Intellectual Property and White-collar Crime:

Report of Issues, Trends, and Problems for Future Research

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In 2003-04, the National White Collar Crime Center (NW3C) conducted a study to examine the association between intellectual property (IP) and white-collar crime (WCC). The goal of the study was to create a coherent picture of the linkage between IP and WCC and to identify future research that would benefit policy makers (in developing IP law); federal, state, and local agencies (in enforcing IP law); and the general public (in understanding IP issues). To establish a foundation for the study, NW3C researchers examined theories of intellectual property rights (IPR), current issues and concerns related to IP, and legal cases through a review of books, journal articles, government reports, and newspaper articles. In addition, NW3C participated in quarterly meetings with law enforcement, prosecutors, and IP industry professionals recognized as experts in the area of IP. Some of these experts participated in individual interviews or completed questionnaires about observations, opinions, and views based on their experience. The purpose of the interviews and questionnaires was to elicit responses to pointed questions about the nature and consequences of IPR violations and to encourage open discussion of obstacles, needs, and concerns in the enforcement community. Although this method of gathering information does not allow for generalizations to be made, it was used to capture unanticipated responses and detailed information about daily activities related to IPR.

The term “intellectual property” generally refers to any product of the human intellect that is deemed unique and potentially valuable in the marketplace, including an idea, invention, literary creation, unique name, business method, industrial process, chemical formula, and computer program. Since the creation and dissemination of IP is an important part of economic,

social, and cultural development, laws have been created throughout the world to define and protect the rights of those who develop IP. These laws include protections through patents, copyrights, trademarks, and trade secrets, and are enforced primarily through civil action and criminal prosecution.

White-collar crime has been defined as "an illegal act or series of illegal acts committed by nonphysical means and by concealment of guile, to obtain money or property, to avoid the payment or loss of money or property, or to obtain business or personal advantage."[1] This definition, along with other definitions recently proposed by scholars,[2] extends beyond the traditional definition of WCC as crime committed by people of high social status[3] and focuses on the offense rather than the offender. Based on this definition of WCC and the findings of the NW3C study, this report maintains that IPR violations are a form of WCC that also facilitates other WCCs, such as investment fraud, money laundering, and identity theft.

Development and enforcement of IP laws are primarily designed to "advance public welfare through the talents of authors and inventors."[4] However, these efforts are complicated by the fact that IPR violations are associated with other crimes,[5] including terrorism.[6] For example, profits from illegal sales of counterfeited goods[7] and insurance fraud[8] have been traced to the funding of terrorist activities and other organized crime. Misappropriated IP has also served as a means of acquiring symbols of legitimacy (e.g., a company's trademark) for fraudulent sales,[9] investment scams,[10] and collection of personal information (i.e., identity theft).[11]

The first section of this report identifies some of the economic, political, and legal theories that support the creation and maintenance of IPR laws, as well as those that support criticisms of IPR protections. This information is drawn primarily from the literature in the social sciences and the legal field, studies conducted by governmental and private organizations

throughout the world, and other articles that address IP issues. Although a thorough review of literature in all fields associated with IP was beyond the scope of this study, this review identified a variety of issues and concerns related to IP and established a basis for gathering information from primary sources.

In the second section, crimes associated with IP and controversial applications of IP law are described to illustrate ways in which IPR violations are associated with WCC and identify conflicting concerns and biases of the numerous stakeholders in IP. A central IP controversy, for example, involves conflicts between free speech and access to essential technologies on the one hand and interests in reasonable economic benefit from innovative ideas and stimulation of research and development on the other. This controversy alone involves issues related to Constitutional rights and privileges, economic theory, computer technology, and social philosophy. The last section of this report provides selected statistics on IPR violations, based on government and industry-based reports, followed by a detailed description of the information gathered from the NW3C survey. This final section focuses on concerns and problems that face those who deal with IP issues on a daily basis and identifies areas for future research.

Theoretical Bases for Intellectual Property Protections

Traditionally, justification for IP laws is based on the view that strong protection of IPR is the best, if not the only, means of stimulating innovation and economic growth. Despite widespread support of this view, opposition to IPR protections has persisted for centuries.[12] Views on the appropriate role of government and law in the development of IP vary tremendously among economists, political theorists, sociologists, the legal community, law enforcement, and various IP consumers. Since one of the consequences of governmental involvement in IP issues is the criminalization of IP use and exchange, examining these differing

views is a necessary part of evaluating the nature and consequences of IP laws, and tangentially the nature and consequences of IPR violations.

Recent arguments favoring weak IPR protections include the contention that levels of IPR protections can be *inversely* related to innovation, economic growth, and global health. Specifically, it is argued, weak protections tend to keep market prices low, thus stimulating economic growth; strong protections, "by creating a monopoly, may induce the producer to accumulate 'sleeping patents' in an effort to preserve market share,"[13] thus stifling both innovation and economic growth. In addition, strong protections, including the World Trade Organization's agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), could, according to some, threaten global health because they reduce access to life-saving medicines, particularly in developing countries.[14] Although this on-going, and currently unresolved, argument has produced more questions than solutions, in part because of the "lack of cumulative empirical evidence,"[15] the dialogue is a useful complement to a summary of problems and concerns in IPR enforcement for an assessment of future research needs.

Notable Economic Theories

From an economic perspective, a primary purpose of IP laws, like many other laws, is to produce a desired result that market forces, or competition, fail to produce. Specifically, IP laws are designed, in part, to protect future economic gain from IP products as an incentive for investing in research and development (R & D) today. Without such protections, it is assumed that innovation would decline because initial costs cannot be recovered in a free market environment. In 1962, Kenneth Arrow identified "three reasons why perfect competition might fail to allocate resources optimally in the case of invention":[16] risk, inappropriability, and indivisibility.[17] Both "risk" and "indivisibility" address the problem that R & D often require

substantial expenditures of time and money. When invention efforts are unsuccessful, this theory holds, expenditures fail to yield reasonable economic benefit to the inventor. When they are successful, the cost of producing the first prototype is usually far greater than the cost of producing subsequent copies, yet pricing (in a free market) tends to be more closely related to the latter. "Inappropriability" of invention describes the inability of an inventor to take exclusive possession of IP, as IP does not have physical form. Addressing some of these problems, Paul Romer suggested in the 1980s and 1990s that economic variables such as taxes, interest, and government subsidies could help to balance inequities that market forces fail to correct.[18] In other words, fiscal and monetary policy could provide incentives for innovation. However, central to Romer's theory is the belief that innovation requires some degree of monopoly power, which, of course, is consistent with current practices of protecting IPR.

Rejecting the analyses of both Arrow and Romer, Boldrin and Levine argued in 1997 that innovation can thrive in perfectly competitive markets and that "copyrights and patents may be socially undesirable."[19] Economists James Bessen and Eric Maskin supported this idea, pointing out that the strengthening of patent protections in the 1980s "ushered in a period of stagnant, if not declining, R & D among those industries and firms that patented most."[20] To explain this position, Boldrin and Levine outlined a challenge to the mainstream assumption that innovation is a single function – a function with costs that cannot be recovered in a free market. Instead, they argued, innovation is composed of two functional parts: (1) *creation*, or R & D (with large initial costs) and (2) *reproduction*, or mass production (with small reproduction costs). Separated in this way, and accompanied by a well-defined "right of first sale"[21] for the inventor, free market value of *creation* and *reproduction* can be determined independently. For example, a drug designer can sell the first prototype of an idea (e.g., a drug) to a distributor for the estimated

value of future sales. This represents the "right of first sale." Then the distributor can sell reproductions in mass at a unit price that the market will bear. Both stages are subject to a competitive market yet valued in a distinctly different manner. In addition, both stages assign value only to the *product* of IP and never to the *idea* disembodied from the product because, Boldrin and Levine argued, ideas "have economic value only to the extent that they are embodied into either something or someone."[22] An important element of current IPR models that is eliminated in this model is the right of the inventor to control, limit, or prevent the reproduction or modification of the IP product. The importance of this difference is that it theoretically allows innovation to contribute to future innovation more easily and ideas to be expanded and incorporated with other ideas more rapidly. In other words, the Boldrin and Levine model eliminates the unintended consequences of stifled innovation that current IP laws and practices tend to produce.

