates establishing links between IPC and terrorist financing. Furthermore, much of the financing is of an indirect nature and it is difficult to attribute direct links between an individual involved in IPC and funds remitted to a terrorist organization.¹⁵

Future Economic Crime Risks

Few sources exist that report comprehensive and seemingly reliable data on the extent of the problem. The two principle studies chosen for use in this report are studies by PricewaterhouseCoopers and the Brookings Institute due to their quality reputations and the apparent thoroughness of the reports. An independent audit and scrutiny of the data they report is, of course, beyond the scope of this study.

According to the PricewaterhouseCoopers' 2003 *Economic Crime Survey*, economic crime is, and will remain, a costly issue. It is, however, an issue that can be countered by effective controls, a strong culture of prevention and deterrence and assertive action when cases arise. As demonstrated by the below figure, product piracy is one of the future concerns.

**Frauds Considered Most Prevalent
Compared With Future Concerns (worldwide)¹⁶**



Over the course of the past two decades, IP owners have witnessed an explosion in the levels of counterfeiting and piracy, in both the domestic and international arenas. IP theft is rampant but largely silent so corporations and law enforcement alike have trouble grasping its enormous impact on profitability - not to mention on national economies.¹⁷

Because counterfeiting and piracy are illegal, many of the normal elements associated with legitimate business are removed, and as a result, benefits are denied society at different levels. Initially, loss of direct sales revenues is experienced by legitimate manufacturers. The size of such loss is monumental, often beyond our comprehension. Credible estimates of lost sales revenue by legitimate manufacturers are show below.

Lost Sales Revenues In Selected Sectors¹⁸

Industry	Loss of Direct Sales
Pharmaceuticals	US\$12 billion in 1999
Music	US\$4.1 billion in 1999
Computer software	US\$59 billion over five years to 1999

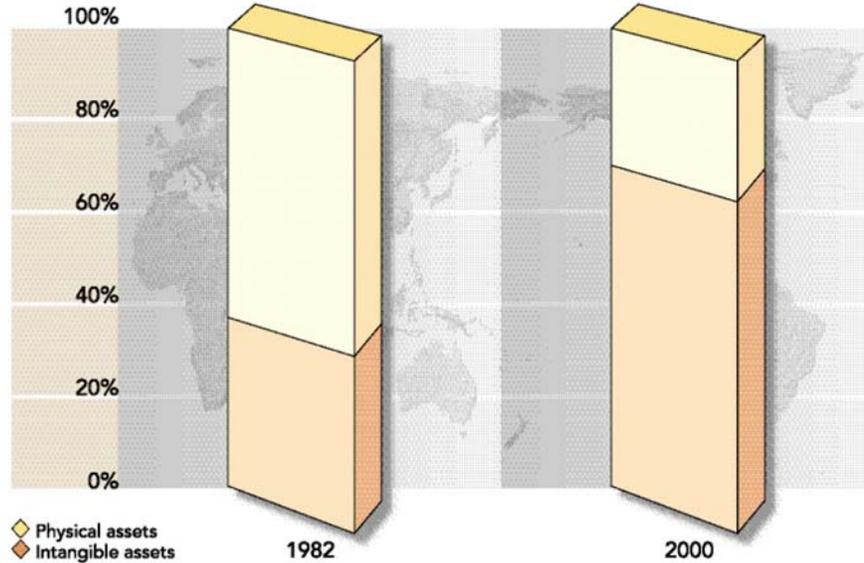
Based on a survey by ASIS International sponsored by PricewaterhouseCoopers and the United States Chamber of Commerce in 2002, 138 large and medium-size responding companies indicated significant losses from IP theft. Analysts estimated that all enterprises represented by respondents lost between \$53 billion and \$59 billion, with 40 percent of respondents reporting an average of two losses each, from proprietary information loss in the previous year. Automation has made it easy to search for, find, access, download and copy voluminous data that can include “the keys to the kingdom” for a business - and its competitors.¹⁹

Hidden Value And Estimated Losses Of Intellectual Property Theft

The bricks-and-mortar economy is being replaced with the economy of ideas in which IP has become one of the major currencies. In the new economy, wealth is generated through creating and capturing the value of knowledge. Throughout the history of human civilization, wealth was based on the possession of physical assets. Today, however, the paradigm has changed, and knowledge has become the new wealth. IP assets are gaining ground as a measure of corporate viability and future performance.

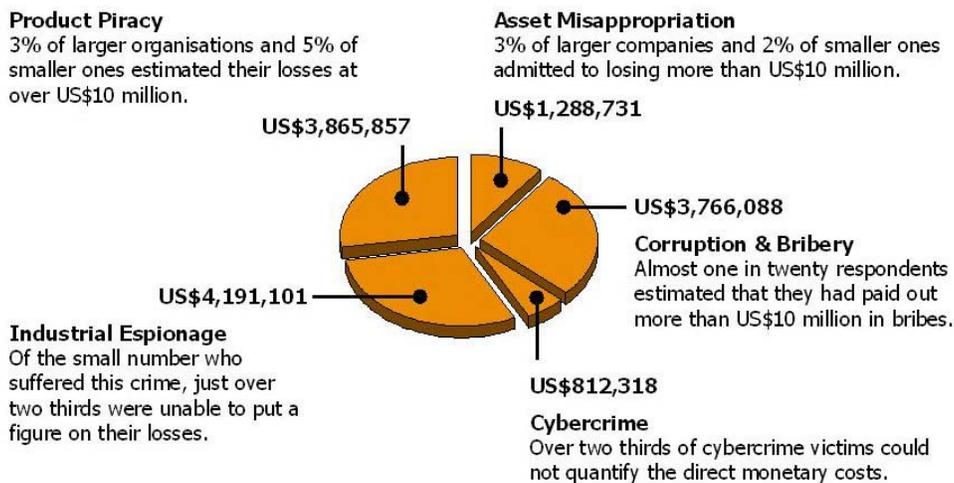
In 1982, some 62 percent of corporate assets in the United States of America were physical assets, but by 2000, that figure had shrunk to a mere 30 percent.²⁰ In 2001, the creative industries, which include theatrical films, TV programs, home video, DVDs, business software, entertainment software, books, music and sound recordings contributed more to the United States economy and employed more workers than any single manufacturing sector, including food and kindred products, industrial machinery and equipment, electronics and other equipment, fabricated metal products, and chemicals and allied products.²¹

US Companies' Intangible Assets As A Percentage of Total Assets²²



It is difficult to get an accurate overview of the worldwide magnitude of the IP theft problem. Those who commit acts of counterfeiting and piracy generally do not file official reports on their sales. Seizures affect only a percentage of the overall market, and the extent of counterfeiting and piracy, including that which occurs in businesses, homes and in private situations, may never be known with certainty.

Average financial loss by type of fraud from 2001 to 2003 (worldwide)²³



The average loss per company from fraud – US \$2,199,930

According to a report by the Counterfeiting Intelligence Bureau, counterfeiting accounts for 5% to 7% of world trade in value terms.²⁴ The immediate impact of this global trade is the loss of sales and the consequent impact upon employment. The United States copyright industry puts its losses due to piracy at between \$12 billion and \$15 billion a year.

The Motion Picture Association of America (MPAA) and its international counterpart, the Motion Picture Association (MPA), estimate that the United States motion picture industry loses in excess of \$3 billion annually in potential worldwide revenue due to piracy. According to the International Federation of the Phonographic Industry (IFPI) sales of illegal CDs account for 14% of the relevant market at world level. In May 2003, the UK music industry reported that sales of pirate CDs have outstripped the sales of genuine products. The major industries which are suffering from the trade in infringing products are: computer software industry (46%), data processing industry (35%), the audio-visual industry (25%), the toy industry (12%), the perfume industry (10%), the pharmaceutical industry (6%), and the clock and watch industry (5%).

In addition to its economic impact, counterfeiting and piracy has a damaging effect upon public health, such as medicinal products, medical equipment, toys, and spare parts for cars and airplanes. Counterfeiting is also rife in sectors involving products which are highly sensitive from the point of view of public health and safety.

Counterfeiting and piracy likewise have damaging consequences for consumers. They generally involve deliberately deceiving the consumer about the quality he is entitled to expect from a product bearing, for example, a well-known trade mark. When he buys counterfeit or pirated goods outside the legitimate trade, the consumer does not as a rule receive any after-sales service or enjoy any effective recourse in the event of damage or injury.

Counterfeiting and piracy also has an adverse effect upon public security, where profits from this trade are appropriated by organized crime, which uses them as a means of recycling and laundering the proceeds of other unlawful activities (arms, drugs, etc.).

Magnitude Of The Problem

Counterfeiting and digital piracy have increased dramatically in recent years and are areas of particular concern.²⁵ Unfortunately, in the area of counterfeiting what was once a localized industry concentrated on the copying of high-end designer goods has now become a massive, sophisticated global business involving the manufacturing and sale of counterfeit versions of everything from soaps, shampoos, razors and batteries to cigarettes, alcoholic beverages and automobile parts, as well as medicines and health care products.

Counterfeiting of such a broad range of products on a global scale affects more than just the companies that produce legitimate products. While it has a direct impact on the sales and profits of those companies, counterfeits also hurt the consumers who waste their money and sometimes put themselves at risk by purchasing fake goods. It also hurts the countries concerned by decreasing tax revenues and deterring investments. In addition, counterfeiters pay no taxes or duties and do not comply with basic manufacturing standards for the health and safety of workers or product quality and performance.

Piracy and counterfeiting of copyrighted products in digital, print (e.g., books, journals and other printed materials) and other analogue formats, as well as counterfeiting of all types of trademarked products, have grown to such a scale because these illegal activities offer enormous profits and little risk for the criminal element of society. Criminals can get into the counterfeiting business with little capital investment and even if caught and charged with a crime, the penalties imposed in many countries are so low that they offer no deterrent.²⁶

Most people when confronted with the problem of counterfeit and pirated products generally conjure up images of products typically peddled by sidewalk vendors -- music CDs, sunglasses, t-shirts, hats, cosmetics, cell phone covers, handbags and watches -- bearing easily recognizable and well known names, marks and logos. Modern day counterfeiting operations, however, are no longer limited to luxury goods and apparel related products. On a more sophisticated and organized level, counterfeiters and pirates are also trading on names and logos often associated with products like razor blades, shampoos, pharmaceuticals, foods, hand tools, auto parts, airline parts, light bulbs, film, skin lotions, laundry detergent, Band-Aids, insecticides, batteries, cigarettes and practically anything else that bears a name that consumers recognize. As infringers become more brazen and as technology provides them with the ability to produce greater varieties and numbers of fake goods, very few industries, if any, will remain beyond the reach of skilled and determined counterfeiters.

Piracy and counterfeiting of copyrighted products in digital format, as well as counterfeiting of all types of trademarked products, has grown to such a scale because it offers enormous profits and little risk for the criminal element of society. These products can be produced and sold at prices much lower than legitimate products, but still deliver attractive profit margins for the infringer because the counterfeit and pirated products are usually made with substandard materials, and undergo little or no quality control or even basic health and safety testing.

Different Types Of Piracy

Digital Technology

Another challenge to IP is digital piracy caused by the ease and speed with which perfect digital copies of books, photographs, music, and film can be made and distributed on the Internet

to anyone, anywhere in the world. Never before has it been so easy to duplicate labels, packaging, documentation, authentication devices and/or symbols/marks/logos with such speed, accuracy and relative anonymity. Perhaps the most maddening part of the situation is that while technological advances in the “digital domain” have made the creation, storage, and marketing of much of IP much better, these same technological advances have made the life of the intellectual-property pirate much better too.²⁷ When digital materials are pirated and trademarks counterfeited, the total product created can appear to the consumer indistinguishable from the original.^{28 29}

With a keystroke from a computer anywhere in the world, criminals can traffic in stolen trademarks or download copyrighted software, music, movies, video games or other works. As technology improves, so do pirating techniques; digitally stored information is easily reproduced creating a “just as good as the original” version.³⁰ With the advent of digital storage and recoding capabilities, audio and video materials can be copied without any degradation in quality (unlike, for example, the audio cassette or video tape) and then distributed to thousands of consumers eager to pay one dollar for what might cost fifteen dollars at the local CD store.

The fight against such illegal distribution of copyrighted materials is being fought with technological weapons, but digital pirates are adept at finding their way through barriers put in place by encryption and copy protection techniques.

Optical Disc Piracy

Optical Disc Piracy is major threat to the audiovisual sector. Pirate optical discs, which include Laser Discs (LD), Video Compact Discs (VCD) and Digital Versatile Discs (DVD), are inexpensive to manufacture and easy to distribute. In 2000, over 20 million pirate optical discs were seized, and by comparison, 4.5 million videos were seized worldwide in the same period.

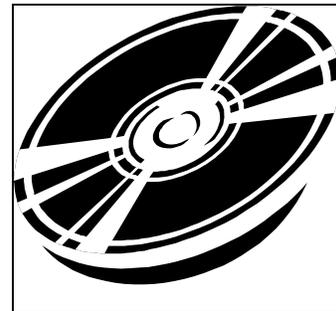
Unlike traditional analog piracy, a digital pirated disc is as pure and pristine as the original. In addition, a production facility can turn out a huge volume of illegal discs in relatively short time. To illustrate this, an average illegal videocassette duplication facility with 100 VCR5 can, in a 10 hour period, produce about 400 pirated cassettes, while pirates with the right CD pressing equipment can produce thousands of perfect VCDs or DVDs daily.

Internet Piracy

Online motion picture piracy is the unauthorized use of copyrighted motion pictures on the Internet. It is illegal to sell, trade, lease, distribute, upload for transmission, transmit or publicly perform motion pictures online without the consent of the motion pictures' copyright owner. Online piracy is a relatively new phenomenon, and, unfortunately, a growing trend.

Downloadable Media

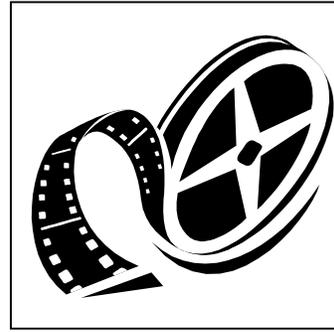
Downloadable Media refers to digital files that allow for motion pictures to be compressed and uploaded for direct download onto a computer. Pirates use Downloadable Media formats to illegally offer and distribute motion pictures to other Internet users. Typically, the pirate host will use illegal VCD copies of motion pictures to create digital copies that are recorded into a computer file. Using online communication



avenues, including chat rooms, Internet Relay Chats (IRC), FTP sites, newsgroups, File Swapping Utilities (FSU5) and Web sites, the pirate offers these files to other Internet users who then download the motion picture file onto their own computers.

Hard Goods

Hard goods piracy refers to the illegal sale, distribution and/or trading of copies of motion pictures in any format, including videocassettes and all optical media product. Illegal hard goods are sold on web sites, online auction sites such as eBay and Yahoo!, and via e-mail solicitations.



Streaming Media

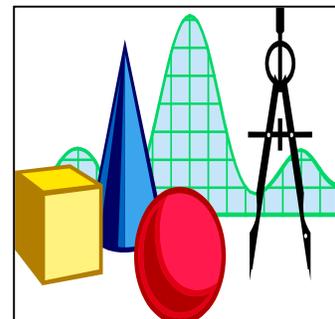
Streaming media refers to the transmission or transfer of data that is delivered to the online user or viewer in a steady stream in near real time. Similar to hard goods and downloadable media, It is illegal to stream copyrighted content without the express authorization of the copyright holder.

Circumvention Devices

A circumvention device is any physical medium or digital file that allows for the circumvention of content protection devices put on films, videos, discs, etc. to secure the copyrighted content. One such Circumvention Device is the unauthorized, so-called software utility DeCSS. Any person that has the DeC55 utility can use it to break the copy protection on DVDs making it possible for motion pictures in DVD format to be decrypted and illegally copied onto a computer's hard-drive for further distribution over the Internet or otherwise, in perfect, digital format. Other common circumvention devices include "black boxes" and other illegal signal theft devices and macrovision defeaters.

Signal Theft

Signal theft refers to the act of illegally tapping into cable TV systems as well as receiving satellite signals without authorization. In addition, pirates have made businesses out of

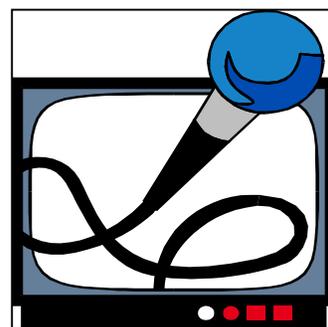


supplying consumers with illegally tampered cable decoders or satellite descramblers.

Internationally, the problem becomes more acute when programs not licensed to a particular country are pirated from satellites and then re-transmitted in that country either by cable or broadcast TV.

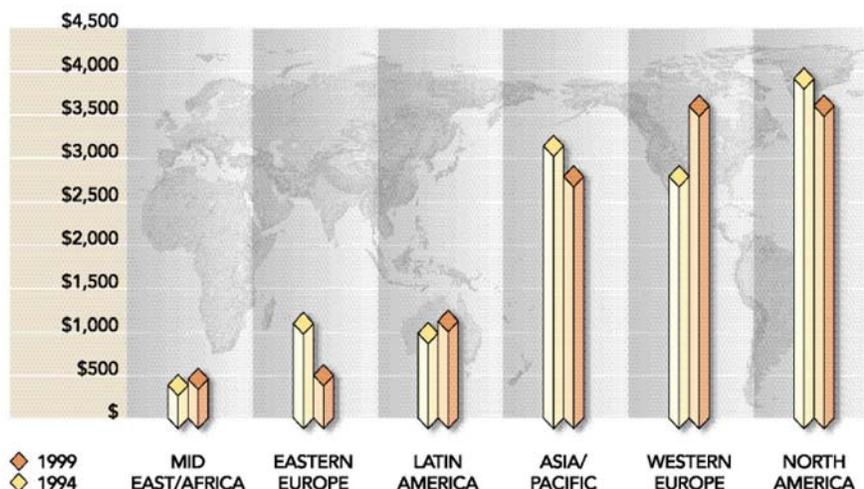
Broadcast Piracy

Like signal theft, broadcast piracy is also defined by piracy that occurs on over-the-air broadcasts. However, instead of stealing signals, the illegal act may be the on-air broadcasting of a bootleg videocassette of a film or the on-air showing of legitimate films or television programs without permission from the copyright holder.



Regional Overview of Piracy

Software Piracy Losses by Region (US\$Billions)³¹



The global piracy rate for PC business software applications was an astounding 36 percent according to the Global Software Piracy Report. However, it was 49 percent in 1994, a decline of 13 percentage points in five years. Notwithstanding the percentages, the industry calculates that it lost US\$12 billion in 1999³², a staggering amount, especially when one

compares that number, for example, to the budget of the United Nations, which was US\$2.54 billion for the 2000-2001 biennium.³³

North America

In 2000, approximately 350,000 illegal videocassettes and 4,000 VCRs were seized. The majority of camcording in theaters in the US is conducted out of the New York City area. In addition, this is where the majority of large-scale video laboratories are located.

Asia/Pacific

In 2000, approximately 17 million pirate optical discs (predominantly VCD5) were seized in this region alone. Recently, illegal DVDs have been produced and distributed as well. The connection of organized crime to pirate syndicates in this part of the world makes battling optical disc piracy ever more difficult, and dangerous.

Notable hubs for optical disc piracy in Asia/Pacific include Malaysia and Taiwan. The International Intellectual Property Alliance (IIPA) identifies Malaysia as a major producer and supplier of pirated video compact discs (VCD5) to the region and throughout the world. Despite several concrete measures adopted in the past year to reduce the piracy levels, including the passage of new optical disc legislation and numerous raids on street vendors who sell pirated goods, Malaysia continues to be a hub for international piracy. In particular, Malaysia has done little to address wholly inadequate criminal enforcement against copyright infringers. Copyright theft is considered lightly by the courts, and violators are often sentenced to misdemeanors.

In Taiwan, while the Taiwanese authorities have made positive developments in enforcement, particularly raids against optical disc factories, Taiwan needs to accomplish more in the area of legislation for optical disc licensing and the control of optical disc manufacturing equipment.

In addition to optical disc piracy, signal theft is a continuing burden on legitimate businesses and the local economy in countries such as the Philippines and India while videocassette piracy remains a threat in markets such as Japan.

In Australia, the parallel importation of film industry products, especially DVDs, is steadily increasing. Illegal parallel importation is adversely affecting the legitimate theatrical and video markets in the area.

Europe, Middle East & Africa

Traditional video piracy remains the major problem in this region despite increased seizures of pirated optical discs and the rapid spread of pirate activities on the Internet.

Turkey now faces the largest pirate VCD problem in Europe. The problem has moved from one of exclusively imported products to a situation where pirate VCDs are also being produced in-country. Turkey's legislation, enforcement mechanisms and court system are inadequate to curb pervasive piracy. To compound matters, a general amnesty in April, 2000, nullified all 174 criminal cases that had been initiated against pirates following pre-April 1999 raids.

On the policy level, the European Parliament is undertaking an important examination of new threats to the legitimate audiovisual sector including optical disc piracy and Internet piracy. Internet piracy is currently most notable in Germany, while "Smartcard" and "black boxes" present acute problems for the legitimate cable industries in the UK and other parts of Europe.

Estimated Proportion of Counterfeit and Pirated Products³⁴

Organization	Estimate
World Customs Organization	Around 5% of all world trade
European Commission	Between 5% and 7% of world trade – representing EUR 200 to 300 billion a year in lost revenue
Organisation for Economic Co-operation and Development	More than 5% of world trade

Counterfeiting/Piracy in the European Single Market³⁵

Sectors Concerned	Rate of Counterfeiting/Piracy
Data processing	39%
Audiovisual	16%
Textiles	10-16%
Music	10%
Vehicle spare parts	5-10%
Sport and leisure	5-7%

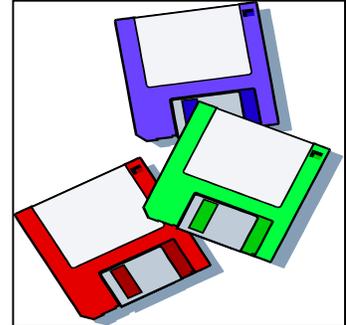
In addition, despite recent progress, Russia continues to have one of the worst piracy situations in the world. In 2000, the Russian Anti-Piracy Organization seized over 655,000 pirate videocassettes and over 171,000 pirate CD-ROMs containing films in MPEG4 format. These seizures point to sophisticated organized criminal groups controlling the duplication and distribution of pirate product. Russia has continued to do little to address wholly inadequate criminal enforcement against copyright infringers.

The Middle East has traditionally been plagued by inadequate sentencing for copyright violations.

Typical Affected Products

Computer Software

This is the most affected of all products and industries touched by counterfeiting and piracy. In their Global Software Piracy Report, the Business Software Alliance (BSA) and the Software & Information Industry Association (SIIA) report findings that are disheartening but also encouraging.³⁶



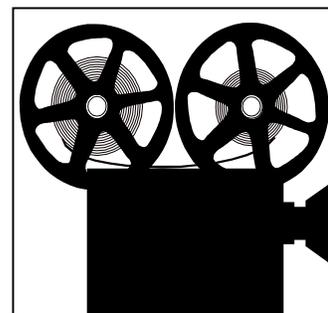
Music

The music industry is also heavily affected, reflecting the underside of the digital revolution. In its Music Piracy Report of 2000, the International Federation of the Phonographic Industry (IFPI) reported that in 1999 the global pirated music market was estimated to have totaled 1.9 billion units. CD piracy increased to 500 million units, leaving music cassettes to account for 1.4 billion pirated units. The report notes that CD-recordable units made a significant impact.³⁷ The cost of this piracy was an estimated US\$4.1 billion. It is slightly less than in 1998, reflecting lower prices for illegal recordings and lower sales of illegal music cassettes. The report does note that world capacity for optical disk manufacturing rose 28 percent in 1999, and increased more than 340 percent over the prior five years. Internet piracy rose dramatically in 1999. While it is almost impossible to ascertain the exact number of illegal downloads via the Internet, Forrester Research estimated that there were more than one billion illegal downloads of music files in 1999.³⁸



Films

The counterfeiting and piracy of films and other audiovisual productions occur in two basic forms: illegal diversion of cable and satellite delivery and physical copies, generally in the form of videocassettes. Focusing only on the sale of physical copies, the



Motion Picture Association (MPA) estimated that worldwide video piracy costs American motion picture companies US\$2.5 billion a year in lost revenues.³⁹ The Organization for Economic Cooperation and Development (OECD), in its report *Economic Impact of Counterfeiting*, estimated that the video piracy rate for some countries can reach almost 100 percent.⁴⁰

Luxury Goods And Fashion Wear

Counterfeit copies of luxury goods, especially fashion wear, proliferate, most notably in Europe where the major manufacturers are located. One common technique in this area is to import the fake clothing or items from one country, and to manufacture or import the labels from another. The fake labels are attached in the country of intended sale, thus making it much more difficult to identify fake goods in transit while these goods are in sufficiently large quantities to justify governmental enforcement action. One major source of these fakes are legitimate subcontractor manufacturers, facilities which are legitimately authorized to manufacture original items, but who manufacture far in excess of the ordered amount, and sell the overruns out the back door at greatly reduced prices. Overruns create a sort of gray market, they are items illegitimately manufactured by a legitimate manufacturer, which are illegitimately sold or placed in the stream of commerce. Such overruns are essentially counterfeit goods which negatively affect the economy.⁴¹

Sportswear

The 1990s saw a huge upsurge in all things sports-related. Counterfeit sports wear is facilitated by several factors. The biggest segment of the market for these items is the youth market, the segment most willing to buy, even search out, counterfeit goods with well-known brand names at lower prices. The market for these items is also easily reachable, since, to a large extent, it centers around major events, particularly sport and music events. Mobile vendors of counterfeit goods are present in numbers at these events, and evidence suggests that these vendors are internationally organized and funded. Because they generally carry small inventories to these events, governmental authorities are restrained from putting a heavier emphasis on, or using more resources against, them. Another factor which helps this area to prosper is that buyers mostly just want the brand name; counterfeiters can easily attach fake labels onto ordinary clothing, and there-by satisfy large numbers of the youth market.⁴²

Perfumes

Perfume products are generally sold in established retail outlets, which lend price stability and authenticity to the market. However, the industry is experiencing attacks from counterfeiters and estimates that its losses in this area are greater than 5 percent of its total turnover. A willing public will generally purchase counterfeit perfumes from smaller shops and street vendors at so called bargain prices where it is often claimed that the goods are stolen but are the real thing.

Toys

The toy industry can be divided into traditional toys and the rapidly growing electronic toy industry. Traditional toys are often copied and then sold under different names and trademarks, rendering infringement actions close to impossible. Electronic games are an ever

more serious problem. Video games, such as those created for the handheld Nintendo best seller, the Gameboy™, are copied and sold in huge numbers.⁴³

Aircraft Components

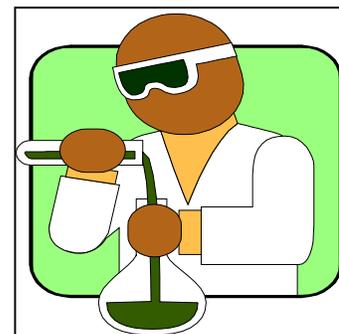
Despite the fact that the legitimate market for aircraft parts is a heavily regulated industry, counterfeit aircraft parts slip into the chain of supply and distribution and can result in death and injury. The origin of counterfeit aircraft parts, where it can be ascertained, indicates that, with respect to accidents in the United States of America caused by such parts, more reported incidents involved parts produced in the United States of America than in other areas of the world.⁴⁴

Automobile Components

This is an emerging growth area for counterfeiters, who target short-duration products, such as standard parts which are or can be sold off the shelf, or which can be fitted to different makes and models of automobiles. Such parts are less likely to carry any security device or anti-counterfeiting technology. The industry estimates its losses from counterfeit parts to be US\$12 billion per year, with the vast majority of that taking place in Europe.⁴⁵

Pharmaceuticals

Because of the dramatic effects which counterfeit pharmaceuticals can have on public health and safety, including the death of unsuspecting victims, this is an area which currently receives more attention than ever before. The problem of counterfeit drugs and medicines is most acute in certain developing countries, where there might not exist a regulatory infrastructure to prevent or curb the problem. According to a recent OECD report on counterfeiting, the main factors underlying the problem of counterfeit pharmaceuticals



in developing countries are “weak drug regulatory control and enforcement; scarcity and/or erratic supply of basic medicines; uncontrolled distribution chains; large price differentials between genuine and counterfeit medicines; lack of effective IPR protection; lack of regard for quality assurance; and corruption of the health care system.”⁴⁶ It is estimated by the WHO that 6 percent of worldwide pharmaceutical sales are counterfeit, and that up to 70 percent of all medicine sold in some countries is counterfeit.⁴⁷

Watches

It is estimated that 5 percent of global trade in watches is counterfeit. It is interesting to note that in some countries, such trade creates a barrier to the sale of legitimate products. The difficulties encountered by some governments in enforcing IPRs, and the public perception in some quarters that such counterfeiting is business as usual, all serve to hamper any efforts to beat back the illegal trade.⁴⁸

Why Counterfeiting And Piracy Are On The Rise

It appears there are two channels for counterfeiting and piracy: clandestine channels and normal commercial channels. The clandestine channels are by definition organized outside the regular market (black market), i.e. in the street, in markets, by correspondence or via the Internet. There are also normal commercial channels, where genuine products are sold alongside counterfeits. An area in which this bifurcated trade occurs, is the so called “grey goods” market in which legitimate branded products are sold as parallel imports. Since parallel products are obtained outside legitimate distribution channels, this trade lends itself to the introduction of counterfeit products.

Manufacturing now accounts for more than 75 percent of total world exports.⁴⁹ Manufacturing is a value-adding process. While manufacturers are constantly adding value to

existing products, they are, at the same time, creating new products; and this creates market demand. By increasing market demand for their products so effectively manufacturers are also, unintentionally, creating a market for counterfeit products, which are almost always lower in price. Manufacturers are thus victims of their own success. Price differences between various markets, which are often strategically segmented by manufacturers and distributors, are reflected in pricing policy, underscoring a significant gap in consumer purchasing power in different countries. This policy often drives people to produce and distribute counterfeit goods in their local market. As counterfeiting activities have become rampant, counterfeiters create distribution channels and establish an economic and even political presence in society. Some economies are supported by these activities which create local job opportunities.

Emerging markets are producing an increase in demand of startling proportions for well-known products, which legitimate manufacturers have been unable to completely satisfy. This extraordinary demand for goods and products has outstripped the abilities of the enforcement agencies to monitor and protect against counterfeit products.

Certain new technologies have allowed easier reproduction of IPR bearing products and goods and facilitated the reproduction of products in nearly every field where there are eager customers or market demand for the legitimate products. Cultural products, such as music, films, computer products, and literary products, are easily reproduced and foisted onto the public, facilitated in large part by new technologies.

International trade has increased substantially in the past few decades, for several reasons, including: standardized rules and remedies applicable to the multi-lateral trading system; increased telecommunications capacities; the rise of the Internet; and the effectiveness of manufacturers in branding their products, creating market demand, and producing products

which are designed to satisfy that market demand. Increased worldwide demand for goods and products and a corresponding lack of proportional increase in worldwide enforcement mechanisms needed to support that demand and production, such as customs, police, and judiciary, allow for cracks and niches in the system. Counterfeiters are right there, ready to fill those cracks with counterfeit goods.

The principal cause of piracy and counterfeiting is the incentive to unscrupulous traders of the considerable business profits which may be made from free-riding on the creative efforts and investment of others, by passing off imitations of desired products at a lower cost than those which are incurred by the producer of genuine products. Obviously, this trade would not exist without consumer demand and the public perception that piracy and counterfeiting are innocuous infractions. The theft of IP is not yet, equated in the public mind with other offences against property, crimes, such as fraud, theft or trespass. This is exacerbated by (i) a failure of the public authorities and commercial organizations to communicate to the consuming public of the dangers from the use of unauthorized products and of the deleterious social welfare effects from this trade; and (ii) the imposition of inadequately deterrent penalties by the judicial authorities.

Piracy is a continually evolving crime. Traditionally, piracy operations were small, often run by individuals or a loose collection of people trying to make a quick buck in what has been perceived to be a fairly risk-free criminal enterprise. However, in recent years, this has changed. Piracy is now a big business, a world-wide, multi- billion dollar illicit economy which robs legitimate industries and creators of income, while driving up costs for consumers.⁵⁰

IACC's "Special 301" Report To The United States Trade Representative

The IACC is the largest multinational organization representing exclusively the interests of companies concerned with IP enforcement, i.e., product piracy and counterfeiting. Its

members consist of approximately 150 corporations, trade associations, and professional firms and represent total revenue of over \$650 billion. The IP owners represent a cross-section of industries, consisting of many of the world's best known companies for the various products that they develop, manufacture and distribute in the entertainment, automotive, pharmaceutical, motion picture, consumer goods, personal care, apparel and other product sectors.

In the results of its 2004 "Special 301" annual review, the International Anti-Counterfeiting Coalition (IACC) found "significant concerns" with dozens of countries, including key trading partners. In the IACC's last two Special 301 submissions to the United States Trade Representative (USTR), its member companies identified 30 countries around the world that pose the greatest problems in the manufacture, distribution (import/export) and sale of counterfeit and pirate products. In addition, the products that are targeted by counterfeiters in today's global market place is, at times, shocking because of the reckless disregard counterfeiters have for consumers in their effort to profit off of famous trademarked goods.

In an effort to prevent pirating in developing nations during the 1990s, the United States Trade Representative (USTR) began tying IP protection provisions to trade statutes and regulations.⁵¹ Additionally, the USTR began identifying and targeting countries which offered inadequate protection for IPRs.

In its 2004 review, USTR categorizes the most egregious offenders as "Priority Foreign Countries," naming Ukraine, China and Paraguay to that category. Other problem countries were placed on the "priority watch list" or "watch list."

Priority Foreign Countries

Ukraine

The Government of Ukraine must address its corruption issues. Indeed, the issue of IP enforcement is plagued by a corruption problem that was recently summed up in the following manner:

Police corruption is so bad that some confiscated pirated goods are actually sold by the authorities... . Organized crime gangs use Ukraine as an important base to manufacture pirated goods.⁵²

Ukraine has demonstrated an unwillingness to take any measurable steps to combat counterfeiting and piracy. The Government needs to enact aggressive IP laws and implement the laws through enforcement actions. Moreover, it must address its underlying corruption issues that plague its system.

According to IACC Ukraine should:

- Confront organized crime and corruption on all levels;
- Implement an aggressive IP enforcement legal and regulatory framework; and
- Take enforcement actions to apprehend infringers, seize and destroy goods and the equipment used to produce such products.⁵³

China

In 2003, China did not appear to make any substantial progress in either controlling counterfeiting or implementing reforms to do so. China continues to pose the greatest threat to IACC members' IP assets as compared to other countries in the world. Based on available statistics and reports from IACC members, China has no equal either as a source of counterfeit and pirated goods to the world or as a market in which fakes are produced and sold locally.

Despite significant improvements in China's IP legal regime over the last few years, which was

noted by IACC in its previous filings, the enforcement system continues to be fraught with weaknesses and inefficiencies that facilitate massive counterfeiting and piracy.