The Boldrin and Levine model has a number of opponents, one of whom is Paul Romer – who recommended fiscal and monetary IP policies. Although Romer acknowledged that the mathematical assumptions made by Boldrin and Levine are "logically consistent," he argued that the assumptions "are wildly at odds with the underlying facts in the pharmaceutical industry."[23] Economist Robert Lucas[24] has been less critical. He has stated that the problem with the model is not the general assumptions but application of the model equally to all types of IP. The model works well in the music industry, for example, since musicians are unlikely to stop writing and recording songs in the absence of copyright enforcement. On the other hand, the model is less applicable to the pharmaceutical industry because the substantial cost of developing new drugs may prohibit innovation if no assurances of economic return are provided. In this case, Lucas argued, IPR protections serve the interests of innovation and not just interests of monopolization.

This is an important distinction because economists generally agree that monopolies create undesirable economic distortions, and the U.S. legal system provides mechanisms that are designed to inhibit monopolistic control.

Notable Political Theories

Although justifications for IP laws rely heavily on economic assumptions, they also rely on political theories, such as the concept that ideas should be regarded as property and government should protect these forms of property. Therefore, examination of IP laws, including violations of those laws, should include analysis of underlying political theories to determine if the consequences of IP laws are consistent with established belief systems of the society in which the laws apply. For example, U.S. public policy is (in theory) designed to secure and promote general welfare (i.e., make people's lives better) and protect individual rights. However, IP law that is based on protections of individual rights (of control and economic benefit) without consideration of the effects of IP law on all people, or vise versa, is not consistent with the belief systems of the U.S.[25]

In a 1999 article, Robert Ostergard acknowledged this conflict of interests, stating, "any approach must balance the rights of creators with the needs of others."[26] Ostergard began his argument by examining "two dominant…lines of reasoning" for the justification of IP rights: John Locke's labor theory of property and a traditional doctrine of utilitarianism. The former provides a micro perspective, focusing primarily on individual rights, and the latter provides a macro perspective, focusing primarily on group benefit. He concluded that these lines of reason, even when considered together, "do not constitute an adequate or coherent prescriptive theory for the recognition of IP rights."[27]

The first justification for IPR that Ostergard examined – John Locke's labor theory of property – contends that "objects produced by an individual through the mixing of labor with resources are the property of that individual alone."[28] Although this dictum is centrally concerned with individual rights, it also requires that "others are not made worse off by the acquisition."[29] This stipulation raises the question, "What is 'worse off'?" One answer, provided by Robert Nozick, is that individuals are worse off if "they lose the opportunity to improve their situation."[30] Based on this definition, Ostergard argued, "those who are monetarily restricted from buying a new drug that can save their lives are worse off";[31] therefore, IP laws – as they are currently designed – cannot be justified with Locke's labor theory. This analysis identifies as a primary weakness in IP law the failure to distinguish between "essential" and "non-essential intellectual objects," or the tendency to "treat all intellectual objects equally."[32] To distinguish essential from non-essential objects, Ostergard suggested, a "physical well-being criteria" might be used. This criteria would, for example, deem a music composition non-essential, since "people would be no worse off if they were monetarily restricted from buying a new music compact disc."[33] Other criteria for differentiating intellectual objects are the *enhancement* people's physical well-being and *overall* well-being, including intellectual and cultural enhancement.[34] Using these criteria, music and cinema would be included as essential objects, in the absence of which people would be "worse off."

The second justification for IPR that Ostergard examined – utilitarianism – is centrally concerned with advancing the welfare of the group (i.e., society). This line of reasoning supports IP rights because they provide "an incentive for invention and production, which, ultimately promotes economic growth."[35] In other words, the short-term costs of providing property rights to the creator of IP are justified by the long-term benefits of promoting economic growth. Citing

examples from the histories of the United States, Great Britain, China, and other countries, however, Ostergard argued that access to ideas has proven to be essential in developmental stages of economic growth. Restricting access to IP, therefore, does not clearly produce long-term benefits of economic growth.[36] This argument, which is supported by Boldrin and Levine's economic analysis, is particularly crucial for considering the impact of IP laws on developing countries in early stages of economic growth.

An alternative conceptualization of IPR, Ostergard suggested, is one that considers "society's development at the individual level instead of at the national level."[37] For example, he argued that "whatever property is needed to maintain an individual's physical well-being must be accessible if all human beings are to be permitted to achieve their full potential."[38] In addition to attempting to accommodate both individual rights and general welfare, this alternative attempts to address international concerns such as the safety of drugs in developing countries.

The Nigerian Institute of Pharmaceutical Research has determined that 80 percent of drugs in the major pharmacy stores in Lagos, Nigeria are counterfeit.[39] The dangers of this situation were demonstrated in a case involving counterfeit cough syrup that was actually antifreeze. One hundred children died in this case.[40] In China, the Shenzhen Evening News reported that 192,000 people died in 2001 from the use of counterfeit drugs.[41] Methods for addressing these tragedies of IP abuse include providing monetary benefit for IP creation through alternative means, such as the taxes and subsidies (suggested by Romer) or a modified market model (suggested by Boldrin and Levine). These alternatives could create lower costs for essential IP, such as drugs, which would make the IP product more accessible to individuals who need it and reduce the demand for, and profitability of, illegal IP products.

Questions to Consider

Should IP laws distinguish between different forms of IP?
Should IP laws treat all IP use equally?
Should IP laws be different for international application than national application?
Should general welfare be given greater consideration than economic benefit in some circumstance of IP use?

Legal Foundations of Intellectual Property Rights

An early version of current U.S. patent law was adopted in colonial America "to promote in the United States the absorption, dissemination and use of technical knowledge available in foreign countries."[42] These and other IP laws were subsequently developed as the needs of the country changed and its status changed from importer of IP to exporter. Today U.S. IP law is primarily maintained through a federal system of protections for patents, copyrights, trademarks, and trade secrets (see Table 1).

Table 1
Intellectual Property Protections, Definitions

Patent	Protects any invention or discovery of a "new and useful process, machine manufacture, or composition of matter, or any new and useful improvement[43]
Copyright	Protects original works of authorship, specifically those that are fixed in any tangible medium of expression, and provides the holder the exclusive right to reproduce, adapt, distribute, perform, and display the work[44]
Trademark	Defined as "any word, name, symbol, or device, or any combination thereof…which a person has a bona fide intention to use in commerce and …[register], to identify and distinguish his or her goods…from those manufactured or sold by others and to indicate the source of the goods, even if that source is unknown."[45]
Trade Secret	Defined as confidential information of a business

Provisions for both criminal and civil penalties for IPR violations are detailed in federal law, as well as various state laws. An appendix to this report provides a basic description of federal IP laws, including grounds for challenging IP ownership, public use of protected IP, and violation penalties.

Copyright issues are perhaps the most widely discussed in recent years, with legal disputes over music, movie, video games, and computer software downloaded from Internet Service Providers (ISPs) and Peer-to-Peer (P2P) networks. Losses from copyright infringement are estimated at $30 billion to $100 billion,[46] though data are not accumulated in any systematic fashion and are generally considered unreliable. A major dispute associated with copyright loss estimates involves disagreement over the amount of money an IP owner would have gained in the absence of violations. It is unrealistic, for example, to equate an illegal copy with a lost sale, since it is unlikely that all owners of infringing material would have purchased an authorized copy if infringing copies were not available.[47] Reports of copyright violations are also challenged by the argument that some violations, such as downloading for personal use, should not be considered illegal, or at least should be distinguished from other forms of IPR crime. Despite the difficulties with estimating and reporting losses, published statistics can be useful methods for conveying the magnitude of IPR violations.

The U.S. Supreme Court has stated that "(t)he economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors."[48] In addition, later courts have held that "(t)he primary objective of copyright [and patents] is not to reward the labor of authors [and inventors], but 'to promote the Progress of Science and useful Arts.'"[49] Accordingly, some have argued that any extension of IPR protections that impedes the progress of science or the arts runs counter to the Constitution.[50] A more moderate version of this view is the belief that an author or inventor "should be rewarded up to the point at which the 'legislation will stimulate the producer' more than the monopoly rights given to the owner will harm the public."[51] This argument is

particularly controversial as it relates to patent protections of medicines and the medical needs of individuals in developing countries that are unmet in part because of the monopoly position that patent protections enable. Further discussion of controversies about copyright and patent law is included in the section, "Controversial Applications of Intellectual Property Law."

The North American Free Trade Agreement (NAFTA) and the Agreement on Trade-Related Aspects of International Property Rights (TRIPS) both contain provisions relating to the protection of trade secrets and require that member countries secure compliance from their states and provinces.[52] In addition, the Economic Espionage Act identifies the theft of trade secrets as a criminal offense.[53] Increasingly, trade secrets have been recognized in the U.S. as important in the modern business world.[54] It is often raw information, such as client lists and business processes, that gives a company its competitive edge. As U.S. courts have held, "misappropriation of a trade secret is an injury of "such continuous and frequent recurrence that no reasonable redress can be had in a court of law." The very nature of a trade secret mandates that misappropriation will have significant and continuous long-term effects. The party wronged may forever lose its competitive business advantage or, at the least, a significant portion of its market share."[55] Estimates of corporate losses from misappropriated trade secrets are between $1.8 billion and $100 billion annually.[56]

Concerns about trade secret protection are also associated with threats to patent and copyright protections. One of the objectives of patent law, for instance, is to encourage full disclosure of innovations so they add to the common body of knowledge. Reduced use of the patent system could lead to a practice of treating information about innovations as trade secrets, which would exclude this information from the common body of knowledge and potentially reduce future related innovations.

Crimes Associated with Intellectual Property

Violations of IPR can be classified as a form of white-collar crime, specifically a white-collar theft or fraud.[57] For example, the illegal reproduction of a movie for the purpose of selling counterfeited copies to others for profit is a WCC under this definition because it involves the acquisition of property through deception, or fraud, for business or personal advantage. The sale of counterfeited drugs also involves deception about the manufacturer or content for illegal financial gain, and the illegal use of a trade secret to develop a marketable product involves deception concerning the true ownership an idea or information. In addition, IPR violations can be used to facilitate other WCCs, such as

- Investment fraud (e.g., using a trademark of a legitimate company to deceive investors);
- Money laundering (e.g., concealing funds acquired from counterfeit goods sales);
- Fraudulent sales (e.g., creating a bogus Web site to deceive customers);
- Identity theft (e.g., using personal information acquired from a misappropriated database or solicited using a misappropriated trademark of a legitimate company);
- Other online scams (e.g., fraudulently acquiring donations using the seal of the American Red Cross);
- Racketeering (e.g., organized efforts to misappropriate IP); and
- Tax evasion (e.g., failing to report income acquired through IP violations).

One of the greatest public concerns about IPR violations (as a form of WCC) is the threat to public health and safety, not only in foreign countries but also in the United States. For example, in Los Angeles, investigators arrested five people in connection with the distribution of counterfeited power tools, which were marked with brand names such as Makita, Black and

Decker, and DeWalt[58] and bore counterfeited "UL" stickers (from Underwriters Laboratory) to indicate that the tools had been inspected and certified as safe.[59] In this case, more than $9.7 million in counterfeit merchandise was recovered. Other cases have identified counterfeit drugs, medical supplies, and aircraft parts[60] as posing a danger to the public.

One example of a counterfeited medical product that was identified within the U.S. is PROLENE, which is a "nonabsorbable mesh used for the repair of hernias and other fascial deficiencies."[61] In October of 2003, ETHICON, Inc., a Johnson & Johnson company, notified healthcare professionals about a counterfeit of their product PROLENE, warning them that ETHICON "could not confirm the mechanical properties, biocompatibility, or sterility of this [counterfeited] material."[62] Preliminary tests of the counterfeit mesh conducted by the FDA found that some samples were not sterile.[63] Distinct differences were also identified in the weave of the products, which is critically important to its function in surgery.[64] Through subsequent correspondence with hospitals, parent company Johnson & Johnson determined that the counterfeit product had entered the U.S. supply chain when some distributors purchased it from the secondary market, also known as the gray or diverted market.[65]

The Internet is one of the most easily accessible venues for the illegal use of IP as a facilitator for other criminal activity. In a case of market manipulation, for example, an employee of a communications company called Pairgain used trademarks and other symbols copied from the Internet to create a Web page that appeared to be a Bloomberg financial Web page. The purpose of this trademark violation was to legitimize a news report as a Bloomberg report, in which the employee wrote false information about the Pairgain activities.[66] Because of the apparent legitimacy of the report, the employee was able to manipulate the price of Pairgain stock and make a profit by selling his personally held stock at artificially inflated prices. In

another case, a stock trader in Texas manipulated stock prices by posting a false press release attributed to PR Newswire on a Yahoo! Finance message board announcing that Lucent Technologies would have a quarterly earnings shortfall.[67] These cases illustrate how the Internet can be used to commit IP violations for the purpose of committing WCCs. Since WCC is often based on deception, and IP such as a trademark can represent a company or product that is recognized as valuable or reliable, it is not surprising that IP violations are often coupled with other WCC.

Another WCC that is frequently associated with IP violations is money laundering, which generally involves attempts to disguise the true origin or ownership of funds derived from illegal activity through financial transactions. The prevalence of the association between IP violations and money laundering prompted amendments to the federal money laundering statute to include specific references to copyright infringement and trafficking in counterfeit goods and services.[68] The consequence of these changes is that any use of money derived from certain types of IPR violations to fund specific forms of crime is considered money laundering.