As in the past, it is not a question of what is counterfeited in China, but what is not counterfeiting in China.⁵⁴ The fundamental illegal activity of counterfeiting in China becomes much more heinous because of the counterfeits that pose significant public health and safety concerns. The list below is a snapshot of the types of products counterfeited in China:

- Batteries
- Razors
- Medicines
- Shampoo
- Cigarettes
- Auto parts (e.g., oil filters, headlamps, windshields, brake pads, spark plugs)⁵⁵
- Industrial valves
- Vision wear
- Apparel
- Air compressors
- Portable tools
- Power strips
- Extension cords
- Footwear⁵⁶

Paraguay

Trademark and copyright owners report the still open border as contributing to a continental problem as Paraguay is a destination country for illicit goods, facilitating in-transit movement of goods and exporting illicit products. While the tri-border area is most often the focal point of cross-border trade, IACC members report Paraguay's increasing influence on the trade in counterfeit and pirated products to other countries such as Bolivia and Peru.

For any border enforcement system to have any impact on the illicit trade in counterfeits and pirated goods, the relevant authorities will need to have the authority to take enforcement actions against imports, exports and goods in-transit, similar to the type of powers our trading partners are expected to provide under recent bilateral free trade agreements. The lack of

criminal prosecutions in Paraguay and the fully inadequate measures at the border translate into a system that generally fails to provide IP protection.⁵⁷

IACC's Priority Watch List

Canada

Canada's counterfeiting and piracy is growing. A December 2003 Canadian Broadcasting Company program, following an IP attorney working on behalf of toy and luxury brand owners, found counterfeit goods openly displayed in shops located in malls -- not unlike China.⁵⁸ Counterfeit and pirated products are now openly available in Canada at malls, department stores and national chain stores.⁵⁹ The open display and sale of counterfeit and pirated products is a clear sign that there is little or no fear that the authorities will take actions.

Counterfeit and pirated goods in the Canadian market includes:

- Batteries
- Cell phones
- Electrical products
- Artwork
- Toys
- Software
- Luxury, designer leather goods and accessories
- Wearing apparel
- Cigarettes
- Printer cartridges
- Shampoo⁶⁰

According to IACC, Canada's need to:

- Enact border enforcement legislation that facilitates ex officio customs enforcement rather than infringement;
- Impose higher penalties for IP crimes;
- Provide information to IP owners so that cases on the merits can be initiated;
- Improve communication and information (intelligence) sharing across government agencies (RCMP and customs);
- Improve enforcement training and promote understanding of IP crimes as a public offense deserving RCMP resources for criminal investigations; and

- Instruct the prosecutors, federal and provincial, to make greater efforts to pursue trademark counterfeiting and copyright piracy cases.⁶¹

India

Copyright and trademark owners experience significant piracy and counterfeiting problems in India as well as procedural obstacles in obtaining protection and enforcement of their IP. While many industries are being injured by counterfeiting in India, the pharmaceutical and auto industries confront high levels of counterfeiting. The issue of counterfeit medicines has been internationally highlighted as a result of the recommendation to impose the death penalty on counterfeit pharmaceutical manufacturers. Whether or not the death penalty becomes law in such cases, it underscores the problem of counterfeit medicines, which must be addressed through improved enforcement, i.e., investigations and timely prosecution of those involved in these operations.

Enforcement efforts in India are difficult due to the fact that law enforcement is not well informed about IPC and does not consider IP violations as worthy of their time and resources. Moreover, the judiciary lacks sufficient knowledge about IP crimes, and, to the extent IP cases are heard, the sanctions imposed do not deter IP crimes.

According to IACC, the Indian Government must do the following:

- Provide training and education for police, prosecutors and judges regarding the investigation, prosecution and hearing of IP crimes;
- Establish an IP enforcement system that requires interaction among enforcement agencies having responsibilities in IP enforcement;
- Establish a border enforcement system aimed at stopping counterfeit exports as well as imports; and
- Impose sanctions sufficient to deter criminal IP theft.⁶²

Lebanon

There is lack of copyright protection in Lebanon. Lebanese sources have attempted to highlight the efforts of the Lebanese courts to impose severe penalties for copyright

infringements, citing the imposition of criminal penalties on an engineering firm for the use of pirated software.

Despite the possibility that some progress may have been made to combat some types of copyright piracy, other types of copyright piracy as well as trademark counterfeiting and infringement continue. For example, auto industry representatives report levels of counterfeit parts in the Lebanese market at approximately 20 percent. Other copyright members report significant ongoing domestic piracy and production of pirated goods within Lebanon. An unregulated CD factory producing pirate product continues to operate outside of Beirut with no inspection or enforcement being done by the Lebanese authorities. Pirate entertainment products can be found everywhere in retail locations of all levels of Lebanon.

There is little deterrence against piracy or counterfeiting in the country and inadequate laws to address these chronic problems. For example, cases initiated by the auto industry have resulted in bad outcomes that have prompted questions about the judiciary and the parties involved in auto parts counterfeiting. Examples include two cases that were taken to court. Both cases were pursued civilly and criminally.

In one of the cases, the Ministry of Economy was petitioned to permit release of counterfeit goods for sale conditioned upon the removal of the offending trademarks. The counterfeit goods would be repacked into packaging not bearing any offending marks. By making the goods appear generic, the counterfeit goods were converted to goods that could be offered in the market place. In the second case, the Court of Urgent Matters lifted its seizure order based on the same type of request, i.e., permitting the return of goods upon removal of the offending trademarks.⁶³

Malaysia

Optical media piracy remains widespread in Malaysia. In addition, there is slow judicial process and weak prosecutions. Despite aggressive enforcement steps taken by the Malaysian Government in 2003, IACC members continue to report that Malaysia is a major source of pirated and counterfeit goods. Malaysia's optical disc law went into effect in September 2000. One of the primary objectives of the law is to control optical media replication in the country. It is also intended to regulate licensing and manufacture of optical discs. The law includes provisions for significant fines and prison terms. Unfortunately, the process for prosecuting defendants is slow and ineffective and provides little deterrent effect. The criminal enforcement system is wholly ineffective in dealing with piracy.

Trademark counterfeiting is also a major problem in Malaysia and impacts a broad range of industries. Some of the injured industries includes:

- Optical media;
- Apparel and luxury goods;
- Tobacco;⁶⁴
- Mobile phone batteries;⁶⁵
- Electrical items;
- Toys;
- Batteries; and
- Health products.⁶⁶

Mexico

IACC members report continued high rates of counterfeiting of their trademarked products in Mexico. In addition to the familiar products that are counterfeited in large quantities such as apparel, footwear, headwear, leather goods, medicines⁶⁷ and office products, IACC members report that electrical products bearing counterfeit marks are also found in the Mexican market. In the electrical products sector, the IACC member reports seizures of over \$600,000 in such counterfeit goods, which is not much when compared to the overall amount of counterfeits

detected and seized in Mexico, but may signal the beginning of counterfeits in a new product area that was not a focal point in the past.

Despite members' attempts to shut down producers and sellers of counterfeit goods, the offenders are free to open up new operations practically next door to the shut down locations. Members find Mexican-sourced goods crossing the border into the United States and Canada as well as other countries.⁶⁸

After years of citing the counterfeiting and piracy problem in Mexico, the IACC and its members question the extent to which the Government of Mexico has control over the criminal elements involved in counterfeiting and piracy.⁶⁹

Philippines

There is an explosion of optical media piracy exports, an abundance of counterfeit products both produced in and exported from the Philippines, ties to organized crime, large numbers of counterfeit pharmaceuticals and high piracy levels for books, cable television and software. As part of its report, the United States Government urged the Philippines to enact appropriate optical media legislation, criminally prosecute (IPRs) violators, expedite pending IPRs cases, implement deterrent penalties and become a party to the WIPO digital copyright treaties.⁷⁰

IACC members continue to cite unacceptably high piracy and counterfeiting levels, millions of dollars in lost revenue, significant judicial delays, and an overall failure to crackdown on IPRs violators. For most IACC members, their IP theft problem in the Philippines either stayed the same or worsened in 2003. According to one United States government official, the Philippines is the seventh leading exporter of pirated goods to the United States.⁷¹

Poland

Poland's lack of political will to stop blatant piracy and counterfeiting, especially in notorious locations such as the Warsaw Stadium is a major concern. IACC members have indicated that they have seen little or no change in the situation in Poland regarding piracy and counterfeiting.

The Polish border is open to imports and exports of counterfeit goods that range from counterfeit medicines to cosmetics products, both having potential health risks for consumers. Asian-sourced counterfeit pharmaceutical products have been found imported into Poland by member companies as well as counterfeit spirits while counterfeit cosmetics products are exported to countries in the region.⁷²

Russia

Russia has been placed on the Priority Watch List, due to its ineffective enforcement of its copyright and trademark laws, the presence of numerous pirate optical media manufacturing facilities, and the need to combat organized criminal syndicates involved in IP theft.

IP owners continue to believe that piracy and counterfeiting in Russia pose as great a threat to their business as the illegal practices in China. Additionally, the involvement of organized criminal elements in the illicit IP trade within Russia is such a threat that many brand owners are concerned for the personal safety of their enforcement representatives and, at times, refrain from taking more proactive measures to protect their legitimate rights. The problem has reach epidemic proportions . Indeed, in November 2003, the President of the Russian Chamber of Commerce reported at an international conference that the "shadow market of commodities in Russia amounts to 30 - 40 percent of the country's GDP."^{73 74}

IACC's Watch List

Japan

A significant amount of counterfeit and piratical goods are offered for sale in Japan through internet auction sites such as “Yahoo! Auction” operated by Yahoo Co., Ltd. (“Yahoo Japan”). Yahoo offers the second largest internet auction site in the world after “eBay” and trademark/copyright owners have been concerned for some time about the volume of counterfeit/piratical goods transacted through Yahoo! Auction sites.

Japan must take the following actions:

- Assess whether current procedures relating to obtaining the identities of IP violators who offer counterfeit and pirate merchandise via internet auction sites are adequate and equitable;
- Take measures to better ensure the timely circulation of enforcement information relating to IPRs among all customs branch offices in a timely and uniform manner;
- Comply with TRIPS Article 55 by providing the appropriate number of working days so that IP owners are not denied time to arrange inspection of samples
- Clarify any irregularities or confusion regarding the need for inspectors to produce powers of attorney documentation; and
- Exercise flexibility at customs regarding in-person examination when customs knows goods are counterfeit.

Panama

Significant quantities of counterfeit and pirate products continue to pass through the Colon Free Zone, a key transshipment point for counterfeit and pirate products to points throughout the world. While both Customs and the Colon Free Zone authorities support brand owners' efforts against IP theft, the lack of personnel, coordination and resources prevent them from being more effective.⁷⁵

Romania

Romania was placed on the Watch List, due to piracy problems, poor border enforcement, lack of resources dedicated to IP theft and low priority given to IP theft by regional

and local authorities, prosecutors and courts. Unfortunately, these issues continue to make IP enforcement a significant challenge in Romania.⁷⁶

Turkey

Turkey was placed on the Watch List in 2003, due to several issues including the counterfeit trademark issue and Turkey's weak domestic and border enforcement. In addition, copyright piracy issues persist in Turkey. The situation in Turkey is basically unchanged from 2003. Large amounts of counterfeit apparel still fill the Turkish market. IACC members report that counterfeit jackets, shirts, belts, and labels are to be affixed to goods have been detected in Turkey. In addition, members report that Turkish made products are found in Europe and are being exported to the United States. There are estimates that in the counterfeit apparel sector, 25 percent of the domestic market is counterfeit. In addition, as reported last year, large volumes of counterfeits are being exported. Turkey is a major supplier of counterfeit designer brands to Russia and other parts of Eastern Europe. The Turkish counterfeiting industry is also producing counterfeit medicines, including Viagra, film, cosmetics, detergents and soaps.

A major problem in deterring counterfeiting and piracy in Turkey is the lack of deterrent penalties imposed against IP violators. Interestingly, one explanation for the lack of deterrent penalties being imposed was provided by the director of a Turkish book publisher's organization claiming that the courts believe the sentences are too harsh because an individual caught with a counterfeit CD could go to jail for several years. While it might be implied that if lighter prison terms could be imposed the courts would be more willing, the degree of counterfeiting and piracy in Turkey warrants severe penalties for those involved in the manufacture and distribution of the illicit goods found in Turkey.

Despite the IP owners' ability to interest the police in conducting raids, the lack of criminal convictions in Turkey simply promotes counterfeiting and piracy because the activity is viewed as criminal activity tolerated by the courts. This has a negative effect on law enforcement as they see the lack of convictions as a disincentive to take action.⁷⁷

Technological Advances And Its Impact On Intellectual Property Law and Policy

Due to today's sophisticated global economy --with its easy and widespread access to technological advances such as computers, copiers and scanners -- there are virtually no product lines, corporations, or consumers that can escape the reach of counterfeiters and/or pirates.

IP is on its way to becoming the ultimate assets.⁷⁸ What has caused this transformation is the advent of the so-called knowledge economy supported by the Internet, which completely changed the coverage, amount, and speed of access to information (from which knowledge can be made).

Technological advances have made IP-type counterfeiting easier, as well, because most pirated audio, video, and software is accompanied by paper-based printed material (including any trademark), which is easily reproducible (both qualitatively and quantitatively) by modern printing techniques.⁷⁹ Ease of replication clearly present the most significant threat to the effectiveness and enforceability of copyright law. The advent of the compact disc clearly accelerated this phenomenon as it provided the pirate, or more accurately the criminal, with the ability to produce near perfect illegal recordings in the millions. And the recent development of cheap recordable optical discs has created another means of illegal mass duplication.

The Internet

The Internet has opened up vast new opportunities for both legitimate business and cybersmuggling crime. The card table pirate, who used to sell to dozens of customers at flea

markets, now reaches millions through Internet auction sites and e-mail Spams. Counterfeiters, including organized criminal groups and terrorist organizations, have discovered that if you do not have to pay anyone for the research and development of those programs, selling them is a high margin and low risk position.⁸⁰

Throughout the world, countries have begun to recognize the importance of the Internet as a vehicle for economic expansion. However, despite the promise that the Internet holds for innovative and creative industries, it also creates significant challenges, as it serves as an extremely efficient global distribution network for pirate products.⁸¹

Enforcement Measures

In order to realize the enormous potential of the Internet, a growing number of countries are implementing the World Intellectual Property Organization (WIPO) Internet Treaties and creating a legal environment conducive to investment and growth in Internet-related businesses and technologies.⁸² An important first step in the fight against Internet piracy was achieved at the WIPO when it concluded two copyright treaties in 1996: the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), referred to as the WIPO Internet Treaties. These treaties help raise the minimum standards of IP protection around the world, particularly with respect to Internet-based delivery of copyrighted works. They clarify exclusive rights in the on-line environment and specifically prohibit the devices and services intended to circumvent technological protection measures for copyrighted works. Both treaties entered into force in 2002.

These treaties represent the consensus view of the world community that the vital framework of protection under existing agreements, including the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), should be supplemented to eliminate any

remaining gaps in copyright protection on the Internet that could impede the development of electronic commerce.

E-Commerce

E-commerce has already begun to have an extraordinary impact on the architecture of our markets and regulatory structures, and to raise issues that implicate different sectors of legal interest. As IP systems have been independently developed in different countries on the fundamental principle that each state has sovereignty over IP protection and enforcement within its territory, the international dimensions of e-commerce and the IP-related questions emerging from it complicate the development of solutions and caution against national interventions that would ignore potential cross-border impacts. They also have horizontal implications for other areas of law and policy as summarized in the following table.

E-Commerce and Its Impact on IP Law and Policy and Other Related Areas⁸³

Characteristics	Phenomena	IP-related issues
Globality	Cross-border impacts	Harmonization of IP laws, recognition of judgments, and enforcement
Interdisciplinary	Emerging new intermediaries and dis-intermediation	On-line provider's liability for IP infringement, broadcasters request for their rights
Digital technology	Perfect quality of digital copies	Review of the definition of copy
Detection, anonymity, and privacy	Cyber-piracy and fair use (e.g. Napster)	Difficult enforcement of IP rights, watermarking of copyrighted works.
Speed of light	A widened gap between legislative efforts and technical changes, no effective judicial system	Internet-based consultation for international policy formulation, emerging solution of using alternative dispute resolution systems (mediation and arbitration)
Technical features	Domain name, Internet standard protocol	Domain name disputes and conflicts with trademarks
Internet governance	Minimalist v. Maximalist	Policy difference between countries (the extent to which governments implement regulatory measures)

Cybersquatters

Another Internet-generated battle in the IP area is being fought over the eviction of cybersquatters who have taken over trademarks to which they have staked a claim in bad faith. Cybersquatters register domain names (essentially website addresses), which they have no intention of using and that are identical or similar to trademarks or famous names, and then try to sell them back to the holders of the mark or famous name at a profit. Cybersquatters, and some of the cases brought against them under the WIPO domain-name dispute resolution procedure, have received wide-spread coverage in the press, highlighting the importance of trademarks and their new manifestation as website identifiers, in the world of commerce. The domain name issue is yet another example of how the Internet has given a new dimension to a traditional form of IP and has forced the IP community to find speedy and efficient solutions in order to resolve a problem of considerable economic importance.⁸⁴

Intellectual Property Laws

Generally speaking, IP law aims at safeguarding creators and other producers of intellectual goods and services by granting them certain time-limited rights to control the use made of those productions. Those rights do not apply to the physical object in which the creation may be embodied but instead to the intellectual creation as such. As mentioned earlier, IP is traditionally divided into two branches, “industrial property” and “copyright.” IPRs are protected by both domestic and international legislation.

Countries have laws to protect IP for two main reasons. One is to give statutory expression to the moral and economic rights of creators in their creations and the rights of the public in access to those creations. The second is to promote, as a deliberate act of Government

policy, creativity and the dissemination and application of its results and to encourage fair trading which would contribute to economic and social development.

Conflicts Of Laws

Because of the expansion of global activities which are involved with IPRs, an area which requires increased attention, from the perspective of international harmonization, is the body of disparate laws and legislation known as private international law. This body of law comes into play when civil litigation involves parties or fora in more than one country. With globalization of business and expanding technological development and telecommunications capacities, noticeably more international litigation is being pursued.