One case that has applied the rules of money laundering in an IPR violation case involved a crime ring that manufactured and distributed pirated audio tapes and resulted in charges of conspiracy, copyright infringement, and trafficking in counterfeit labels.[69] The underlying copyright infringement and counterfeiting claims were also used to sustain charges of money laundering. Another money laundering case associated with IP violations involved a computer salesman who sold counterfeit or re-marked computer parts and software significantly below market price at computer trade shows.[70] In addition, authorities discovered, the salesman hid the proceeds of these sales (more than $3.1 million) in four bank accounts by making 376 separate deposits, each of which was below the $10,000 reporting threshold for currency transactions

reports.[71] Initially arrested on charges of money laundering and conspiracy in connection with a counterfeit software and computer parts distribution ring, the defendant pleaded guilty to structuring currency transactions, i.e., money laundering.[72]

Some cases of IP violations, whether they accompany other crime or not, are never reported to law enforcement. Private companies may be reluctant to report instances of IP violations, or even file for civil remedies, because of the concern that public knowledge of such cases could damage their reputation. For example, in 2003, a Malaysian counterfeit ring penetrated the computer system of the Platte Valley Bank to steal customer debit card numbers.[73] In this case, the debit card numbers were used to make numerous unauthorized debits against customer accounts. Instead of contacting law enforcement, the bank identified the affected debit cards and blocked the fraudulent transactions. A decision was made by the bank president to absorb the costs from damages and protect the reputation of the bank rather than undergo scrutiny by law enforcement and customers.[74]

Organized Crime and Intellectual Property Rights Violations

The Racketeer Influenced and Corrupt Organizations (RICO) statutes were created to "seek the eradication of organized crime in the United States by strengthening the legal tools in the evidence-gathering process, by establishing new penal prohibitions, and by providing enhanced sanctions and new remedies to deal with the unlawful activities of those engaged in organized crime."[75] RICO statutes were designed to enable punishment of criminal activity, including certain types of IP violations, that form a pattern of organized behavior, based on the assumption that much of the power of organized crime syndicates is derived from the money they make through "various forms of [illegal] social exploitation."[76] This broad area of law can also be used to sanction owners of IP who seek to protect their rights in impermissible ways. In a

recent case, for example, a cable company allegedly threatened to sue customers of another company, which was selling decoder boxes for "pirating" cable channels, if they failed to pay the cable company a (settlement) fee. Based on the pattern of misrepresenting that the mere purchase of a descrambler was illegal in order to obtain money (which served as the basis for mail and wire fraud charges, two other RICO predicates), a court upheld the customers' rights to sue the cable company and their law firm under RICO.[77]

In recent years, concerns about terrorist activities have intensified efforts to deter organized criminal activity. During this time, a white paper was published by the International AntiCounterfeiting Coalition (IACC) charging that the reorganization of U.S. Customs and Border Protection (Customs) has rendered IPR enforcement "greatly reduced or ignored."[78] When Customs was a component of the Department of Treasury, it identified IPR enforcement as one of its key missions. As a component of the Department of Homeland Security (DHS), the IACC noted, "its focus will be on antiterrorism and related homeland security efforts."[79] The argument made in the IACC paper was that IPR violations are related to terrorist activities and thus are consistent with, rather than extraneous to, the new priorities of the DHS and Customs.

To support this argument, the IACC paper cited a number of examples that involved both IPR violations and terrorist organizations. For example:

- Counterfeit textile sales from a New York City store were associated with the bombing of the World Trade Center in 1993;[80]
- Counterfeit t-shirt sales were associated with followers of Sheik Omar Abdel Rahman, who was subsequently sentenced for plotting to bomb New York City landmarks;[81]

- Shipments of counterfeit beauty products were associated with a member of al Qaeda;[82] and
- Al Qaeda training manuals recommended selling counterfeit goods to raise funds for terrorist activities.[83]

Through these examples, the IACC paper developed a credible argument for a connection between IPR violations and terrorism. (Interpol has made a similar argument using examples of activities in Northern Ireland, Kosovo, Chechnya, and North Africa, as well as activities of Hezbollah and al Qaeda.[84]) However, the implied extension of this argument – that a violation of IPR represents a means for funding terrorist activities and should therefore be considered a similarly egregious crime – runs the risk of categorizing all violations of IP law with threats of terrorism and other crimes, and, in doing so, marginalizing important issues that are unique to the IP debate.

Controversial Applications of Intellectual Property Law

A major source of conflict in the IP debate is differences in cultural norms, not only among nations but also among groups defined by age or behavior. People who associate themselves with the Internet culture, for example, often have different beliefs about appropriate uses IP than people in the law enforcement community. Individuals in different countries may have different views on appropriate uses of IP because of differences in IP laws or generally accepted practices in their community. Beliefs and views about IP may be based on legal, social, or ethical considerations, and, more importantly, can have visceral meaning for community members that is not easily relinquished.

The Culture of the Internet and Application of Intellectual Property Law

With the significant expansion of Internet use, "dilution" has become a primary area of dispute in trademark law, and attempts by companies to "police" online use of IP (often referred to as "cyberbullying") have clashed with the free speech culture of the Internet. Dilution of a trademark occurs when "the capacity of a famous mark to identify and distinguish goods or services"[85] is lessened, for example, when an identifiable mark is applied to counterfeited goods or services or used without permission on a commercial Web site. (Noncommercial use of a mark, comparative commercial advertising, and news commentary are exceptions to the usual dilution standards.[86]) Current IP law requires that companies "police" some forms of unauthorized use in order to protect the fame of their mark and show that they have not abandoned it.[87] If they fail to control how others use their marks, they run the risk of the marks being used generically, as "common use" words, such as "jello" (rather than Jell-O brand gelatin dessert), "kleenex" (rather than "Kleenex tissue"), and "band-aid" (rather than "Band-Aid brand adhesive bandage"). Even when the use of a trademark name does not rise to the level of common use, the mark may still lose its power to associate the trademark holder's goods with the trademark holder, and the company may lose trademark protection for that particular symbol altogether.[88]

A recent article entitled "Culture Wars on the Net" cited efforts by Warner Brothers and Coca-Cola to suppress the online use of their trademarks as illustrative of "forms of online censorship."[89] In the Warner Brothers case, two 15-year-old-girls received a cease-and-desist order for their "Harry Potter fan sites with URLs that contained the character's name."[90] After receiving "a barrage of angry fan e-mail messages" concerning the action, however, Warner Brothers stated that "they were interested only in 'clarifying the intent' of [the] site" and that the

absence of any mention of "intent" in the cease-and-desist letter was a "clerical error."[91] In another case, Coca-Cola took action against a Web site that had been donated to a community of senior citizens who collected and traded vintage Coca-Cola bottles and cans. The site, called Vintagecocacola.com, was used to display the seniors' collections. In January 2000, the site's administrator received a cease-and-desist letter from Coca-Cola with instructions to "discontinue use of all Coca-Cola trademarks and to assign the domain name to the company or abandon it."[92] Despite the fact that the site contained appropriate disclaimers (and the seniors never sold the products that they displayed), the group relinquished the site.

Company actions to stop modifications of product images have also been challenged by the Internet community as attempts to control, or censor, Internet expression. In 1997, for example, Mattel took action against the creator of a Web site who had posted "texts and visuals, including alterations to the [image of a Barbie] doll's face, to explore the role of the doll as an icon of American life."[93] The Internet community criticized Mattel's actions as "incredible blatant censorship," and reacted by posting numerous Barbie sites with a variety of themes and images.[94]

Presenting a social perspective of this issue, Naomi Klein argued in her 1999 book, *No Logo*, that "such examples [of cyberbullying] give a picture of corporate space as a fascist state where we all salute the logo and have little opportunity for criticism because our newspapers, television stations, Internet servers, streets and retail spaces are all controlled by multinational corporate interests."[95] On the other hand, it is evident from studies in product marketing that the value of many products, as perceived by consumers, increasingly has been derived from "the brand experience as a lifestyle,"[96] resulting in increased corporate expenditures on the development and marketing of product *concepts* and decreased expenditures in the production of

the physical product. This evidence leads to a question about the true beneficiary of strong IPR protections: Are strong IPR protections a product of corporate interests (leveraged by substantial political influence) or national interests (representing the population-at-large)?[97]