Litigants and their lawyers find that the laws of all Countries are not the same; moreover, the laws differ so much in some cases as to affect the outcome of litigation matters, depending in which country's courts the plaintiff decides to initiate the litigation. Because of this disparity in applicable laws, efforts are underway to further and more satisfactorily develop principles of applicable law, so that the application of law in enforcement contexts will be fair and predictable. Issues such as jurisdiction, damages, and choice of applicable laws are at the heart of such initiatives.

Various trade agreements ensure the free flow and protection of IP among nations. The MPA encourages foreign governments to abide by, and fully implement, important agreements such as the Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement and the World Intellectual Property Organization (WIPO) treaties.

The European Initiatives

The European Community (EC) has taken action in the IP field mainly to harmonize existing national laws.⁸⁵ On October 15, 1998, the Commission presented a Green Paper⁸⁶ on the

fight against counterfeiting and piracy in the Single Market in order to launch a debate on this subject with all interested parties. The areas of intervention suggested in the Green Paper related in particular to action by the private sector, the effectiveness of technical security provisions, penalties and other means of ensuring compliance with IPRs, as well as administrative cooperation between the national authorities. Following the receipt of submissions, a public hearing in Munich on March 2 and 3, 1999 and a meeting of experts from the Member States on 3 November 1999, the European Parliament adopted a Regulation on this subject on May 4, 2000.⁸⁷ On November 30, 2000, the Commission presented a follow-up Communication to the Green Paper in which it indicated that it would be presenting a proposal for a Directive aimed at harmonizing the legislative, regulatory and administrative provisions of the Member States on the means of enforcing IPRs, and at ensuring that the rights available enjoy an equivalent level of protection in the Internal Market.⁸⁸ The proposal for a Directive on the enforcement of IPRs, was generally welcomed by interested circles and was approved by the European Economic and Social Committee.⁸⁹ A proposal for a Directive on measures and procedures to ensure the enforcement of IPRs was issued on January 30, 2003.⁹⁰

As the EC Green Paper entitled, *Combating Counterfeiting and Piracy in the Single Market* (1995), observed “Since the early 1950s counterfeiting and piracy have grown considerably to a point where they have now become a widespread phenomenon with a global impact.” According to the EC Green Paper, the reasons for this phenomenon are various. They include developments in reprographic technologies, where digitization has facilitated the rapid and extensive production of copies at a minimal cost, the growth in world demand for branded items, as well as economic and political developments, such as the growth of international trade, the internationalization of the economy, the expansion of means of communication and the

opportunism of organized crime following the collapse of the political systems in central and eastern Europe and in the former Soviet Union.

Criminalization Of Intellectual Property Violations In The United States

While owners of IP can protect their rights by pursuing civil remedies, the threat of civil sanctions is insufficient to deter theft of trade secrets or infringement of trademarks, copyrights, or patents.⁹¹ Indeed, some IP thieves view civil damages as simply another cost of doing business.⁹²

The marked increase in IPC, combined with the lack of deterrence provided by civil remedies, has led the federal government (and most states) in the United States to enact criminal statutes to prevent the theft of IPRs.⁹³ The government has also begun a crackdown on trademark and copyright infringement.⁹⁴ The FBI's Operation "Counter Copy" and the DOJ's "Intellectual Property Rights Initiative"⁹⁵ are evidence of the government's commitment to prosecute IPC.⁹⁶

Anti-piracy Laws In The United States

The Copyright Act of 1976 gave the United States some of the strongest anti-piracy legislation in the world. The Act was amended in 1982, substantially increasing the penalties for the illegal duplication of copyrighted material, making such offenses felonies on the first offense. The Sentencing Commission guidelines have reinforced these penalties. The Communications Act of 1984, and later amendments provide comparable penalties and remedies for cable TV and satellite pirates. Copyright owners may also file civil lawsuits against copyright infringers, and the government may file criminal charges. Online piracy is covered by the same laws that govern other forms of piracy. In addition, the United States government recently amended federal copyright statutes to specifically address Internet copyright issues and enhance the

protection of IP online through the No Electronic Theft Act (NET Act) and the Digital Millennium Copyright Act (DMCA).

In addition, IP relations between the United States and most foreign countries are governed by an array of multilateral treaties and conventions as well as bilateral agreements, including the Universal Copyright Convention (UCC) and the Berne Convention.

Examples Of Legislative Actions

Piracy Deterrence And Education Act of 2003

The “Piracy Deterrence and Education Act of 2003” orders the FBI to develop a deterrence program and facilitate information sharing among law enforcement agencies, Internet service providers and copyright owners of information. The FBI and the Recording Industry Association of America drafted a Memorandum of Understanding regarding the FBI Intellectual Property Rights Warning Program, which allows for the Recording Industry’s use of the FBI seal in the same way that it has been used as a warning on videotapes, DVDs and movies for years.⁹⁷

Database Protection

Copyright law currently provides little protection for databases.⁹⁸ The 106th Congress (1999-2000) saw an effort to correct this with the introduction of two database protection bills:⁹⁹ the Collections of Information Antipiracy Act (“CIAA”) and the Consumer and Investors Access to Information Act of 1999.¹⁰⁰

The Digital Millennium Copyright Act (“DMCA”)

The DMCA Act became law in October 1998.¹⁰¹ The DMCA provides liability limitations for transmitting online copyrighted material,¹⁰² and it provides criminal penalties and for circumvention of copyright protection systems¹⁰³ and for compromising the integrity of copyright management information.¹⁰⁴

The No Electronic Theft Act (“NET Act”)

The NET Act was enacted in December 1997.¹⁰⁵ This Act modified criminal copyright statutes by removing the financial requirement and making illegal reproduction or distribution of copyrighted materials as a federal crime.¹⁰⁶ The No Electronic Theft Act was enacted in 1997 to reflect the fact that significant copyrighted infringement occurs not for financial gain but to harm the copyright owner or simply for personal gratification.¹⁰⁷ NET removed the requirement of financial gain.¹⁰⁸

The Economic Espionage Act of 1996

The Economic Espionage Act (“EEA”) of 1996 is a federal criminal statute dealing directly with the theft of commercial trade secrets.¹⁰⁹

Trade Secrets Act

Prior to the EEA, the only federal statute that specifically addressed theft of trade secrets was the Trade Secrets Act (“TSA”), which criminalizes the unauthorized disclosure of confidential information to government employees.¹¹⁰ However, because the TSA does apply to private sector employees¹¹¹ and only provides for misdemeanor sanctions,¹¹² federal prosecutors have preferred to rely on the National Stolen Property Act, the Mail and Wire Fraud Statutes to pursue charges of criminal trade secret misappropriation.¹¹³

National Stolen Property Act

The National Stolen Property Act (“NSPA”)¹¹⁴ provides criminal sanctions¹¹⁵ for any person who “transports, transmits, or transfers in interstate or foreign commerce any goods, wares, merchandise, securities or money, of the value of \$5,000 or more, knowing the same to have been stolen, converted or taken by fraud.”¹¹⁶ Federal courts have held that, under certain

circumstances, the NSPA can apply to the theft of tangible property containing trade secrets,¹¹⁷ even though the NSPA was not designed or intended to apply to trade secret theft.¹¹⁸

Mail and Wire Fraud Statutes

The mail and wire fraud statutes¹¹⁹ provide criminal sanctions for using or attempting to use the mails¹²⁰ and wire services to perpetrate fraud.¹²¹ Unlike the NSPA, these statutes may be applied to theft of intangible rights, such as trade secrets.¹²² By imposing criminal penalties on those who use the mails or wires to defraud copyright owners, mail and wire fraud statutes can be used, where appropriate, to prosecute infringers.¹²³

Racketeer Influenced and Corrupt Organizations Act

Criminal sanctions for theft of trade secrets are also available under RICO.¹²⁴ Although many cases brought under RICO are civil actions,¹²⁵ the predicate acts necessary to sustain a RICO claim are violations of criminal law.¹²⁶ Consequently, the elements of civil and criminal RICO action similar. The definition of racketeering activity applicable to the theft of trade secrets includes mail fraud,¹²⁷ wire fraud,¹²⁸ activity prohibited by the NSPA,¹²⁹ and the receipt of stolen property.¹³⁰

Copyright Act

Criminal copyright infringement, first introduced into federal law in 1897, has traditionally been distinguished from civil violation by the requirement that the conduct be willful and undertaken for profit.¹³¹ The criminal copyright statute has been frequently amended as Congress attempts to strengthen the Act and broaden its scope.¹³²

Copyright Felony Act

Enacted in October 1992, the Copyright Felony Act¹³³ responded primarily to the growing problem of large-scale computer software piracy. For a little more than a century,

criminal copyright infringement provisions have been a part of the federal copyright act and distinguished from civil remedies by the requirements of willfulness and profit-making desire.¹³⁴ In 1992, Congress enacted the Copyright Felony Act as a response to a software piracy.¹³⁵ Prior to that time, only the infringing copying of audiovisual works, motion pictures, and sound recordings was a violation of federal criminal law.¹³⁶ The Copyright Felony Act caused the protection, by criminal sanction, of all copyrighted works.¹³⁷

The Communications Act

It is a violation of federal law (17 U.S.C. §106(1)) to distribute, rent or sell illegally duplicated copies, even if the copies are made by someone else (17 U.S.C. §106(3)). The Communications Act of 1934, as amended, (47 U.S.C. §605) and related statutes also prohibit the unauthorized reception of films via satellite or cable TV. Copyright infringement and violation of the Communications Act are felonies under federal law and carry maximum sentences of up to five years in jail and/or a \$250,000 fine. Both laws also provide for copyright owners to seek civil damages.

Money Laundering Act

The money laundering statute, 18 U.S.C. § 1956, defines money laundering, and includes the receipt of proceeds from trafficking in counterfeit goods or goods infringing on copyright as specified unlawful activities.¹³⁸

State laws relating to video piracy are not copyright laws per se. However, various states have so-called “truth-in-labeling” laws and other statutes that can be effectively used to prosecute film and video pirates.

Forty-five states have “True Name and Address” statutes which can be used to combat video piracy. These laws impose criminal penalties for the rental or sale of video cassettes that

do not bear the true name and address of the manufacturer. Video pirates who fail to identify themselves as the “manufacturer” of illegally duplicated cassettes violate these statutes. In some states these laws are currently first offense misdemeanors.

Border Enforcement

As trade in infringing goods spreads to auto parts, foodstuffs, pharmaceuticals, electrical tools, power strips, beverages, shampoo, skin care products, toothpaste, batteries, cigarettes, vision care products, household cleaners and many other everyday consumables and increases in volume, minimum safety standards cannot be ensured. The trade in “branded” or trademarked products affects every industry with potentially dangerous effects.

The International AntiCounterfeiting Coalition (IACC) commended the efforts of the U.S. inter-agency negotiating teams to raise levels of enforcement at the border in recent bilateral free trade agreements (FTAs). The IACC believes that the threat from global trade in counterfeit and pirated goods requires no less than enforcement at the border to stop imports, exports and goods in-transit. According to IACC, a TRIPS minimum approach is no longer acceptable. Requiring border authorities to take action *ex officio* is another major step forward.

Civil Enforcement

The TRIPS Agreement requests Member States to provide the legal infrastructure and mechanisms necessary for IPRs holders to vindicate their rights, to stop infringements at the outset, to gather necessary evidence, and to seek appropriate and effective remedies relative to the particular situation, including *ex parte* injunctions, seizures, destruction of infringing goods and damages, which could include the cost of suite and attorney’s fees. Civil enforcement can be an effective tool against counterfeiters, although criminal enforcement is the preferred course against such abusers of the IP system.

Criminal Enforcement

There is fairly general agreement that the most effective methods and procedures in the fight against infringement of IPRs are those involving criminal enforcement. Criminal law imposes different standards for liability that are generally harder for the prosecution to meet than in civil cases, however, criminal penalties are more onerous. Large-scale, commercial counterfeiting and piracy operations have traditionally looked upon civil fines as merely the cost of doing business. However, when the threat, or especially the reality, of prison is introduced into the mix, real enforcement starts to take shape.

Significant Prosecutorial Accomplishments

The below cases are presented as illustration of both the scope of the IP violations, and the type of the response necessary to achieve positive enforcement and prosecution results. The following is a snapshot of investigative activities by law enforcement:

Operation Decrypt

On February 11, 2003, in the Central District of California, as part of a year-long investigation known as Operation Decrypt, 17 individuals were indicted for their roles in developing sophisticated software and hardware used to steal satellite television signals. One of the individuals pled guilty and admitted to being responsible for nearly \$15 million in losses to the victim companies. An additional nine defendants also agreed to plead guilty for their involvement. The defendants in these cases used online chat rooms to exchange information and techniques on how to defeat the sophisticated security protections utilized by satellite entertainment companies. In October 2002, search warrants were executed in seven states as part of this operation.¹³⁹

Operation Buccaneer

Operation Buccaneer was the culmination of an investigation that has been ongoing under the direction of the United States Customs Service and the Department of Justice's Computer Crime and Intellectual Property Section, in conjunction with the United States Attorney for the Eastern District of Virginia.

The Department of Justice and the United States Customs Service worked closely with law enforcement in the United Kingdom, Australia, Finland, Sweden and Norway to effect 17 searches of foreign subjects simultaneously with the execution of the United States searches. Buccaneer also marks an unprecedented degree of cooperation and coordination with international law enforcement in the fight against IP violations committed via the Internet.

Additionally, the investigation successfully targeted members of several leading "courier" groups that specialize in the illegal distribution and trading of copyrighted works over the Internet, including the groups RequestToSend (RTS), WeLoveWarez (WLW), and RiSC. Collectively, these Warez groups were responsible for illegally reproducing and distributing over the Internet hundreds of millions of dollars worth of copyrighted works.

Additionally, law enforcement seized a number of the largest and most significant Warez "archive" sites from around the world. "Archive" sites are highly-secured computers used to store massive quantities of pirated software, games and movies. Access to these sites is used as a reward for active Warez group members and as an incentive for them to continue their illegal activity. Many archive sites contain 2,000 gigabytes or more of pirated software, equivalent to approximately 1.4 million, 3.5 inch diskettes of copyrighted material.¹⁴⁰

Although an exact figure is unavailable, the retail value of the pirated software, movies, games, and music seized during the course of Operation Buccaneer is estimated to be in the hundreds of millions of dollars. See Appendix A, for additional information.

Operation Bandwidth

On December 11, 2001, the longest-running of the undercover operations culminated with the execution of over 30 search warrants across the United States and Canada. This undercover operation, code-named “Bandwidth,” was a two-year covert investigation established as a joint investigative effort to gather evidence to support identification and prosecution of entities and individuals involved with illegal access to computer systems and the piracy of proprietary software utilizing “WareZ” storage sites on the Internet.

Bandwidth, through the joint efforts of the Defense Criminal Investigative Service (DCIS), the Environmental Protection Agency Office of the Inspector General (EPA-OIG), and the Federal Bureau of Investigation (FBI), supervised by the United States Attorney’s Office for the District of Nevada, created a “WareZ” site, controlled and monitored by the undercover operation, as a means of attracting predicated targets involved with the distribution of pirated software. The undercover “WareZ” site has been accessed to transfer over 100,000 files, including over 12,000 separate software programs, movies and games.

Over 200 different individuals participated in the software pirating efforts. Those individuals were able to attain first-run movies, the latest computer games, and versions of notable software products even before they were publicly introduced. As a result of Operation Bandwidth, thousands of copies of pirated software are expected to be removed from circulation, as well as the seizure and forfeiture of the computer hardware and servers used to facilitate the crimes.¹⁴¹

Operation Digital Piratez

Operation Digital Piratez is an undercover operation by the Federal Bureau of Investigation's Boston Field Office, which has been supervised by the United States Attorney's Office for the District of New Hampshire. On December 11, 2001, the FBI executed nine search warrants, and obtained consent for an additional three searches, on computers located across the country. During this investigation, undercover Special Agents of the Federal Bureau of Investigation successfully infiltrated several Warez distribution organizations. This investigation targeted not only the Warez sites and those who operated them, it also targeted the "cracking groups" specifically created for the purpose of pirating software so that it may be distributed over the Internet in violation of United States copyright laws.

Each of the ongoing investigations has benefited from the important assistance provided by various IP trade associations, including the Interactive Digital Software Association, the Business Software Alliance, the Motion Picture Association and individual companies, including Microsoft and Sega Corporation.¹⁴²

United States v. Ke Pei Ma, et. al.

On February 26, 2003, in a joint operation between federal and local law enforcement in New York City, six people were charged (two remain fugitives) in conjunction with an investigation of the illegal distribution of Symantec and Microsoft software. At the time of the arrests, over \$9 million worth of counterfeit software was seized from distribution centers in the New York area. The defendants were believed to have distributed thousands of copies of counterfeit software and received an estimated \$15 million over two years in return for the pirated products. In a single two-month period, the defendants received nearly \$2 million dollars as a result of their illegal activity.¹⁴³

United States v. Rocci

Beginning on February 25, 2003, the Computer Crime and Intellectual Property Section, working with the CHIP Unit for the Eastern District of Virginia, engaged in a highly-successful public education effort as part of a conviction originally obtained in December 2002. David Rocci of Virginia, pled guilty to conspiring with others to traffic in illegal circumvention devices in violation of the Digital Millennium Copyright Act. Rocci was the owner and operator of the most prominent publicly-accessible web site on the Internet dedicated to providing information about the Awarez scene and copyright infringement, <http://www.iSONEWS.com>. Rocci used his web site as the exclusive medium to conduct the illegal sale of circumvention devices known as Amod chips, which defeat security protections in the Microsoft Xbox and allow unlimited play of pirated games on the gaming console. As a condition of his guilty plea, Rocci transferred his domain name and website to the United States. Upon taking control of the domain name, the United States replaced iSONEWS.com with a new web page providing information about *United States v. Rocci*, as well as a general anti-piracy message outlining the potential criminal consequences for engaging in illegal piracy. This case marked the first time that the United States has assumed control of an active domain name in an IP case. In the first three days, the new law enforcement site received over 238,000 hits from Internet users worldwide.¹⁴⁴

United States v. Mynaf

On February 13, 2003, a California man, Mohsin Mynaf was sentenced in the Eastern District of California to 24 months in federal prison for multiple violations relating to copyright, including Digital Millennium Copyright Act violations, criminal copyright infringement, and trafficking in counterfeit labels. Mynaf operated a videocassette reproduction center which produced counterfeit movie videocassettes, which he would then sell at various locations

throughout California. In addition to 24 months in federal prison, Mynaf had to also pay in excess of \$200,000 in restitution. Three other individuals had also been convicted of aiding and abetting Mynaf in his illegal activity and were awaiting sentencing. This case was successfully prosecuted by the United States Attorneys Office in Sacramento, California.¹⁴⁵

William Haskell Farmer

On January 16, 2003, William Haskell Farmer entered a guilty plea to trafficking in a massive counterfeit clothing operation. (The guilty plea was conditional upon an appeal to the United States Court of Appeals for the Fourth Circuit). According to the United States prosecutor, the scheme involved approximately \$7 million in knock off t-shirts and sweat shirts. Farmer sold the shirts to 191 stores throughout the country. United States Customs agents seized over 300,000 fake items from the Farmer's home and warehouse (the house was a two-story home with a swimming pool and two car garage). Farmer agreed to forfeit over \$500,000 in cash and cashier's checks, eight vehicles, (including two Mercedes and a 1998 Corvette), and two cargo trailers. The cash had been seized in 1998 when Farmer's home was searched. The majority of the money was in \$50 and \$100 bills. There was \$6,000 worth of change in the garage.¹⁴⁶

Drug Operation In Queens New York

In July 2002, three individuals were arrested when police stumbled upon 5,000 fake Rolex watches and Mount Blanc pens and \$1 million in cash during a raid of a Flushing (Queens), New York home in connection with a drug operation. Prosecutors stated that the defendants used the sale of counterfeit items to launder drug money.¹⁴⁷

John Sankus

In February 2002, John Sankus Jr., 28, of Philadelphia, was sentenced to 46 months in prison leading an international piracy ring responsible for copying and distributing software, games and movies. Sankus headed an international software piracy group called DrinkorDie, which was comprised of about sixty members from numerous countries including the United States, Australia, Norway, Finland and the United Kingdom. The group's biggest claim to fame was distributing copies of Windows 95 two weeks before the official release of the operating system. Federal agents conducted raids at Duke University and MIT in connection with DrinkorDie's activities. Some of the computers seized in the operation contained more than one terabyte of hacked software (which is equal to 700,000 floppy disks).¹⁴⁸

Mark Dipadova

On December 14, 2001, Mark Dipadova (who used three aliases) was sentenced to 24 months in prison and three years of supervised release and ordered to pay over \$135,000 in restitution for operating websites through which he sold counterfeit goods. Dipadova and his partner shipped over 10,000 packages, both domestically and internationally and had been sued civilly by trademark holders. At his sentencing hearing, Dipadova admitted to posting a link on one of his websites to an audio recording of a radio interview in which he stated that he was aware that his actions were illegal but that he refused to stop because he was making too much money.¹⁴⁹

Software Piracy Ring

A 52 year old woman was one of four people arrested in November 2001 after being suspected of operating a piracy ring that imported close to \$100 million in fake software and

computer products from Taiwan. The woman was sentenced to nine years in prison and ordered to pay \$11 million in restitution to two software companies.¹⁵⁰

Chinatown In New York City

Police in the Chinatown section of New York City uncovered a stash of fake watches, handbags, sunglasses and wallets worth over \$125 million, merchandise was hidden in a building that contained secret tunnels, trapdoors and vaults. The search resulted in ten arrests.¹⁵¹

Counterfeit Computer Software

In November 2001, United States federal authorities made their largest seizure ever of counterfeit computer software. The seizure of nearly 31,000 copies of phony software was valued at approximately \$100 million. The software originated in Taiwan and was encased in counterfeit packaging (including holographs and registration codes) and also came with manuals. Federal authorities were alerted to the shipment when a member of a criminal syndicate operating between Taiwan and Los Angeles allegedly attempted to bribe an undercover agent who was posing as a United States Customs official. Seized in connection with the arrests were a forty foot shipping container filled with counterfeit computer software and package material, two forty foot containers filled with 85,000 cartons of counterfeit cigarettes (i.e., 17 million cigarettes).¹⁵² A second search warrant executed in connection with the investigation resulted in the seizure of 21 cartons of counterfeit end user license agreements, manuals, bar codes, adhesive labels and registration cards.¹⁵³

Counterfeit Clothing

In November 2001, a Cocoa, Florida businessman was convicted of conspiracy to distribute and possession of cocaine and crack cocaine, trafficking in counterfeit merchandise

and carjacking. When he was arrested police seized \$150,000 in cash and truckloads of counterfeit clothing.¹⁵⁴

Italian Counterfeiting Group

The speed and brazenness of Italian counterfeiting groups was demonstrated the summer of 2001 when burglars broke into the headquarters of a prominent Italian luxury goods/apparel producer. An investigation of the incident revealed that the only items missing as a result of the break-in were samples of the designer's 2002 men's spring/summer collection. It is now assumed that counterfeiters stole the samples to copy them before the genuine products made it to market. The sale of fake leather goods in Italy was estimated to be at \$1.4 billion.¹⁵⁵

Drug Ring In New York

In 1993, law enforcement officials in New York raided a large warehouse and discovered numerous fake handbags. The unusual part of this raid was what they found sewn into the lining of the handbags. A ring of drug smugglers would smuggle in the drugs this way, sell the drugs first and then sell the bags. Essentially, they used contraband to hide other contraband.¹⁵⁶

As a result of cases as the ones mentioned above, law enforcement generally has a better understanding of piracy now than it had in the past.

Initiatives Toward Enforcement Of Intellectual Property Rights

At the international level, a number of governments are reinforcing their legal framework and institutional arrangements to comply with the existing international treaties. Generally, enforcement of IPRs can take four basic forms:

- Administrative enforcement, such as seizure of infringing goods by a customs office;
- Criminal enforcement, in which the state, generally through the police, is the moving party in a criminal action against the infringer;
- Civil enforcement, in which the right holder, or someone in possession of valid rights, such as an assignee or licensee, takes prescribed legal action, such as in

- court by filing a civil action against an infringer, and perhaps seeking an injunction;
- Technological enforcement, in which producers of products and services employ technological means to protect IPRs against infringement (for example, encryption of digital copyright works).

Comparison Of Various Enforcement Measures

Measures	Moving Party	Relevant IPR	Advantages	Disadvantages	Emerging Trends
Administrative	Customs office	Mark, copyright	Relatively expeditious	Effective only in obvious cases	Regional cooperation on border control
Criminal	Police	Mark, copyright	Effective, relatively expeditious	Limited to serious cases	Increase of fines, more raids for educational effect
Civil	IPR holder	All IPRs	Reasonable remedies	Time-consuming and expensive	IPR special court, Alternative Dispute Resolution (ADR)
Technological	Producer of IPR works	Copyright, mark, patent	Practical, speedy	Vulnerable to hacking	Standardization efforts for water-marking

These measures are limited to applicable laws (for example, in many countries, criminal enforcement is not applicable in the case of a patent infringement). Administrative measures and civil measures are linked in some countries. For some states, it is hard to determine the extent to which the state should use public resources to help enforce a private party’s right. However, effective enforcement has become an international obligation under the TRIPS Agreement, as it is vital in promoting trade and fostering fair competition in market-oriented economies. Advantages and disadvantages are shown below.

The issue of the enforcement of IPRs cuts across many segments and layers of society; it affects them all in varying degrees and in different ways. Counterfeiting and piracy constitute the bulk of the problem. Because of the various effects on society, there are numerous organizations such as the World Customs Organization (WCO)¹⁵⁷ and INTERPOL involved in protection of IPRs as well as several noteworthy law enforcement initiatives.¹⁵⁸ There are other international organizations that have shaped the course of IPR protection. For example, in the

wake of World War II, the World Bank and the International Monetary Fund (IMF) collaborated to create the General Agreement on Tariffs and Trade (GATT).¹⁵⁹ GATT was established to provide a framework for a multilateral economic system. In order to promote that objective, it sponsored “rounds” as a forum for signatory nations to meet and further the established goals of the organization.¹⁶⁰

The United States and other developed countries view the GATT as the appropriate forum in which to strengthen IPRs.¹⁶¹ Under GATT, the United States and other developed countries were able to set high international standards for the protection of IP with those standards being enforced under the World Trade Organization (WTO).¹⁶² The United States has also included provisions protecting IPRs in multinational documents. For instance, the United States insisted that NAFTA contain a provision on IP protection in an effort to combat piracy in Mexico.¹⁶³

World Trade Organization

In 1994 at the “Uruguay Round” the World Trade Organization (WTO) was created and replaced GATT’s old administrative structure.¹⁶⁴ The WTO is the only global international organization dealing with the rules of trade between nations with the goal of helping producers conduct their business.¹⁶⁵ The WTO structure is made up of three primary pillars: The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS),¹⁶⁶ the General Agreement on Trade in Services (GATS), and GATT - 1994.¹⁶⁷ The TRIPS Agreement has been hailed as “a landmark in the evolution of an international consensus on IP protection and is the most significant advance in the international protection of IP since the adoption of the Berne and Paris Conventions in the late 19th century.”¹⁶⁸

The Agreement On Trade Related Aspects Of Intellectual Property Rights

The TRIPS Agreement is based on the principles of national treatment and most favored nation (MFN) status. National treatment under TRIPS provides that “each Member shall accord to the nationals of other Members treatment no less favorable than that it accords to its own nationals with regard to the protection of IP...”.¹⁶⁹ This provision is similar to the protection afforded by the Berne and Paris Conventions. MFN, on the other hand, requires that in IPR protection, any advantage, favor, privilege or immunity granted by one member nation to the nationals of any, other country shall be conferred immediately, and unconditionally, to the nationals of all other member nations.¹⁷⁰ Thus, MFN supports national treatment by assuring that all MFN nations are treated equally.

These international, multilateral agreements signal a fundamental shift in the global protection of IPRs. The level of international cooperation and commitment to these organizations is unprecedented in the history of IPRs.

Although the United States and other WICs strongly favor worldwide enforcement of IPRs, much of the Third World opposes such enforcement.¹⁷¹ The United States position of strengthening international IP enforcement is based on at least two motives: (1) the economic benefits to the United States which enhanced enforcement of IP could yield;¹⁷² and (2) a belief that improved protection of IP is essential for the economic development of all countries.¹⁷³ Some Third World countries, however, view WICs’ attempts to enforce IP as a continuation of colonialist policies in which WICs control the economic structure of the lesser-developed nations by allocating technology and extracting exorbitant royalties in return.¹⁷⁴ In addition, many developing countries believe that WICs have an obligation to aid the development of poorer countries rather than retarding their growth through restrictive IP policies.¹⁷⁵

The United States Position

There is a dual nature to the United States' handling of international IP. On one hand, the United States views IP as a legal issue. The United States is a member of all international treaty organizations and conventions that have been seeking, for over a century,¹⁷⁶ to create a uniform international IP law. On the other hand, the United States also treats IP as a trade issue.¹⁷⁷ The United States has generally resolved trade issues in a multilateral context that seeks to attain consensus between trading partners.¹⁷⁸

International and multinational agreements have included provisions that specifically provide for heightened protection of IP because new innovations are necessary to stimulate competitiveness in the international economy.¹⁷⁹

Global Anti-Counterfeiting Group

While the United States economy suffers most from the piracy and counterfeiting of its IP,¹⁸⁰ other industrialized nations are suffering, as well. In early 1998, for example, several countries announced the formation of an anti-piracy group during a meeting organized by the International Chamber of Commerce (ICC).¹⁸¹ The new entity, called the Global Anti-Counterfeiting Group, was formed "in response to the rising participation of organized crime in the sale and production of counterfeit goods."¹⁸²

The International Anti-Counterfeiting Coalition

The International AntiCounterfeiting Coalition, Inc.,¹⁸³ a Washington, D.C.-based non-profit organization devoted solely to combating product counterfeiting and piracy was formed in 1978. The International Anti Counterfeiting Coalition representing a cross section of businesses and industries is the largest international organization devoted solely to combating product counterfeiting and piracy.¹⁸⁴ The cornerstone of the IACC's mission is to combat counterfeiting

and piracy by promoting laws, regulations and directives designed to tender the theft of IP undesirable and unprofitable.¹⁸⁵

Intellectual Property Crimes Are Perceived As Victimless Crimes

Intellectual property crime (IPC) is well established and few people will argue that it is not at least a \$400 to \$450 billion a year crime problem. One would think that this fact in itself would make prosecution of this crime a high priority for law enforcement around the world. Considering that in the United States alone IPC represents a \$200 - \$250 billion dollar loss, any problem of this magnitude should draw the attention of law enforcement at both national and international levels. The question still remains unanswered as to why this has not this been a high priority crime area for law enforcement.¹⁸⁶ Both individuals and businesses have an interest in protecting the investments made in various forms of IP. There is a great deal to be lost when IPR are not protected.

IP piracy is unfortunately considered as a low-risk, high-profit criminal enterprise which is widely tolerated and almost universally ignored.¹⁸⁷ It is common for the public to think of IP piracy as a victimless crime, a minor economic offense that only affects wealthy corporations and does no real harm to society or to individuals. Such activities are frequently a low priority for domestic and international law enforcement agencies as well. Counterfeiters are counting on law enforcement, prosecutors and the courts to take a soft approach toward those who engage in what appears to be victimless counterfeiting. Until investigations of these crimes prove otherwise, the extent of the threat arising from these activities is unknown. Those involved in trafficking counterfeit goods are everywhere and despite the perception that product counterfeiting is harmless and victimless, consumers, companies and governments are all victims.¹⁸⁸ The cross-industry impact of the crime dilutes its importance on any one industry. It

is a crime that crosses national borders, so it is difficult to investigate from end to end. The distribution network is very dispersed, often ending up with poor immigrants standing on street corners with items that seem too good to resist. The penalty, if arrested and convicted, for engaging in this kind of activity is also low, therefore the deterrence impact is not great.¹⁸⁹

Law enforcement and prosecutors get little credit for arrests and/or for seizures. It's often viewed as a civil enforcement problem and often time the question becomes why not let the wealthy companies or the wealthy industries police this problem themselves? Consumers believe that the companies involved make so much money already, why -- and how are they going to be hurt if the consumers buy a disc, a CD or a designer product? From the consumers' perspective, the profits of designer goods companies and drug companies are already high, profits of certain sports retailers -- producers also seem to be high. Therefore, the connection between the consumers' act, the consumers' purchase, and the crime seems to be far. Furthermore, the victim is not anyone that the consumer knows or can identify with in terms of a human face.¹⁹⁰

Law Enforcement Challenges

Law enforcement agencies have to recognize that Intellectual Property Crime is not a victimless crime. In general, law enforcement does not treat IPC as a high priority crime. Law enforcement does not always investigate IPC cases. Investigations when initiated often tend to be seizure-based and do not extend to following onward flows of money. Even if law enforcement were to follow onward flows of money, given the high level of cash-based transactions involved, it is difficult to establish with any precision the end destination of the financial flows.

What Needs To Be Done

One question is whether the incentives for introducing a Western-style IP system should be given to all countries or only to countries that play a dominate role in IPR's violations. In other words, should the countries be ignored until they reach the stage-two to stage-three transition or should the incentives to implement an IP system be introduced even in stage-one countries?

A uniform policy of encouraging all countries to adopt IP protection is probably preferable.¹⁹¹ It should be easier to encourage a developing country to adopt an IP system before it reaches the "pirating" stage of economic development. Once a country has developed a significant number of businesses that profit from pirating, these businesses will become a political force that will oppose the adoption of IP regulations. In addition, the United States might find it extremely difficult to determine when a country had reached the proper developmental stage for the imposition of an IP system. It would be simpler to encourage an IP system in all countries regardless of developmental stage. The incentives should continue until the country has reached a level of development where benefits of IP protection clearly outweigh its costs.¹⁹²

Even though IP protection is important for developing nations, most have failed to provide IP adequate protection, and this failure has facilitated the rampant piracy of goods.¹⁹³ The challenges of IPRs protection have become correspondingly global, with concerted action at the national, regional and international levels. The reasons underlying such disrespect for IPRs are many and varied, and range from greed, perceived necessity, lack of awareness, and ruthless criminal intent, all the way to innocent mistake. The scale of such disrespect also varies considerably, from copying a protected work in one's home to large-scale commercial criminal

enterprises which produce hundreds of thousands of illegal copies. When illegal products take market share (or even kill a potential market), and when recouping an investment is prevented by intervening criminal activity, enforcement mechanisms are called into play to protect vital interests, not only of the players and entities mentioned, but also those of the public.

Recent Efforts Toward Protection Of Intellectual Property Rights

Senior officials from government, law enforcement and business sector, met at the First Global Congress on Combating Counterfeiting in May 2004 in Brussels, Belgium. The Congress called for concrete action in curbing the growing problem of counterfeiting, which they estimated to be worth EUR 500 billion annually, equivalent to more than seven percent of global trade. More than 300 delegates attended the conference co-sponsored by the World Customs Organization and Interpol, with the support of the World Intellectual Property Organization. The purpose of the Congress was to develop a collective understanding of the extent of the counterfeit and piracy problem, identify effective measures of governments and the private sector in anti-counterfeiting and anti-piracy work, generated ideas for further cooperation and begin to identify solutions that will make a real difference in the coming decade.¹⁹⁴

The Congress recommended action in four main areas:

- Substantially increased cooperation and communication among all stakeholders.
- Better enforcement and stiffer penalties to deter counterfeiting.
- Extended training and resources for law enforcement.
- Increased public awareness of the full impact and costs of counterfeiting.¹⁹⁵

According to this Congress, any future discussions should be focused on the following topics:

- Developing a consensus on the full dimensions and related costs of counterfeiting to consumers, governments and industry.
- Developing common understandings of the prevailing attitudes of governments, the private sector and consumers towards counterfeiting.