Internet-related copyright violations of IP such as music, movies, and software have received a great deal of public attention in recent years. Although these violations allegedly impact industry revenues directly, there is no clear consensus that the long-term economic effects of such violations undermine innovation and economic development. In fact, precisely the opposite has been argued: that in the absence of monopolistic control, innovation is stimulated, rates of production increase, marginal production costs decrease, and revenue increases (assuming that demand increases disproportionately to price decreases, as should be the case with elastic goods such as music, movies, and software).[98] One of the most convincing illustrations of this theory is the highly successful open source[99] initiative, which began in its present form in 1998 and is responsible for more than 50,000 projects. The premise of this initiative was that free distribution of software and source codes stimulates the creation of new knowledge through the open sharing of ideas and their associated products. Perhaps the most widely recognized product produced through the open source concept is the Linux operating system.[100]

Never-the-less, one group that has articulated a strong position against IPR violations, as well as an aggressive plan of action, is the Recording Industry Association of America (RIAA). In 2003, the RIAA began an "education and enforcement campaign" that resulted in "more than 1,500 subpoenas and nearly 350 lawsuits" against individual computer users found "sharing" music in peer-to-peer (P2P) networks.[101] Although representatives of the RIAA have called this campaign successful, critics have argued that "suing your customers is not a winning

strategy."[102] G. Richard Shell, a Wharton legal studies professor, identified the problem as one of public legitimacy and described a significant distinction between an attack on a distributor such as Napster and an attack on "otherwise law-abiding consumers who download music."[103] The danger of ignoring this distinction, he wrote, was illustrated 100 years ago, "when leading automobile manufacturers in 1903 tried to put down the threat of cheap, mass-produced cars by suing consumers who bought Henry Ford's automobiles."[104] The battle in the automobile industry culminated with a shift in public sympathy and a barrage of editorials that deemed the industry's lawsuits against consumers heavy-handed.[105] To some extent, the RIAA's actions have been met with similar responses. The infamous lawsuit against a 12-year-old girl in New York for downloading songs is one example.[106]

In an effort to accommodate potential benefits of freely distributed IP over the Internet, Canada has implemented a private copying exemption permits individuals to copy musical works for private use and uses taxes levied against blank recording products to compensate artists for any potential losses from this practice.[107] In 1992, the U.S. adopted a "prohibition on certain infringement actions"[108] that bears some similarity to the Canadian law; however, the U.S. law applies only to devices whose *primary* purpose is "making a digital audio copied recording for private use,"[109] i.e., it does not apply to audio recordings downloaded to a computer. In Canada, downloading music from peer-to-peer networks is permitted.[110] One argument that supports the Canadian strategy is that a private copying exemption allows law enforcement to allocate more resources to IPR violations that represent a greater threat to IP development. Studies of alternative IP laws in Canada and other countries may help to identify consequences – whether intended or unintended – of IP laws and enforcement practices and increase our understanding of successful means of stimulating IP innovation and economic growth.

International Intellectual Property Issues

Since U.S.-based IP constitutes a major portion of IP available worldwide, application of U.S. IP law outside of the U.S. has become a subject of serious legal debate. There is, for example, a strong sentiment in U.S. law that "legislation of Congress, unless a contrary intent appears, is meant to apply only within the territorial jurisdiction of the United States."[111] To the extent that U.S. law is applicable abroad, the doctrine of "substantial effect"[112] is often the basis for legal challenge. This doctrine establishes that "a state has jurisdiction to prescribe law with respect to…conduct outside its territory that has or is intended to have substantial effect within its territory."[113] Specifically, the U.S. Supreme Court has held that "it is well established by now that [U.S. law] applies to foreign conduct that was meant to produce and did in fact produce some substantial effect in the United States."[114] Taken broadly, this doctrine (of substantial effect) gives the U.S. justification for applying its laws to acts that occur wholly between foreign nationals in a foreign country in accordance to that country's laws, so long as the acts affect the United States. One principle that is generally (though not universally[115]) accepted, however, is that the extraterritorial exercise of criminal jurisdiction requires a stronger finding of reasonableness than a purely civil action.[116] Needless to say, U.S. attempts to apply this doctrine have been challenged.[117]

Given the debate over this matter, application of IP law to activities outside of the U.S. are decided on a case-by case basis by judges whose socio-political perspectives may vary widely and who may assign different values to competing interests. To help minimize this variability, a number of U.S. agencies have recently established significant relationships with foreign and international organizations.

Since 2002, the National Intellectual Property Rights Coordination Center (IPR Center), formed by the Federal Bureau of Investigation (FBI) and the Immigration and Customs Enforcement (ICE), has had substantial success coordinating IP efforts in the U.S. with those in other countries, as well as coordinating law enforcement efforts with those of IP-based industries. [118] International agencies engaged in activities with the IPR Center include the International Criminal Police Organization (Interpol), the World Intellectual Property Organization (WIPO), and the World Trade Organization (WTO). Other U.S. agencies that are actively involved in IP information exchange and enforcement efforts include the U.S. Department of State, Bureau of Economic and Business Affairs, and the U.S. Commerce Department. Non-governmental organizations that advance enforcement of IPR violations include the International Intellectual Property Alliance (IIPA), International AntiCounterfeiting Coalition (IACC), Recording Industry Association of America (RIIA), Business Software Alliance (BSA), Motion Picture Association of America (MPAA), and Pharmaceutical Security Institute Inc. (PSI). Despite these efforts, the effectiveness and likelihood of bilateral or multilateral cooperative agreements tend to vary widely from country to country. In addition, violators of IPR have shown a willingness to relocate their activities to countries without a good working relationship with U.S. law enforcement or the ability to effectively enforce IP laws.

In a recent World Intellectual Property Organization (WIPO) publication, Dr. Peter Drahos addressed the problem of international cooperation from a different perspective. He stated that “the development of intellectual property policy and law has been dominated by an epistemic community comprised largely of technically minded lawyers. In their hands intellectual property has grown into highly differentiated and complex systems of rules. The development of these systems has been influenced in important ways by the narrow and often

unarticulated professional values of this particular group."[119] Rather than further particularizing current IP laws to address the varied forms and functions of IP, this remark implies, a fruitful approach to reevaluating IP law might involve discussion and evaluation at a much more basic level. "Ideally," Drahos suggested, "the human rights community and the intellectual property community should begin a dialogue." The human rights discourse can contribute by "encourag[ing] us to think about ways in which the property mechanism might be reshaped to include interests and needs that it currently does not," and the IP community can contribute by conveying "the diffuse principles that ground human rights claims to new forms of intellectual property" to something more concrete "through models of regulation."[120]

Given that each community is unlikely to concede the fundamental rights that it defends and that the judicial system is an inappropriate venue for the determination of the issues at stake, Drahos offers a reasonable proposal. However, implementation of such a discourse, which must necessarily include deeply factional cultures that are defined by geography, religion, politics, cultural norms, and age, would be extremely complex.[121] Preliminary steps to this dialogue, perhaps, would be the identification of individuals and groups that would collectively represent these two communities, followed by an extensive inquiry into IPR issues, interests and needs of each. These steps serve the purpose of identifying some of the key subjects for dialogue and of acknowledging the value of those who have traditionally remained marginal in the development of IP policy.

Research on Intellectual Property Rights Violations

Currently, the cumulative information on IPR violations consists primarily of estimates of economic losses to specific industries or legal action by specific groups. As noted earlier, data on IPR violations are limited (i.e., incomplete and unreliable), like data on many WCCs. No source

provides data that reflects the full scope of IPR violations, and comparisons among data sources are difficult because of different methodologies and biases. Despite this limitation, data that are available can contribute to an understanding of the global nature of the phenomenon and can call attention to those areas that might benefit from modifications to regulations or practices.