- Generating common understanding of what is being done and what more needs to be done in the fight against counterfeiting.
- Examining and understanding current international instruments for cooperation among governments in enforcement work, and identifying enhancements required for strengthening enforcement efforts.

Possible Solutions for Intellectual Property Crimes

In order to combat counterfeiting and piracy effectively, the following measures can be implemented: (a) monitoring by the private sector; (b) the use of technical devices; (c) sanctions and other means of enforcing IPRs; and (d) administrative cooperation among the competent authorities.¹⁹⁶

Monitoring By The Private Sector

Most monitoring can be carried out privately by national or international professional associations or organizations, such as manufacturers' associations, trade mark proprietors' associations and collecting societies. It generally consists of observing market trends, advising and supporting the industries concerned, collaborating with the authorities (customs, police, the courts, etc.), monitoring suspicious activities and detecting acts of counterfeiting and piracy, keeping the public informed and, where necessary, convincing the government of the need to amend or revise the existing laws.¹⁹⁷

The Use Of Technical Devices

One of the means of combating counterfeiting and piracy at the disposal of the holders of IPRs is the use of technical devices to protect and authenticate their products or services. Technical devices may take many forms: security holograms, optical devices, chip cards, magnetic systems, biometric codes, special inks, microscopic labels, etc. These technical devices facilitate the prosecution and punishment of counterfeiting and piracy. Through them, unlawful uses of works, products or services can easily be traced back to the source, so that infringers can

be identified and prosecuted more effectively. However, although technical devices act as a filter for the most obvious counterfeit or pirated goods, they do not as a rule defeat the most highly organized infringers, who succeed in turn in reproducing the devices. Such devices must therefore enjoy suitable legal protection to prevent them from being infringed, manipulated or neutralized.¹⁹⁸

Sanctions And Other Means Of Enforcing Intellectual Property Rights

As previously mentioned, the TRIPS Agreement obliges all Member countries to implement the enforcement mechanisms contained in that Agreement. This includes both criminal and civil remedies. All Member States provide by law that counterfeiters and pirates are in principle liable to criminal penalties, but the level and severity of the penalties vary considerably from one Member State to another. For violation of certain types of right, no criminal penalty is provided. Some Member States have, however, been tightening up the criminal law in respect of counterfeiting and piracy in recent years. Failure to comply with an injunction is punishable by specific penalties, usually a fine payable either to the State or to the person seeking the injunction. The infringer may be required to pay damages to the rightholder to make good the loss or damage caused by the infringement of the intellectual property right.

Other measures for combating counterfeiting and piracy, include the sanction of publicity, through the publication of judgments, orders to reveal information about the origin of the goods, the distribution channels and the identity of any third parties involved in the production and distribution of the goods.

Best Practices for Enforcement of Intellectual Property Rights

According to a 2002 survey by WIPO, the principal barriers to eliminating counterfeiting and piracy did not subsist in the substantive law, but rather in the remedies and penalties

available (or not available) to stop and deter counterfeiting and piracy.¹⁹⁹ The ineffectiveness of enforcement systems was attributed, in many cases, to a lack of human resources, funding and practical experience in IP enforcement of relevant officials, including the judiciary; insufficient knowledge on the side of right holders and the general public, concerning their rights and remedies; and systemic problems resulting from insufficient national and international coordination, including a lack of transparency.

Enforcement Provisions Under TRIPS

The following were identified as among the best practices for the implementation of the enforcement provisions of the TRIPS Agreement:

National Cooperation And Coordination

The fight against counterfeiting and piracy would have much greater chances for success if it is a coordinated one, involving all the relevant stakeholders, and dealing with all types of IPRs. A number of Member States have established coordinating or taskforce units involving, *inter alia*, the various relevant ministries and agencies, such as the industrial property offices, customs, police and justice. Also involved are members of such bodies as associations of right holders, copyright societies, medicines control agencies and trading standard authorities, as well as leading manufacturing, retail and consumer organizations. These units sometimes have specialized smaller committees, dealing with more specialized IP issues such as the drafting of new legislation and the development of frameworks for cooperation on enforcement action against IPC.

The ultimate goal of this cooperation including the coordination of enforcement activities is to enhance the development of greater expertise, particularly among customs officers at all points of import and export; the improvement of general liaison procedures with all national

agencies involved in enforcement efforts; the enhancement of contacts with right holders and their representative organizations; the establishment of benchmarks with specialist anti-counterfeiting units in other Customs administrations; and the participation in the public awareness campaigns. Right holders have been encouraged to contribute to the training of customs staff in the identification of counterfeit and pirated goods, and in intelligence reporting from their own sources to assist officers in identifying consignments of counterfeit or pirated goods.

International Cooperation

In some Member States, cooperation with international intergovernmental organizations has resulted in the creation of bilateral cooperation and support programs in the field of enforcement. It has been suggested that industrialized Member States be requested to create an international computer network covering the ownership of merchandise that passes through customs. It was observed that the same IPRs registered in a number of countries could be affected by the same types of infringements. Information networks could consequently be useful for the exchange of information on infringement cases.

Right Holder Cooperation

As IPRs are ultimately private rights, right holders have the largest immediate financial stake in ensuring the protection of those rights. For this reason rights holders have been particularly willing to assist in enforcement efforts by providing information to assist in the identification of infringing products and in cooperating in awareness and training programs.

Criminal Procedures

A number of countries have introduced criminal sanctions in relation to piracy and counterfeiting. Article 61 of the TRIPS Agreement requires criminal procedures and penalties

for cases of willful trademark counterfeiting or copyright piracy on a commercial scale. A number of countries provide for both civil remedies and criminal penalties in relation to piracy and counterfeiting, as well as for the seizure, forfeiture and destruction of the infringing goods and of any materials and implements the predominant use of which has been in the commission of the offence.

Deterrence Of Publicity

In some countries, to provide protection for the public, as well as raising the awareness of the value of IPRs, judicial authorities, have the power to order the official publication of court decisions, particularly those with a deterrent effect.

Specialized Courts

Some developing countries, such as Thailand and China, have established specialized courts to hear IPR-related cases as a means of improving their capacities for national enforcement, though such a measure is not formally required under TRIPS. A more attractive approach for developing countries is probably to establish (or strengthen) a commercial court, which may hear IPR-related cases *infer alia* and provide improved access to justice for the business sector as a whole. In any event, in most developing countries, a considerable program of training for the judiciary and other enforcement agencies in IP subjects will be required. The “private” nature of IP rights suggests the importance of resolution of disputes between parties either out of court or under civil law. Indeed, as state enforcement of IPRs is a resource-intensive activity, there is a strong case for developing countries to adopt IPR legislation that emphasizes enforcement through a civil rather than a criminal justice system. This would reduce the enforcement burden on the government in the case of counterfeiting on a large scale, although the state enforcement agencies would still be required to intervene.

Future Policy Consideration For Protection Of Intellectual Property Rights

1. There is a need to allocate resources to the investigation of IPC and to trace its financial flows.
 2. Successful models for investigating IPC nationally and internationally should be established. Various agencies involved in intellectual property crime investigation must help to coordinate international action against intellectual property crime. The models should be based on professional law enforcement and intelligence agency investigations into organized crime and terrorist group involvement in intellectual property crime and other forms of criminality.
 3. An intellectual property crime action group should be established by including a wide range of stakeholders from customs, police and private industry.
 4. Encourage Federal law enforcement agencies to cooperatively pursue investigations of counterfeiting to root out and prosecute manufacturers, distributors and other involved in the trafficking of counterfeit goods. The exchange of information and intelligence gathering must be enhanced between law enforcement agencies worldwide. Strategies and programs to combat international criminal activity linked to IP infringement must be developed.
 5. The operational contact network of private and public partners throughout the world must be enhanced and strengthened. International cross-border multi-agency investigations into intellectual property crime must be coordinated.
 6. Awareness of intellectual property crime must be raised with the general public.
 7. Data and reporting of intellectual property crime must improve.
 8. New IP laws are needed to address IPC.
 9. Increase the level of vigilance at the border regardless of the products involved.
- Counterfeiting and piracy impact national economic security.

10. Ensure that legislation permits ex officio border and criminal enforcement, including prosecution.

11. There is a need for legislation to detain, seize, forfeit and destroy pirate/counterfeit goods being imported, exported and moving in-transit as well as seizure and destruction of equipment used to produce such goods.

12. Raise the stakes for the individuals involved in IP theft. The federal criminal statute against trafficking in counterfeit goods should be strengthened. There is a need for sentencing guidelines that require more stringent penalties (fines/imprisonment).

13. Examine the extent to which organized crime is involved in the international trade of counterfeit and pirated products.

14. There is a need for cooperation among law enforcement agencies and the high-tech industry.

15. Finally, more research and publications is needed on this topic.

Future Research Issues

The topic of IP violations is a complicated and challenging topic to research and analyze. The following unanswered questions on this topic provides a starting point for future research that aims to provide practical solutions to policy makers, legislatures, government agencies, private industry and IPRs holders around the world who are grappling with protection of IPRs.

- What is the status of international investigations into the problem of IP violations?
- Where does this criminal activity appear most prevalent?
- Which governments are most aggressively tackling this issue?
- Which governments are failing to address the problem?
- What are effective law enforcement strategies to combat IPC?
- What legislative responses, if any, would be appropriate?
- What international cooperative efforts should be explored?
- What is the most effective means by which to educate consumers about this growing problem?²⁰⁰

Each of these questions represents a search topic unto itself.

Whether, and to what extent, society realizes the full value of IPRs in the new economy and in modern society irrefutably impacts on economic, social, and cultural development. In addition to political will and the implementation of national legislation compliant with all the relevant treaties of IPRs enforcement, government leaders may wish to consider the importance of fostering an IP culture.

Appreciating the value of IPRs and the potential positive impact they can have on society, will raise awareness in all persons involved or touched by the process. In the IP culture, government officials and agencies act to increase value and raise standards of living by advocating an increased use of IPRs. The private sector, from multinational corporations down to SMEs, recognizes the value of IPRs in knowledge-based industries and economies. The public must understand the benefits of purchasing legitimate goods and services.

Given that we are all aware of the counterfeit goods sold in flea markets and on the streets of major cities, the added knowledge that counterfeiters have moved into auto parts, medicines, home appliances and electrical goods should give us pause to start thinking of the counterfeiting problem as a frontal attack on consumer safety and economic stability. Because no industry sector is immune from attack by counterfeiters and no country is exempt from this type of criminal activity, both corporate and governmental law enforcement resources must be committed to combating IP crime.

Today's level of counterfeiting has reached the point that it now requires government intervention to confront the organized crime elements that are involved around the world. Industry is neither equipped to deal with organized crime nor is it a function for industry to pursue this type of criminal activity. Because of a reluctance to combat product counterfeiting in

the past, it is now being seen as a real and dangerous threat to consumers and industry. The proliferation of this problem requires governments to take steps in the domestic market, at the border as well as in free trade zones that seem to be lawless territory.

This report provides a review and examination of the current state of affairs in international IP law and its enforcement or lack thereof. As requested by NIJ when commissioning this work, the report is meant to review the state of the art and identify areas of future research. It is hoped that this will prove useful in helping to influence the future research agenda in the area.

APPENDIX A

Operation Buccaneer Defendants

Defendant	Nickname	Warez Group Affiliations	Conviction Date	Offense*
SANKUS , John, Jr. Philadelphia, PA.	eriFleH	DrinkOr Die, Harm	Felony Feb. 27, 2002	18 U.S.C. § 371
ERICKSON , Barry Eugene, OR	Radsl	RiscISO, DrinkOrDie, POPZ	Felony May 2, 2002	18 U.S.C. § 371
GRIMES , David A. Arlington, TX	Chevelle	DrinkOrDie, RISC, RTS	Felony March 4, 2002	18 U.S.C. § 371
NAWARA , Stacey Rosenberg, TX	Avec	RTS, Razor1911, DrinkOrDie	Felony March 19, 2002	18 U.S.C. § 371
HUNT , Nathan Waterford, PA	Azide	CORPS, DrinkOrDie	Felony April 3, 2002	18 U.S.C. § 371
PATTANAYEK , Sabuj Durham, NC	Buj	DrinkOrDie, CORPS, RTS	Felony April 11, 2002	18 U.S.C. § 371
KELLY , Michael Miami, FL	Erupt	RiSC, AMNESiA, CORE, DrinkOrDie	Felony April 10, 2002	18 U.S.C. § 371
CLARDY , Andrew Galesburg, IL	Doodad	POPZ, DrinkOrDie	Felony April 4, 2002	18 U.S.C. § 2319 18 U.S.C. § 2
TRESCO , Christopher Boston, MA	BigRar	RiSC, DrinkorDie	Felony May 28, 2002	18 U.S.C. § 371
EISER , Derek Philadelphia, PA	Psychod	DrinkOrDie	Felony June 21, 2002	18 U.S.C. § 2319
NGUYEN , Mike Los Angeles, CA	Hackrat	Razor1911, RISC	Felony Jan. 31, 2002	18 U.S.C. § 371
KARTADINATA , Kent Los Angeles, CA	Tenkuken	DrinkOrDie	Felony Jan. 31, 2002	18 U.S.C. § 371
BERRY , Richard Rockville, MD	Flood	POPZ, DrinkOrDie	Felony Apr. 29, 2002	18 U.S.C. § 371
RIFFE , John Port St. John, FL	blue	SMR, EXODUS	Felony May 9, 2002	18 U.S.C. § 2319
GROSS , Robert Horsham, PA	targetpractice	DrinkOrDie	Felony May 22, 2002	18 U.S.C. § 2319
COLE , Myron Warminster, PA	t3rminal	DrinkOrDie	Felony July 10, 2002	18 U.S.C. § 2319
BUCHANAN , Anthony Eugene, OR	spaceace	POPZ, DrinkOrDie	Felony August 19, 2002	18 U.S.C. § 2319

*Offenses:

- 18 U.S.C. § 371 - Conspiracy
- 18 U.S.C. § 2 - Aiding and Abetting
- 18 U.S.C. § 2319 - Criminal Copyright Infringement

Source: Computer Crime & Intellectual Property Section, U.S. Department of Justice

APPENDIX B

International AntiCounterfeiting Coalition Recommendations 1997 - 2004

	97	98	99	00	01	02	03	04
Argentina				WL	WL	WL	--	
Australia			WL	--	--	--	--	
Belize								WL
Bolivia							WL	
Brazil				WL	WL	WL	--	WL
Bulgaria						WL	--	WL
Canada				WL	OO	WL	WL	PWL
Chile		WL		--	WL	WL	WL	
China	PFC		306	306	306	306	306	306
Columbia			PWL	--	--	WL	--	
Greece		PWL	PWL	--	--	--	--	
Hong Kong					OO	--	--	
Hungary						--	WL	
India							WL	PWL
Indonesia	PWL	PWL		--	WL	PWL	--	
Italy				WL	WL	WL	--	
Japan					WL	WL	--	WL
Jordan								WL
Kazakhstan						WL	--	
Korea		WL	WL	WL	--	--	--	
Lebanon								PWL
Libya								WL
Malaysia				WL	PWL	--	PWL	PWL
Mauritius								WL
Mexico		OO	WL	WL	OO	WL	WL	PWL
Pakistan								WL
Panama							WL	WL
Paraguay					306	306	306	306
Philippines						PWL	PWL	PWL
Poland						PWL	PWL	PWL
Romania								WL
Russia				PWL	PWL	PWL	PWL	PWL
Saudi Arabia						WL	WL	WL
Singapore				PWL	--	WL	WL	
South Africa					WL	WL	WL	
Taiwan	OO	OO	WL	WL	PWL	PWL	PWL	WL
Thailand				PWL	--	WL	WL	WL
Turkey						--	WL	WL
Ukraine					WL	PFC	--	PFC
UAE						WL	WL	WL
Venezuela								WL
Vietnam						WL	WL	

Abbreviations

PFC: Priority Foreign Country
 306: Section 306 Monitoring
 PWL: Priority Watch List

WL: Watch List
 OO: Other Observations

Source: International AntiCounterfeiting Coalition

Notes and References

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- ² The Convention Establishing the World Intellectual Property Organization in Stockholm on July 14, 1967, (Article 2(viii)).
- ³ Powell, R. & Rohan, P. (1996). *Powell on real property*. New York: Matthew Bender.
- ⁴ Chisum, D.S. (1997). *Chisum on patents: A treatise on the law of patentability, validity and infringement*. New York: Matthew Bender.
- ⁵ World Intellectual Property Organization. *About intellectual property*. Retrieved February 28, 2004 from, <http://www.wipo.org/about-ip/en/>.
- ⁶ Ibid.
- ⁷ Ibid.
- ⁸ Its origin dates back to ancient times, when craftsmen reproduced their signatures, or marks, on their artistic or utilitarian products. Over the years, the practice of using these marks evolved into today's system of trademark registration and protection.
- ⁹ The creator - or the owner of the copyright in a work - can enforce rights in the courts where the owner may obtain an order to stop unauthorized use (often called piracy), as well as obtain damages for loss of financial rewards and recognition.
- ¹⁰ New Patent System Boosts Intellectual Property Rights. (2001, September 3). *Business World*, p. 30.
- ¹¹ Hyde, Henry J. Opening Remarks before the Committee on International Relations; *Intellectual property crimes: Are proceeds from counterfeited goods funding terrorism?* (16 July 2003). Retrieved February 2004 from, www.fnsg.com.
- ¹² Ibid.
- ¹³ Piracy is "the unauthorized and illegal reproduction or distribution of materials protected by copyright, patent, or trademark law." *Black's Law Dictionary* 1169 (7th ed. 1999).
- ¹⁴ To counterfeit is "to forge, copy, or imitate (something) without a right to do so and with the purpose of deceiving or defrauding." *Black's Law Dictionary* 354 (7th ed. 1999).
- ¹⁵ Testimony of INTERPOL Secretary General Ronald Noble before the House Committee on International Relations Hearing, "The Links Between Intellectual Property Crime and Terrorist Financing" (July 16, 2003).
- ¹⁶ Helsby, R. (2003, July). *Economic crime survey 2003*. PricewaterhouseCoopers in association with Wilmer, Cutler & Pickering. Retrieved March 2004 from, www.pwc.com/crimsurvey. See the press release at <http://www.pwcglobal.com/gx/eng/cfr/gecs/PwC_GECS03_global_pr.pdf>.
- ¹⁷ Interviews conducted by author with David Mahon, Supervisory Special Agent, Cyber Crime Squad, Federal Bureau of Investigation - Denver Division, 2004. There are various loss estimates due to counterfeiting and piracy. For example, the International Intellectual Property Association estimated that losses due to piracy of U.S. copyrighted materials around the world have reached \$20 to \$22 billion annually (not including Internet piracy). According to the 2003 Department of Homeland Security statistics on seizures, the majority of goods seized at U.S. ports of entry were counterfeit goods, worth more than \$90 million.
- ¹⁸ See, <http://www.interpol.int>; IFPI Piracy Report: 2; <http://www.bsa.org>.