The Business Software Alliance (BSA) has published studies on software piracy that estimates the amount of business application software installed without a license throughout the world, by country, and within the United States, by state.[122] Worldwide, BSA has estimated that the highest software piracy rates existed in Vietnam (95%) and China (92%) in 2002, and the lowest rates were found in the United States (23%) and New Zealand (24%). The greatest dollar losses for 2002 were shown in China ($2.4 billion) and the United States (almost $2 billion). Overall, the worldwide software piracy rate has declined somewhat since 1994 (from 49% to 39%), while the worldwide economic loss (in U.S. dollars) has increased slightly (from $12.3 billion to $13 billion).[123] Within the U.S., the highest software piracy rates were found in Mississippi (41.7%) and Wyoming (40.3%), and the lowest rates were found in Illinois (13.5%) and Michigan (13.9%). The greatest dollar losses were in California ($241 million) and Florida ($122 million).[124] The nation-wide piracy rate in 2002 was eight percent lower than the rate in 1994, a drop from 31 to 23 percent.[125] An interesting complement to these data is WIPO's estimates of Internet penetration. In 2002, the areas with a high percent of Internet use were in Sweden (64.6%), Denmark (60.3%), Hong Kong, China (59.6%), and the U.S. (59.2%).[126]

A survey by the International Intellectual Property Alliance (IIPA), a coalition that represents U.S. copyright-based industries, found piracy rates that were consistent with BSA's findings. However, the dollar losses associated with these rates differed from those in the BSA study, in part because different variables were used to calculate the losses. The IIPA survey also

provided statistics on losses in the motion picture, recording, and entertainment software industries.[127] For example, China's piracy rates for each of these industries were reported as 91, 90, and 96 percent respectively.

Most of the reports on IPR violations that were reviewed indicated that the rate of violations has not significantly changed worldwide in the past five years; however, the estimated dollar losses continue to increase, as does the quality of counterfeited goods being distributed. Countries identified as those with the largest volume of illegal IP activity include China, Russia, Ukraine, Vietnam, Taiwan, Pakistan, and Indonesia.

U.S. data on law enforcement efforts to reduce IP crime, reported by Customs and Border Protection (Customs), show that the number of IP seizures worldwide in 2003 exceeded the levels of the previous five years (see table 2). The value of Customs' 2003 IP seizures was estimated at $94 million, a slight decrease from the $99 million seized in 2002.[128]

Table 2
U.S. Customs and Border Protection Annual IP Seizures

Fiscal Year	Number of Seizures	Value of Seizures
2003	6,500	$ 94,000,000 (estimate)
2002	5,793	$ 98,990,341
2001	3,586	$ 57,438,680
2000	3,244	$ 45,327,526
1999	3,691	$ 98,501,594
1998	3,409	$ 75,896,505

Source: U.S. Customs and Border Protection (CBP) [129]

The FBI's IP crime deterrence efforts have produced 92 indictments,[130] 596 pending cases, and 95 convictions[131] for 2003, following 121 indictments, 590 pending cases, and 76 convictions in 2002. Neither of the two most recent years, however, reaches the collective 2001 levels, which included 114 indictments, 629 pending cases, and 177 convictions.[132] The FBI has estimated overall losses to U.S. businesses from IP crime at $200 to $250 billion per year.[133] Estimates of losses worldwide are about twice this figure.[134] These overall figures on IP crime represent not

only estimates for goods such as software, music, and movies; they also represent counterfeit goods such as cigarettes, apparel, perfumes, electronics, and pharmaceuticals.

Since investigating and prosecuting a single criminal case often takes more than a year, the data on IP seizures, federal indictments, and convictions can offer only a general indication of criminal IP activity that affects the U.S. It also should be noted that a number of factors, such as budget changes and changes in priorities, can have an effect on investigative and litigation activities. For example, it is likely that some of the increases in the Customs and FBI data in 2002 and 2003 are attributable to political and administrative changes in 2001 and following the attacks of 9/11.

NW3C Survey of Current Intellectual Property Issues

The issues and concerns that have been discussed in this report thus far represent not only subjects of debate in academic and legal environments but also matters of practical significance for law enforcement, prosecutors, policy makers, and IP-based industries, as well as the general public, whose daily lives are affected by IP in a variety of ways. To assess current knowledge in the area of IP law and practices and to identify areas in which new research is needed, NW3C gathered information from those who deal directly with IP laws and enforcement and are considered subject matter experts (SMEs) in the IP field. This method of sampling is supported by scholars such as Yin[135] and Eisenhardt[136] who have identified theoretical and purposive sampling as useful methods for exploratory and descriptive studies.

In addition to attending IPR law enforcement and industry meetings, NW3C conducted interviews with federal law enforcement and IP-based industry representatives to ascertain their knowledge of IP crimes and problems, opinions about IP law, and views on national and international IP issues. Information was also gathered through surveys administered to a broader

audience, consisting of local, state, and federal law enforcement; state and county prosecutors; trade association investigators and attorneys; IP-based business representatives; and attorneys engaged in private practice. This instrument included multiple choice, Likert scale, and open-ended questions about the nature and consequences of IPR violations and the obstacles, needs, and concerns facing IP professionals. Since the target audience for the survey consisted of IPR experts, the instrument was distributed at IPR meetings and through e-mail. Responses provided in the nineteen completed surveys received from IP SMEs are outlined in the summary below.

NW3C Survey Findings: Views on Intellectual Property Laws

Although it seems clear from case law, as well as economic and political analyses, that the intent of IP law is to "promote the Progress of Science and useful Arts," when asked to identify the goals of IP laws, about a third of those interviewed and responding to questionnaires (respondents) named protections of "the rights of IP holders" as a goal of IP law. Another third identified crime prevention or piracy deterrence. In other words, the function of the law, rather than the reason behind the function, was frequently identified as the goal of IP law. A few respondents stated that IP laws played an important role in making IP products available to consumers, by impacting distribution, price, or some other variable.

When asked about the effectiveness of IP law and enforcement, most respondents (58%) felt that IP laws had not done enough for IP protection, and most (68%) felt that law enforcement had not done enough. Of those who felt that IP protections had been successfully addressed by U.S. law and law enforcement (32%), most represented IP-based industry. One law enforcement representative indicated in an interview that successes might be attributed in part to the fact that IP laws and practices have been continuously modified in recent years.[137]

When asked specifically about the relationship between IP innovation and IP laws and practices, 42 percent of respondents felt that current U.S. IP law had no effect on innovation. Thirty-two percent felt that IP laws nurtured innovation, and 11 percent felt that they stifled innovation. A larger portion of the respondents (42%) indicated confidence in the ability of technological and corporate practices (e.g., embedded technological protections in software) to nurture innovation; most of these represented law enforcement.[138] Although these responses represent only a small group, they again raise the questions: What is the purpose of IP laws? Are U.S. IP laws accomplishing the intended purposes?

NW3C Survey Findings: Obstacles to Intellectual Property Rights Enforcement

The most prominent theme of discussion in responses to the NW3C survey was inadequate support, coordination, and education in the area of IPR and enforcement efforts. Law enforcement officers, private attorneys, and IP-based industry representatives all indicated that training of investigators, prosecutors, judges, and the general public was a pressing need, as well as developing methods for building on-going cooperative efforts between law enforcement and businesses for the exchange of information.