¹⁹ PricewaterhouseCoopers. (2002, September). *The US Chamber of Commerce and ASIS International: Trends in Proprietary Information Loss*, Survey results.

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²⁴ Counterfeiting Intelligence Bureau, International Chamber of Commerce (1997). *Countering Counterfeiting: A guide to protecting & enforcing intellectual property rights*.

²⁵ Interviews conducted by author with David Mahon, Supervisory Special Agent, Cyber Crime Squad, Federal Bureau of Investigation - Denver Division, 2004.

²⁶ Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

²⁷ Tomlinson, D.E. (1995). Journalism and entertainment as intellectual property on the information superhighway: The challenge of the digital domain, 6 *Stanford Law and Policy Review* 61, 63-64.

²⁸ Tomlinson, D.E. (1999). Intellectual property in the digital age: The piracy/ counterfeiting problem and antipiracy and anticounterfeiting measures. *Currents: International Trade Law Journal*, 3(3) Vol. 8, no. 1, starts on p. 3.

²⁹ Birden, Jr., P.B. (1996). Trademark protection in China: trends and directions. *Loyola of Los Angeles International and Comparative Law Journal*, 18, 431, 486 n.444.

³⁰ Tomlinson, D.E. (1999). Intellectual property in the digital age: The piracy/ counterfeiting problem and antipiracy and anticounterfeiting measures. *Currents: International Trade Law Journal*, 3(3) Vol. 8, no. 1, starts on p. 3. Tomlinson notes, the realm of intellectual property, "counterfeiting" generally relates to the copying of a product's trademark and trade dress, e.g., using the CD packaging which accompanies the CD itself as the "master image" for purposes of printing as much CD packaging "just as good as the original" as an entity might wish to print to accompany the CDs... .

³¹ Business Software Alliance and Software & Information Industry Association (2003). *Global Software Piracy Report*. (Issue 3). BSA Global Software Privacy Study, published in 2003, and located at <http://global.bsa.org/globalstudy/2003_GSPS.pdf>. BSA "Global Software Piracy Report" in 2000, located at <<http://global.bsa.org/usa/globallib/piracy/piracystats99.phtml?CFID=14731&CFTOKEN=33412057>>. BSA is located in Washington, DC.

³² Business Software Alliance and Software & Information Industry Association (2003). *Global Software Piracy Report*. (Issue 2). BSA Global Software Privacy Study, published in 2003, and located at <http://global.bsa.org/globalstudy/2003_GSPS.pdf>. BSA "Global Software Piracy Report" in 2000, located at <<http://global.bsa.org/usa/globallib/piracy/piracystats99.phtml?CFID=14731&CFTOKEN=33412057>>. BSA is located in Washington, DC.

³³ United Nations Association Staff. (1998). Basic facts about the United Nations. New York: United Nations Publications.

³⁴ Commission of the European Communities. (1998). Green paper: Combating counterfeiting and piracy in the single market. Brussels, Belgium. Retrieved December 17, 2003 from, see http://europa.eu.int/comm/internal_market/en/intprop/indprop/922.htm; OECD, ICC Counterfeiting Intelligence Bureau. (1998). The economic impact of counterfeiting (#DSTI/IND(97)6/REV1: Issue 5). Paris, France.

³⁵ World Intellectual Property Organization. (2002). *Intellectual property: A power tool for economic growth*. Geneva, Switzerland; located at http://www.wipo.int/about-wipo/en/dgo/wipo_pub_888/index_wipo_pub_888.html: Kamil Idris.

³⁶ Business Software Alliance and Software & Information Industry Association (2003). *Global Software Piracy Report*. (Issue 3). BSA Global Software Privacy Study, published in 2003, and located at http://global.bsa.org/globalstudy/2003_GSPS.pdf. BSA "Global Software Piracy Report" in 2000, located at <http://global.bsa.org/usa/globallib/piracy/piracystats99.phtml?CFID=14731&CFTOKEN=33412057>. BSA is located in Washington, DC.

³⁷ International Federation of the Phonographic Industry. (2000). Music piracy report 2000 (Issue 2). London: IFPI is both author and publisher.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 12). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴¹ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 13). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴² Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 14). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴³ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 15). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴⁴ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 16). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴⁵ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 17). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴⁶ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 18). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴⁷ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 18). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴⁸ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 9). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁴⁹ Organization for Economic Co-operation and Development. (1998). Economic impact of counterfeiting (Issue 12). Paris: Paris; Washington, DC: Organization for Economic Co-operation and Development.

⁵⁰ Malcolm, John G. Federal Document Clearing House Congressional Testimony. *The Internet, and Intellectual Property Committee on the House Judiciary, Copyright Piracy and Links to Crime and Terrorism*, (13 March 2003).

⁵¹ Gutterman, A.S. (1992). International intellectual property: Recent developments and issues for the coming decade. *Currents: International Trade Law Journal* 5(5), Vol. 1, no. 2, pp. 335-405.

⁵² EIU Riskwire, *Ukraine Risk: Legal and Regulatory Risk* (January 13, 2004).

⁵³ Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

⁵⁴ Associated Press Worldstream, (January 27, 2004). Chinese police raid fake prison, find disguised cigarette factory. Over 100 tons of tobacco found in the fake prison where 20 brand names were being used.

⁵⁵ Automotive News Europe (November 17, 2003). Authorities cite brake linings made of compressed grass, sawdust or cardboard, and oil filters that use rages for the filter element.

⁵⁶ Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

⁵⁷ Ibid.

⁵⁸ CBC-TV, *Venture Program* (December 14, 2003).

⁵⁹ *Flood of Fakes a Lethal Threat*, National Post (December 12, 2003).

⁶⁰ Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ See *Fake Cigarettes Worth RM1 Mil Seized*, Bernama The Malaysian National News Agency (January 9, 2004).

⁶⁵ See Harny Abu Khair, *Imitation Battery Warning*, Malay Mail (October 10, 2003); Ahmad Kushairi, *Pakistan Ori' for Handphone Batteries*, New Straits Times-Management Times (October 13, 2003).

⁶⁶ Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

⁶⁷ *Counterfeit Goods Pose Real Threat*, Insight on the News (2003, November 24). It is believed that 25 percent or more of drugs sold in Mexico now are counterfeit, which may be due partly to the fact that Mexico allows its pharmacists to work without any formal training and does not require prescriptions.

⁶⁸ Office Products International, *State of flux: Mexico has become a modern nation with an export-driven economy* (December 1, 2003).

⁶⁹ Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

⁷⁰ Ibid.

⁷¹ See *Philippines Must do More to Protect Intellectual Property Rights*, AFX-Asia, AFX News Limited (2004, February 2) (quoting Assistant Secretary of Commerce William Lash).

⁷² Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

⁷³ See *Shadow Goods Market in Russia Makes Up 30-40% of GDP*, Business Report (Interfax News Agency) (November 13, 2003).

⁷⁴ Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Ibid.

⁷⁸ *Aurigin Systems*. (1999). In K.G. Rivette and D. Kline, *Rembrandts in the attic: Unlocking the hidden value of patents*. Cambridge, MA: Harvard Business School Press.

⁷⁹ Friedman, D. (1994). Standards as intellectual property: An economic approach. *University of Dayton Law Review*, 19, 1109-1117.

⁸⁰ Hearing before the Subcommittee on Crime of the Committee on Judiciary, House of Representatives. *Fighting Cybercrime*, (14 June 2001) U.S. Printing Office.

⁸¹ Office of the United States Trade Representative. (2004). *USTR - Intellectual property: 2004 special 301 report*. Washington, DC.

⁸² Ibid.

⁸³ World Intellectual Property Organization. (2002). *Intellectual property: A power tool for economic growth*. Geneva, Switzerland; located at http://www.wipo.int/about-wipo/en/dgo/wipo_pub_888/index_wipo_pub_888.html: Kamil Idris.

⁸⁴ Interviews conducted by author with Edwin Kwakwa, Legal Counsel, World Intellectual Property Organization, Geneva, Switzerland, (2004). World Intellectual Property Organization. (2004, March). WIPO, Information technology and internet domain name disputes. Cleveland: Case Western Reserve University School of Law, Center for Law, Technology and the Arts: Edwind Kwakwa.

⁸⁵ Eg trade marks (First Council Directive 89/104/EEC of 21 December 1988 to approximate the laws of the Member States relating to trade marks, OJ L 40, 11.2.1989, p. 1.8), designs (Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on the legal protection of designs, OJ L 289, 28.10.1998, p. 28), patents for biotechnological inventions (Directive 99.44.EC of the European Parliament and of the Council of 6 July 1998 on the legal protection of biotechnological inventions, OJ L 213, 30.7.1998, p. 13), aspects of copyright and related rights (Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, OJ L 122, 17.5.1991, p. 42; Council Directive 92/100/EEC of 19 November 1992 on rental right and lending right and on certain rights related to copyright in the field of intellectual property, OJ L 346, 27.11.1992, p. 61; Council Directive 93/83/EEC of 27 September 1993 on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission, OJ L 248, 6.10.1993, p. 15; Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights, OJ L 290, 24.11.1993, p. 9; Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, OJ L 77, 27.3.1996, P. 20; Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the information society, OJ L 167, 22.6.2001, p. 10..) resale right for the benefit of the authors of original works of art (Directive 2001/84/EC of the European Parliament and of the Council of 27 September 2001 on resale rights for the benefit of the authors of original works of art, OJ L 272, 13.10.2001, p. 32) and the Directive on the harmonization of certain aspects of copyright and related rights in the information society 13.

⁸⁶ COM(98) 569 Final.

⁸⁷ OJ C 41, 7.2.2001, p. 56.

⁸⁸ COM (2000) 789 Final.

⁸⁹ OJ C 221, 7.8.2001, p. 20.

⁹⁰ COM (2003) 46 Final.

⁹¹ Mason, J.D., Mossinghoff, G., and Oblon, D. (1999). The Economic Espionage Act: Federal protection for corporate trade secrets. *Computer Law*, 16, 14-15. Historically, civil remedies for theft of trade secrets have been sought in litigation. However, because increased technological complexity, delays in civil litigation, and advances in computer technology have allowed thieves to profit more rapidly from trade secrets, traditional remedies of injunctions and civil damages have become largely ineffective. Furthermore, because of the intangible nature of trade secrets and the fact that thieves are often judgment-proof or too sophisticated to be pursued, civil remedies are frequently illusory.

⁹² Carr C., Morton, J. and Furniss, J. (2000). The Economic Espionage Act: Bear trap or mousetrap? *Texas Intellectual Property Law Journal* 8, 159-167.

⁹³ Interview conducted by author with Wolfgang Starein, Director, World Intellectual Property Organization, Geneva, Switzerland, (2004). United States Department of Justice Criminal Division. *Prosecuting Intellectual Property Crimes Manual, Introduction*. Retrieved February 2004 from, <http://www.cybercrime.gov/ipmanual/intro.htm>. (“As the modern economy grows increasingly reliant on intellectual property, the proliferation of computers and computer networks has made the illegal reproduction and distribution of protected material much easier to accomplish.”).

⁹⁴ United States Dep’t of Justice. (Press Release). (1997). FBI releases first results of nationwide crackdown on criminal trademark and copyright fraud. Retrieved December 10, 2002 from, http://www.usdoj.gov/criminalcybercrime/fl95_ag.htm (presenting results of Operation “Counter Copy” enforcement effort against copyright and trademark violations).

⁹⁵ Green, J.T. (2001). Don’t steal this article: Using the criminal provisions of the Copyright Act, 4 *Business Crimes Bulletin* 3 (2001) (noting this initiative quickly netted four guilty pleas for copyright infringement by college students).

⁹⁶ United States Department of Justice Criminal Division. *Prosecuting Intellectual Property Crimes Manual, Introduction*. Retrieved February 2004 from, <http://www.cybercrime.gov/ipmanual/intro.htm>.

⁹⁷ Monroe, Jana D. Federal Document Clearing House Congressional Testimony. *Copyright Enforcement and Internet Copyright Issues*, (17 July 2003).

⁹⁸ See *Feist Publications, Inc. v. Rural Telephone Serv. Co.*, 499 US. 340, 349, 353 (1991) (holding originality, not sweat of brow--hard work in compiling facts--to be key to copyrightability).

⁹⁹ Tomlin, D. H. (2001). Sui generis database protection: Cold comfort for hot news. 19 *Comm. Lawyer* 15, 16, 18.

¹⁰⁰ H.R. 1858, 106th Cong. (1999). This bill was introduced by United States Representative Thomas Bliley (R-VA). See John J. Cotter et al., *Using and Misusing Third Party Resources*, 661 PLI/Pat 213 (2001), at 254. H.R. 1858 prevented the distribution of a duplicate of another’s database in direct competition with the original database.

¹⁰¹ Pub. L. No. 105-304, 112 Stat. 2877 (codified as amended at 17 U.S.C. § 512 (1998)). See *United States v. Elcom Ltd.*, 203 F. Supp. 2d 1111, 1127-1129 (N.D. CaL 2002) (upholding DCMA to constitutional challenge); see also Goldstone, D. and O’Leary, M. (2001). Novel criminal copyright infringement issues related to the Internet. Retrieved January 21, 2003 from, http://www.cybercrime.gov/usamay2001_5.htm. (discussing enactment of the DMCA).

¹⁰² 17 U.S.C. § 512 (2000).

¹⁰³ 17 U.S.C. § 1201 (2000).

¹⁰⁴ 17 U.S.C. § 1202 (2000).

¹⁰⁵ No Electronic Theft (NET) Act of 1997, Pub. L. No. 105-147, 111 Stat. 2678 (1997).

¹⁰⁶ Coblenz, M. (1999). Intellectual Property Crimes. *Albany Law Journal of Science and Technology*, 9, 235-244. (commenting on history of criminal copyright statutes). The NET Act is the centerpiece of DOJ efforts to combat intellectual property infringement, especially in the New York-New Jersey area, California, Massachusetts and the Southern District of Florida. Eric H. Holder, Jr. (Press Conference). (1999). Announcing the Intellectual Property Rights Initiative. Retrieved January 21, 2003 from, <http://www.usdoj.gov/criminal/cybercrime/dagipini.htm>. (detailing new interdepartmental commitment).

¹⁰⁷ Hsieh, L., McCarthy, J. and Monkus, E. (1998). Intellectual Property Crimes. *American Criminal Law Review* 35, 899-915. "A college student pleaded guilty to illegally distributing movies, music and software programs [through] his Web site in what federal prosecutors...said was the first Internet piracy conviction under a 1997 law." Students pleads guilty to software pirating. (1999, August 21). *Houston Chronicle*, p.2C.

¹⁰⁸ Hsieh, L., McCarthy, J. and Monkus, E. Intellectual Property Crimes, *American Criminal Law Review*, 35, 899-915.

¹⁰⁹ Computer Crime and Intellectual Property Section. Chapter VIII: Theft of Commercial Trade Secrets. Retrieved February 2004 from, at <http://www.cybercrime.gov/ipmanual/O8ipma.htm>. cf. 18 U.S.C. § 1905 (2000).

¹¹⁰ 18 U.S.C. § 1905 (2000) (describing crime of disclosure of confidential information by an officer or employee of the United States); see *United States v. Wallington*, 889 F.2d 573, 577-78 (5th Cir. 1989) (noting Act prohibits disclosure of information only if information is confidential and federal employee knew information to be so).

¹¹¹ 18 U.S.C. § 1905 (2000) (limiting scope to "an officer or employee of the United States or of any department or agency thereof, any person acting on behalf of the Office of Federal Housing Enterprise Oversight, or agent of the Department of Justice as defined in the Antitrust Civil Process Act").

¹¹² 18 U.S.C. § 1905 (2000) (providing for fine or imprisonment of not more than one year, or both, removal from office or employment, for disclosure of confidential information by officer or employee of United States). Pooley, J.H.A. (1996). Understanding the Economic Espionage Act of 1996. *Texas Intellectual Property Law Journal*, 5, 177-180.

¹¹³ Pooley, J.H.A. (1996). Understanding the Economic Espionage Act of 1996. *Texas Intellectual Property Law Journal*, 5, 177-180.

¹¹⁴ 18 U.S.C. § 2314 (2000). The NSPA was intended "to fight the 'roving criminal' whose access to automobiles made it easy to move stolen property across state lines. . . frustrating local law enforcement." Krakaur, K.D. & Juman, R.C. (1997). Two New Federal Offenses Help Battle Corporate Espionage. *Business Crimes Bulletin: Compliance & Litigation*, 4, 7. See Pooley, supra note 26, at 179-180 (indicating 18 U.S.C. §§ 2314, 2315 are also known as the Interstate Transportation of Stolen Property Act ("ITSP")).

¹¹⁵ 18 U.S.C. § 2314 (2000) (levying sanctions in form of fine and/or imprisonment for up to ten years).

¹¹⁶ 18 U.S.C. § 2314 (2000). Section 2314 imposes criminal sanctions on any person who: having devised or intending to devise any scheme or artifice to defraud, or for obtaining money or property by means of false or fraudulent pretenses, representations, or promises, transports or causes to be transported, or induces any person or persons to travel in, or to be transported in interstate or foreign commerce in the execution or concealment of a scheme or artifice to defraud that person or those persons of money or property having a value of \$5,000 or more.

¹¹⁷ See *United States v. Stegora*, 849 F.2d 291, 292 (8th Cir. 1988) (ruling theft of sample of synthetic casting material used in repairing broken bones falls under NSPA even though major portion of its value comes from intangible component); *United States v. Bottone*, 365 F.2d 389, 393-94 (2d Cir. 1966) (holding NSPA

applicable to theft of copies of documents containing trade secrets); *United States v. Seagraves*, 265 F.2d 876, 880 (3d Cir. 1959) (finding theft of geophysical maps identifying possible oil deposits falls under NSPA).

¹¹⁸ Simon, S. (1998). The Economic Espionage Act of 1996. *Berkeley Technology Law Journal*, 13, 305-306. (explaining history of National Stolen Property Act).

¹¹⁹ 18 U.S.C. §§ 1341, 1343 (2000) (describing elements of mail or wire fraud crimes). For a more extensive discussion of the mail and wire fraud statutes, see the Mail And Wire Fraud Article in this issue.

¹²⁰ The mail fraud statute is flexible because almost any use of the mail brings one under the statute's prohibitions. See *Schmuck v. United States*, 489 United States 705, 710-11(1989) (holding use of mails need not be essential part of scheme but only "step in [the] plot").

¹²¹ See *United States v. McNeive*, 536 F.2d 1245, 1247 (1976) (construing statute in light of its manifest purpose to prohibit all attempts to defraud by any form of misrepresentation).

¹²² See *United States v. Henry*, 29 F.3d 112, 114 (3d Cir. 1994) ("The statutes cover schemes to defraud another of intangible property, such as confidential business information.").

¹²³ Hsieh, L., McCarthy, J. and Monkus, E. (1998). Intellectual property crimes. *American Criminal Law Review*, 35, 899-920.

¹²⁴ 18 U.S.C. §§ 1961-1968 (2000) (criminalizing racketeer influenced and corrupt organizations activities). For a full discussion of §§ 1961-1968, see the Racketeer Influenced And Corrupt Organizations article in this issue.

¹²⁵ E.g., *Religious Tech. Ctr. v. Wollersheim*, 796 F.2d 1076, 1084 (9th Cir. 1986) (recognizing civil RICO claims for trade secret theft but finding injunctive relief not available in RICO action before court). The issue of whether RICO claims give rise to injunctive relief is now before the Supreme Court. See *Scheidler v. Nat'l Org. for Women, Inc.*, 535 United States 1016 (2002).

¹²⁶ See 18 U.S.C. § 1961(1)(B) (2000) (identifying predicate offenses under RICO which violate criminal law); see also *W. Assocs. Ltd. P'ship v. Mkt. Square Assocs.*, 235 F.3d 629, 633 (1)12, Cir. 2001) (finding predicate offenses are acts punishable under certain state and federal criminal laws).

¹²⁷ 18 U.S.C. § 1341 (2000).

¹²⁸ 18 U.S.C. § 1343 (2000).

¹²⁹ 18 U.S.C. § 2314 (2000).

¹³⁰ 18 U.S.C. § 2315 (2000). One commentator reports that Congress intended the criminal misappropriation of trade secrets to be a crime punishable under RICO, and thinks it likely that this will occur in the future. See Coblenz, M. (1999). Intellectual property crimes. *Albany Law Journal of Science and Technology*, 9, 235-283 (speculating that Economic Espionage Act (EAA) was not included in RICO amendments because the EEA was signed into law three months after RICO).

¹³¹ See *United States v. LaMacchia*, 871 F. Supp. 535, 539 (D. Mass. 1994) (requiring commercial exploitation for criminal offense of software piracy). Saunders, M. J. (1994). Criminal copyright infringement and the Copyright Felony Act. *Denver University Law Review*, 71, 671-672 (discussing requirements for criminal copyright infringement); Spanner, R.A. (1995). The brave new world of criminal software infringement prosecutions. *Computer Law*, 12, 1-11. (discussing various factors involved in criminal software prosecutions); Walker, K. (1994). Federal criminal remedies for the theft of intellectual property. *Hastings Communication & Entertainment Law Journal*, 16, 681-683. (presenting United States Attorney's view on factors for prosecuting high-technology crime as distinguished from civil infringement).

¹³² See, e.g., *LaMacchia*, 871 F. Supp. at 539-40 (discussing history of criminal copyright law); Saunders, M. J. (1994). Criminal copyright infringement and the Copyright Felony Act. *Denver University Law Review*, 71, 671-680 at 679-80 (describing criminal copyright statute).

¹³³ Pub. L. No. 102-561, 106 Stat. 4233 (codified as amended at 18 U.S.C. §2319(b)-(c) (2000)). For an in-depth discussion of the legislative history of the Copyright Felony Act; Saunders, M. J. (1994). Criminal copyright infringement and the Copyright Felony Act. *Denver University Law Review*, 71, 671-680 at 679-80

¹³⁴ Hsieh, L., McCarthy, J. and Monkus, E. (1998). Intellectual property crimes. *American Criminal Law Review*, 35, 899-914.

¹³⁵ Ibid.

¹³⁶ Hsieh, L., McCarthy, J. and Monkus, E. (1998). Intellectual property crimes. *American Criminal Law Review*, 35, 899-915 at 915.

¹³⁷ Ibid.

¹³⁸ See 18 U.S.C. § 1956(c)(7)(D) (2000 & Supp. 2001) (amended to insert section 1030, relating to computer fraud and abuse). For further discussion of this statute and its applicability to copyright law, see the Money Laundering article in this issue.

¹³⁹ Malcolm, John G. Federal Document Clearing House Congressional Testimony. *The Internet, and Intellectual Property Committee on the House Judiciary, Copyright Piracy and Links to Crime and Terrorism*, (13 March 2003).

¹⁴⁰ Department of Justice. (2001). Federal law enforcement targets international Internet piracy syndicates: Multiple enforcement actions worldwide snare top "Warez" leadership. Washington, DC.

¹⁴¹ Ibid.

¹⁴² Ibid.

¹⁴³ Malcolm, John G. Federal Document Clearing House Congressional Testimony. *The Internet, and Intellectual Property Committee on the House Judiciary, Copyright Piracy and Links to Crime and Terrorism*, (13 March 2003).

¹⁴⁴ Ibid.

¹⁴⁵ Ibid.

¹⁴⁶ LeBlanc, C. (2000, January 18). Huge fake clothing ring cracked: Upstate man pleads guilty to running \$7 million scam. *The State*, pp.A1. Department of Justice. (Press Release). South Carolina man pleads guilty to trafficking closing with counterfeit trademarks. Retrieved March 9, 2004 from, <http://www.cybercrime.gov/farmerPlea.htm>.

¹⁴⁷ Shifrel, S. (2002, July 11). Three charged in money laundering. *Daily News*, pp. 4.

¹⁴⁸ White, J. (2002, February 28). Pennsylvania man admits internet conspiracy. *The Washington Post*, pp. B02.

¹⁴⁹ Department of Justice. (Press Release). (2001). Defendant who operated Fakegifts.com sentenced. Retrieved March 9, 2004 from, <http://www.cybercrime.gov/DipadovaSent.htm>.

¹⁵⁰ Author unknown. (2002). Woman must pay slim in software. Retrieved November 25, 2002 from, <http://www.cnn.com/2002/TECH/biztech/11/25/counterfeit.software.ap/index.html>.

¹⁵¹ Martinez, E. & Kranes, M. (2002, May 10). Knockoffs knocked out. *New York Post*, p. 8.

¹⁵² (2001). Taiwan fears US blacklist after fake software haul. *The Strait Times* pp. A3.; Department of Justice. (Press Release). (2001). U. S Customs Seizes \$100 million in pirated computer software: Biggest case in United States history. Retrieved December 17, 2003 from, <http://www.cybercrime.gov/operationwhitehorse.htm>; Statement LaMagna, Richard C. Testimony before the House Subcommittee on Courts, the Internet, and Intellectual Property. *Oversight Hearing on International Copyright Piracy. 'Links to Organized Crime and Terrorism*, (13 March 2003). (noting that Taiwanese authorities later confirmed that the operation was financed by criminal groups based in Asia).

¹⁵³ Ibid.

¹⁵⁴ Tuohy, J. (2001, November 27). Testimony from felons help convict cocoa man. *Florida Today*, **volume, pages**.

¹⁵⁵ Galbraith, R. (2001, September 29). Luxury groups battle a wave of counterfeit goods, *The International Herald Tribune*, p. 12.

¹⁵⁶ George W. Abbott, Jr. and Lee S. Sporn, Trademark Counterfeiting § 1.03[B] (2001); 5. Rep. 104-177. 104th Cong., Vt Sess. (1995).

¹⁵⁷ The WCO is based in Brussels, Belgium. Established in 1952 as the Customs Cooperation Council, it changed its name in 1994 to World Customs Organization to reflect its worldwide role as the exclusive intergovernmental organization with competence in customs matters. As this is written, there are 151 member governments. WCO hosts a joint Customs/Business IPR Committee, in which business members work directly with governments to enhance enforcement of IPRs and the fight against counterfeiting and piracy.

¹⁵⁸ Interpol was set up to globally enhance and facilitate cross-border criminal police cooperation. It is an international organization with 179 member countries. See more at www.interpol.int.

¹⁵⁹ McKenzie, S. (1998). Comment, global protection of trademark intellectual property rights: A comparison of infringement and remedies. In China versus the European Union. *Gonzaga Law Review*, 34, 529-539.

¹⁶⁰ McKenzie, S. (1998). Comment, global protection of trademark intellectual property rights: A comparison of infringement and remedies. In China versus the European Union. *Gonzaga Law Review*, 34, 529-539.

¹⁶¹ Getlan, M. (1995). TRIPS and the future of section 301: A comparative study in trade dispute resolution. *Columbia Journal of Transnational Law*, 34, 173-176.

¹⁶² Getlan, M. (1995). TRIPS and the future of section 301: A comparative study in trade dispute resolution. *Columbia Journal of Transnational Law*, 34, 173-176. Countries not in compliance with the set standard would be expected to amend their laws to coincide with international standards and would have to agree to be bound by a dispute settlement mechanism (which would allow retaliatory measures). See Id. at 177. Retaliation measures include the withdrawal of GATT concessions or obligations. See id.

¹⁶³ Rangel-Ortiz, H. (1996). Intellectual property and NAFTA. *Currents: International Trade Law Journal*, 36, 36.

¹⁶⁴ The Uruguay Round was the eighth round sponsored by GATT. General Agreement on Tariffs and Trade -Multilateral Trade Negotiations (The Uruguay Round): Agreement Establishing the Multilateral Trade Organization [World Trade Organization], 15 December 1993, 33 I.L.M. 13.

¹⁶⁵ The World Trade Organization. What is the WTO? Retrieved February 28, 2003 from, http://www.wto.org/english/thewto_e/whatis_e/whatis_e.htm.

¹⁶⁶ (1994). The “author” of the agreement appears to be multiple countries involved with GATT (http://www.wto.org/english/thewto_e/gattmem_e.htm). Agreement on trade-related aspects of intellectual property

rights: Agreement on trade-related aspects of intellectual property rights. Retrieved February 29, 2003 from, http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm.

¹⁶⁷ The World Trade Organization. The WTO ...in brief. Retrieved February 28, 2003 from, http://www.wto.org/english/thewto_e/whatis_e/inbrief_e/inbr00_e.htm.

¹⁶⁸ Hicks, L. & Holbein, J. (1997). Convergence of national intellectual property norms in international trading agreements. *American University Journal of International Law and Policy*, 12, 769-780.

¹⁶⁹ (1994). The “author” of the agreement appears to be multiple countries involved with GATT (http://www.wto.org/english/thewto_e/gattmem_e.htm). Agreement on trade-related aspects of intellectual property rights: Agreement on trade-related aspects of intellectual property rights. Retrieved February 29, 2003 from, http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm.

¹⁷⁰ (1994). The “author” of the agreement appears to be multiple countries involved with GATT (http://www.wto.org/english/thewto_e/gattmem_e.htm). Agreement on trade-related aspects of intellectual property rights: Agreement on trade-related aspects of intellectual property rights. Retrieved February 29, 2003 from, http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm.

¹⁷¹ Emmert, F. (1990). Intellectual property in the Uruguay Round: Negotiating strategies of the western industrialized countries. *Michigan Journal of International Law*, 11, 1317-79.

¹⁷² Emmert, F. (1990). Intellectual property in the Uruguay Round: Negotiating strategies of the western industrialized countries. *Michigan Journal of International Law*, 11, 1317-22. Bello, J. & Holmer, A. (1989-90). “Special 301”: Its requirements, implementation, and significance. *Fordham International Law Journal*, 13, 259-260.

¹⁷³ Oddi, A. (1987). The international patent system and third world development: Reality or myth? *Duke Law Journal*, 831, 848-55. Mossinghoff, G. (1987). Research-based pharmaceutical companies: The need for improved patent protection worldwide. *Journal of Law and Technology*, 2, 307-11.

¹⁷⁴ Oddi, A. (1987). The international patent system and third world development: Reality or myth? *Duke Law Journal*, 831, 848-55.

¹⁷⁵ Emmert, F. (1990). Intellectual property in the Uruguay Round: Negotiating strategies of the western industrialized countries. *Michigan Journal of International Law*, 11, 1317 at 1354.

¹⁷⁶ The first international patent congress was held in Vienna in 1873. Emmert, F. (1990). Intellectual property in the Uruguay Round: Negotiating strategies of the western industrialized countries. *Michigan Journal of International Law*, 11, 1317-39.

¹⁷⁷ Ashman, K. (1989). The Omnibus Trade and Competitiveness Act of 1988: The Section 301 Amendments: Insignificant changes from prior law? *Boston University International Law Journal*, 7, 115, 129-31.

¹⁷⁸ Baucus, M. (1989). A new trade strategy: The case for bilateral agreements. *Cornell International Law Journal*, 22, 1-2.

¹⁷⁹ Farkas, L. (1996). Trade-related aspects of intellectual property In T. P. Stewart (Ed.), *The World Trade Organization: the multilateral trade framework for the 21st century and U.S. implementing legislation*, Chicago, IL: American Bar Association, Section of International Law and Practice, 1996, pp. 463-521.

¹⁸⁰ McCarthy, J. (1995). Intellectual property: America's overlooked export. *University of Dayton Law Review*, 20, 813-14. American businesses suffer the most when an Asian government tolerates the widespread pirating of computer programs and CDs and the Asian market becomes flooded with pirated products. This occurs because America supplies the bulk of the world's software and music, as well as video tapes. While the Asian nations produce most of the hardware used in the entertainment and computer industries, such as televisions, CD players, and PC clones, America supplies the content for that hardware--the shows, songs, and software that makes the hardware valuable. If foreign nations do not recognize or enforce intellectual property laws, then America has nothing to sell.

¹⁸¹ ICC Spawns Formation of Multinational Anti-Counterfeiting Body. (1998). *Journal of Proprietary Rights*, 10, 27.

¹⁸² ICC Spawns Formation of Multinational Anti-Counterfeiting Body. (1998). *Journal of Proprietary Rights*, 10, 27. The GAGC expects to focus its efforts on lobbying governments that have been relatively tolerant of counterfeiting and on disseminating information to its members. As a unified group, the GACG also believes...it can overcome many of the setbacks...its individual members [have] experienced in combating piracy on their own. Id.

¹⁸³ The membership of IACC is comprised of a cross section of business and industry - from autos, apparel, luxury goods, and pharmaceuticals, to food, software and entertainment - whose combined annual revenues exceed \$650 billion.

¹⁸⁴ See International AntiCounterfeiting Coalition (IACC) Frequently Asked Questions, International AntiCounterfeiting Coalition, Retrieved March 25, 2004 from, <http://www.iacc.org/teampublish/uploads/IACC-FAQs.pdf>.

¹⁸⁵ Hyde, Henry J. Opening Remarks before the Committee on International Relations; *Intellectual property crimes: Are proceeds from counterfeited goods funding terrorism?* (16 July 2003). Retrieved March 25, 2004 from, www.fnsg.com.

¹⁸⁶ Ibid.

¹⁸⁷ Interview conducted by author with Wolfgang Starein, Director, World Intellectual Property Organization, Geneva, Switzerland, (2004).

¹⁸⁸ Ibid.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid.

¹⁹¹ Interview conducted by author with Wolfgang Starein, Director, World Intellectual Property Organization, Geneva, Switzerland, (2004).

¹⁹² Some authors have suggested the use of an incentive system, but have emphasized that the incentives must be strictly limited in time so that the developing countries will be encouraged to progress quickly to true intellectual property protection. Kastenmeir, W. & Beier, D. (1989). International trade and intellectual property: Promise, risks, and reality. *Vanderbilt Journal of Transnational Law*, 22, 285-304. The problem with setting time limits to the incentives is that real hardships will ensue if incentives are terminated before real benefits outweigh the costs of the imposed intellectual property system.

¹⁹³ Niemeyer, K. (1995). Protecting foreign copyright in the People's Republic of China, *Currents: International Trade Law Journal* 10, 10.

¹⁹⁴ Interview conducted by author with Wolfgang Starein, Director, World Intellectual Property Organization, Geneva, Switzerland, (2004).

¹⁹⁵ Ibid.

¹⁹⁶ Ibid.

¹⁹⁷ Ibid.

¹⁹⁸ See Article 11 of the WIPO Copyright Treaty and Article 18 of the WIPO Performances and Phonograms Treaty. Both treaties were adopted by the Diplomatic Conference on Certain Copyright and Neighboring Rights Questions, which was convened under the auspices of WIPO in Geneva on 20 December 1996.

¹⁹⁹ WIPO Doc., WIPO/EIM/3.

²⁰⁰ Interviews conducted by author with David Mahon, Supervisory Special Agent, Cyber Crime Squad, Federal Bureau of Investigation - Denver Division, 2004.