Although law enforcement reported that industry was much better educated than in previous years, and industry reported that investigators were taking IPR violations more seriously than several years ago, education at the state- and local-levels for law enforcement, prosecutors, and the public was reported as inadequate. Even with most IPR enforcement occurring at the federal level, this education was identified as crucial to enable state and local law enforcement to know what to look for and how to handle IPR violations. Specifically, 84 percent of respondents stated that investigators lack adequate training in IP issues, and 53 percent indicated that prosecutors typically fail to take IPR violations seriously. In response to

this problem, both federal agencies and IP-based industries have extended training opportunities to state and local law enforcement.[139] Not surprisingly, inadequate resources for IP cases were identified by 74 percent of respondents as an obstacle (see table 3).

Table 3
Obstacles to IPR Enforcement Efforts

Problem	Percent of Respondents Who Identified Problem as an Obstacle
Investigators lack IP training	84%
Cases require resources that are not available	74%
Investigators lack understanding of IPR violations	74%
Uncooperative foreign agencies	58%
Judges lack understanding of IP violations	58%
Prosecutors do not take IP violations seriously	53%
Judges do not take IP violations seriously	47%
Prosecutors lack understanding of IP violations	47%
Uncooperative U.S. agencies	47%
Uncooperative victims	47%
Uncooperative victims	47%
Investigators do not take IP violations seriously	42%

Source: NW3C Survey of Intellectual Property and White-collar Crime

One program designed to provide training in IP crime is the Computer Hacking and Intellectual Property (CHIP) program of the Department of Justice (DOJ). As of July 2001, CHIP units were located in nine cities: San Francisco, Los Angeles, San Diego, Atlanta, Boston, New York, Dallas, Seattle, and Alexandria. The training and assistance provided by CHIP units, however, address only a portion of the IP education problem; they specialize in IP cases that involve computer intrusion specifically and provide training specifically to prosecutors. Training for law enforcement and other government officials is available through the Computer Crimes and Intellectual Property Section (CCIPS) of DOJ, which is the section under DOJ's Criminal Division that coordinates the CHIP units.

NW3C Survey Findings: Information Resources for Intellectual Property Rights Enforcement

When asked what information is currently unavailable but considered valuable, those interviewed provided a number of suggestions (see Table 4). Federal law enforcement and IP-

based industry representatives indicated that a central database repository, with regularly updated information, could be a useful informational tool. Suggestions for components of this database included intelligence updates on current crime problems and current information on rights holders of specific IP. Currently, no online database is available with intelligence on current criminal activity for either law enforcement or industry to access. Such a database could be

Table 4
Information Reported as Valuable to Law Enforcement and IP-based Industry

Information about IPR Violations	Percent of All Respondents	
	Valuable or Very Valuable	Not Available or Inadequate *
New IPR offender techniques	95%	84%
U.S. law enforcement contact lists	84%	84%
Foreign law enforcement contact lists	79%	89%
Information on foreign IP law application	74%	84%
Typical locations of IPR violations	74%	74%
Typical monetary damages from IPR violations	74%	68%
Locations of illegal IP distribution	68%	79%
Typical IPR offender techniques	68%	58%
Typical non-monetary damages from IPR violations	68%	68%
Locations of illegal IP consumption	63%	79%
Annual damages from IPR violations	63%	74%
"Typical consumer" profile for IPR violations	58%	68%
"Typical offender" profile for IPR violations	53%	68%
Research on IPR offender motivations	47%	79%
Research on illegal IP consumer motivations	42%	63%

Source: NW3C Survey of Intellectual Property and White-collar Crime

* Information identified as "not valuable" is excluded from this calculation.

developed and maintained, if only for access by law enforcement. The latter suggestion – a database of IP rights holders – is currently available, to some extent, online at the U.S. Customs and Border Protection Web site. Formerly available through the Customs Electronic Bulletin Board (CEBB), the Intellectual Property Rights Search (IPRS) is a searchable database "containing public versions of U.S. Customs and Border Protection intellectual property rights recordations."[140] This online information, however, is limited and does not provide detailed current information, such as the address or telephone number of the rights holder. The detail of

information that Customs makes available to other law enforcement was not ascertained in this study.

Federal law enforcement and IP-based industry representatives reported that periodic meetings currently provide substantial and timely information, including information about

- New and typical techniques used in IPR violations;
- New and typical locations of illegal IP production, distribution, and consumption;
- Contacts in U.S. law enforcement for IPR concerns; and
- Contacts in foreign law enforcement for IPR concerns.

They noted that industry and law enforcement may share information in an informal setting more readily than in a formal database or document, in part because of industry concerns about competition and reputation and law enforcement's confidentiality concerns.[141] The identification of informal networks as valuable mechanisms for information sharing has also been noted in previous studies on WCC.[142]

The interviews and other NW3C queries indicated that substantial progress has been made in recent years with respect to adjusting policies to accommodate changes in technology, providing education in IP issues, and coordinating efforts in IPR enforcement. As with many areas of law enforcement and regulation, the most challenging obstacles to success involve jurisdictional constraints, information restrictions, and interests of autonomy. On both the (U.S.) national and international levels, these three obstacles are inevitably related. For instance, in the U.S., agencies at local, state, and federal levels tend to protect rather than share information concerning their activities, which tends to intensify jurisdictional limitations and impede resolution of IP problems. The same occurs among agencies in different countries, with the added complication, in many cases, of substantial differences in law, culture, and economic

interests. Finally, communication with those who represent IP consumers, including consumers of illegally created IP, has been limited. One example of such an effort that was deemed successful was described in a NW3C interview. Federal law enforcement provided an online forum for discussion and debate on the subject of IP and online IP violations. This communication not only afforded online consumers an opportunity to ask questions, express objections, and gain knowledge about IP issues, it also afforded law enforcement a better understanding of consumer IP concerns and Internet culture.

NW3C Survey Findings: International Intellectual Property Challenges

A substantial concern of many respondents in the NW3C survey was the absence of IP laws in many countries and the failure of countries with existing IP laws to enforce those laws. In addition, most respondents (74%) indicated that better information about foreign laws would be a valuable tool, along with contact information for foreign law enforcement (see table 4). To some extent, it was reported that these problems are in the early stages of resolution. The FBI, for example, described significant and on-going cooperative efforts with the International Criminal Police Organization (Interpol), the World Intellectual Property Organization (WIPO), the World Patent Organization (WPO), and industry representatives.[143] Currently, the IP Crime Action Group, coordinated by Interpol, is working to develop a model for adoption by all countries.[144] In addition, a steering committee, with members representing all regions of the world, is working to establish training initiatives.[145]

Another effort designed to provide training and assistance in IP crime is the IPR Training Coordination Group, sponsored by the Bureau of Economic and Business Affairs of the U.S. Department of State. Comprised of U.S. government agencies and IP-based industry associations, this group extends training and assistance to foreign officials and policy makers

around the world.[146] Clearly coordination on such a large scale requires willingness and ability to manage significant differences in cultures, norms, and traditions. Continued participation in these efforts by U.S. representatives, including law enforcement and industry, was reported as important for addressing both U.S. and global IP concerns.

Another concern, which is related to inconsistencies in IP laws and enforcement around the world, is the prevalence of non-traditional, transnational organized crime groups associated with IP crime. Several respondents noted that an increasing number of pirating groups are basing their operations abroad.[147] Because of the difficulties inherent in coordinating law enforcement efforts in multiple countries and the lack of IP laws and enforcement in some countries, this trend is likely to continue. Although a great deal of study has been devoted to activities of traditional organized crime groups in the past, limited information is available about groups that are organized in a nontraditional way or engage in activities that are not historically typical of organized crime groups. In addition, new and creative techniques for counterfeiting or pirating goods, which are often the product of organized criminal efforts, are reported as difficult to stay abreast of. Although 95 percent of respondents indicated that information about new techniques was valuable, 84 percent indicated that the information was either unavailable or inadequate.[148]

In a hearing on March 13, 2003, before the Subcommittee on Courts, the Internet, and Intellectual Property of the Committee on the Judiciary, House of Representatives, John Malcolm, representing the Department of Justice (DOJ) Criminal Division, noted that "criminal organizations are playing a more prominent – and dangerous – role in piracy around the globe."[149] In addition to traditional organized crime syndicates located in Asia and Russia, Malcolm described online piracy groups referred to as "warez" groups. These groups – that typically distribute computer software, games, and movies – are distinguished from traditional

organized crime groups not only by the fact that they operate entirely in the cyber world but also by the fact that they do not engage in piracy for monetary gain. They are free providers of the IP products. This form of piracy involves suppliers, often company insiders, obtaining the latest computer software, games, and movies, stripping ("cracking") copyright protections, and releasing the final product to hundreds of Internet sites worldwide before, or within hours of, the release of the legitimate product.[150] Operation Buccaneer,[151] one of the most widely publicized efforts targeting warez groups, was "the first enforcement action to reach across international borders and strike at the most highly placed and skilled members of these international criminal enterprises."[152] In February of 2004, a leader of an Internet-based piracy group received a 50-month prison sentence, the longest imposed to date of the more than 40 individuals targeted worldwide.[153] The warez groups are only one example of the atypical nature of international organized crime groups that engage in IP violations.

NW3C Survey Findings: Alternative Approaches to Intellectual Property Rights Enforcement

With respect to IP enforcement within the U.S., varying opinions were expressed in the NW3C survey about federal- and state-level IP coordination specific to jurisdiction and authority. Federal law enforcement and IP-based industry representatives suggested that a system should be established to facilitate uniformity of laws among states and to encourage more states to develop IP laws. Clarifying the jurisdictional authority of state and federal agencies and courts would also be required in this situation. (Currently, federal patent, copyright, and trademark law preempts state law, in most instances, even when a state has laws to specifically address IP.) One argument that supports this recommendation is that state and local law enforcement tend to have a better understanding of and access to local problems and needs. Other respondents expressed concern that some IP cases fail to meet dollar thresholds (of losses) set for acceptance as federal

cases and therefore are never addressed. Given adequate funding and education for state and local law enforcement, this recommendation could also serve to relieve federal law enforcement of responsibility for smaller cases and allow state law enforcement to address cases that cannot be handled at the federal level. A state regulator and private attorney interviewed by NW3C, on the other hand, felt that all IP issues should be addressed at the federal level. The primary argument for this suggestion was that there are too many exceptions to the law, too many inconsistencies in court rulings, and a general lack of understanding of IP law.[154]

A few respondents, from the software industry and state law enforcement, expressed a desire for new laws that could directly address specific concerns. Potential laws that were mentioned included Internet laws, peer-to-peer piracy laws, laws requiring Internet Service Providers (ISPs) to provide information about suspected IPR violators, and protection for whistle-blowers. However, federal law enforcement respondents indicated that it might not be useful to create new laws to address IP. It might be more useful to modify existing laws – on a regular basis. In addition, federal law enforcement respondents indicated that industry should bear the primary responsibility for addressing their specific IPR problems, using law enforcement only as a last resort.[155]

Conclusion

Despite the numerous and disparate views on the extent to which producers of IP should be economically protected and the public should have access to IP, there is little argument that some forms of IP misappropriation results in harm to the public. In addition to physical harm from counterfeited products such as medical supplies, vehicle parts, and tools, IP violations can contribute to substantial economic harm to consumers – through fraudulent representations of company affiliation or product value (e.g., investment fraud), or unauthorized use of personal

information (e.g., identity theft) – and to businesses. IP violations have also been found to be funding sources for violent harm, such as terrorist activities.

Major challenges that obstruct efforts to reduce this harm, particularly in the past ten years, include increasingly sophisticated technology for reproduction (including the Internet), increasing activities in global commerce and communication, and significant differences in social and legal norms throughout the world. To address these challenges, it seems necessary to develop some understanding, if not agreement, about how IP should be used (i.e., protected, distributed, and shared) that is applicable in a multi-national context and attentive not only to the interests of IP holders but also to the interests of potential IP users. It also seems prudent to recognize that as technologies become increasingly sophisticated and social responsibility increasingly becomes a global matter, it may be necessary to reevaluate some uses of IP that have been denied or restricted in the past. Evaluation of policy and development of some foundational understanding is likely to require extensive and on-going dialogue among a variety of communities. Without this kind of systemic dialogue, conflicting views and behaviors will likely continue to undermine at least some of the goals of every group with an interest in IP.

In addition to broad questions (such as how can a dialogue among communities be implemented?), a number of questions that address narrower issues can be explored through research to advance efforts to resolve current IP concerns and problems. For example, research on the characteristics of non-traditional, transnational crime groups engaged in IP violations could contribute to an understanding of violation techniques and illegal IP markets, which could help identify not only occurrences of IP violations but also problems and opportunities that tend to perpetuate IP violations. Studies that query those who violate IP laws would also be valuable. Such a study could identify unique and shared characteristics of different type of violations, such

as downloading music for personal use and distributing counterfeited drugs for profit. Additional examples of both broad and narrow research questions are listed in table 5.

Table 5
Questions for Further Research

What are the characteristics of non-traditional, transnational organized crime groups that are associated with IP crime?
What crimes are typically associated with IP violations and what are the characteristics of those crimes?
How can law enforcement and industry maintain information about new techniques of IP violations as they emerge?
How can harmful IP use on the Internet be deterred without interfering with freedoms that are deemed valuable and important in Internet culture?
How can IP education and training be improved for law enforcement, prosecutors, and judges in the U.S. and around the world?
How can the public be better informed about IP issues?
How can coordination among law enforcement and IP industries be improved in the U.S. and around the world?
How can online databases be developed for the dissemination of intelligence and coordination of action concerning current IPR criminal activity?
Should states coordinate uniform laws, with every state responsible for developing unique but consistent policies?
What are the consequences of federal IP laws preempting state laws?
How do IP laws or enforcement practices of other countries differ from those in the U.S.?
How have intended or unintended consequences of laws and practices (in the U.S. and around the world) affected IP innovation, economic growth, and human development?
What successes and problems have resulted from Canada's private copying exemption, and how (if at all) might they be applied in the U.S.?
Should IP laws be different for international application than national application?
To what extent and under what circumstances should U.S. IP laws apply in foreign countries?
What is (should be) the intent of IP law?
Who is (should be) involved in determining the intent of IP law?
How can a dialogue between the human rights community and the IP-based community be initiated, and how can this dialogue contribute to resolving difficult IP issues?
How have U.S. IP legal protections affected innovation, economic growth, and human development in the U.S. and around the world?
Should IP laws distinguish between different forms or uses of IP?
Should general welfare be given greater consideration than economic benefit in some circumstances of IP use?
How have civil actions initiated by the RIAA and others against consumers affected innovation and economic growth?

Methods for exploring these questions might include a series of focus group sessions with individuals representing different interests or a series of online forums lead by law enforcement or IP-based industry representatives. Other questions might be explored through case study

analysis, such as: What successes and problems have resulted from Canada's private copying exemption? Some of the needs identified in the NW3C survey can be addressed through cooperative efforts within law enforcement and the IP community rather than though research. For example, development and implementation of dynamic online databases with information about IP violations or foreign IP legal systems require legal and technical guidance but do not require extensive preliminary research.

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