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CONTENTS

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The rise of the global economy and the explosive growth of digital technology and the Internet have had sweeping implications for intellectual property protection in the United States and around the world.

While the adoption of new global standards for intellectual property protection and enforcement under the World Trade Organization promises an era of improved observance of copyright, patent, and trademark law, the international community is being challenged by a wave of piracy prompted by the ease of reproducing protected works in this digital era. The stakes in having an effective intellectual property rights regime are already high, and mounting rapidly. The very future of electronic commerce, distance education, and other cutting-edge trends in the global marketplace depend on the health and well-being of knowledge-based industries — industries that are the most sensitive to losses from piracy and infringement.

This issue of *Economic Perspectives* explores these contradictory trends. The journal discusses the latest challenges to intellectual property rights and how the United States, other countries, and multilateral organizations like the World Intellectual Property Organization are responding. It examines the current state of intellectual property protection in the developing world, and outlines both the challenges these countries face and the potential benefits to them of higher intellectual property standards in terms of economic development.

❑ FOCUS

❑ COMMENTARY

ECONOMIC PERSPECTIVES

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❑ PROTECTING INTELLECTUAL PROPERTY IN A GLOBAL ECONOMY

By Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks

The global growth of the Internet presents new challenges to efforts to safeguard the rights of intellectual property producers. While the issuance of patents may be facilitated by the new global electronic networks, trademark protections need to be extended to the Internet, and there are serious issues involving the protection of copyrighted printed and visual materials, says Bruce Lehman, an assistant secretary of the U.S. Department of Commerce and the head of its Patent and Trademark Office. Copyright protections are threatened by the ease of digital reproduction and worldwide distribution and by the argument that copyright laws should not apply in cyberspace.

The rise of globe-spanning communications networks — along with the rapid growth of electronic commerce that has accompanied it — require us to reflect and plan for new ways to protect intellectual property rights if we are to avoid major problems in the 21st century. Significantly, these are issues that cannot be solved without international cooperation.

In today's global economy, we are making great strides in protecting copyrights, trademarks, and patents. We are obliged to make these advancements, and make them quickly. Our analog world has gone digital. Digital technology and the Internet are being welcomed into our lives as enthusiastically as typewriters and photocopiers once were. Yet we need to update copyright laws in order to protect original literary and artistic works distributed over the Internet from unauthorized copying. Similarly, we must align laws governing the Internet with trademark law so that registered marks are protected from unauthorized use as domain names. And we should build upon our already strong patent laws to promote technological advancement.

A recent study by the International Telecommunications Union (ITU) reports that by the year 2001, 112 million host computers will be connected to the global information system, up from 16.1 million in 1996. That same study predicts that on-line sales will grow from $314,000 million to $357,000 million by 2001. The bulk of these connections will be in the developed world, but rapidly growing economies in Latin America, Asia, and parts of Africa are also experiencing high rates of expansion. Electronic commerce is growing rapidly, and we need to address the important legal issues that it raises so as to guarantee that the potential growth predicted by the ITU study will take place.

New patent, trademark, and copyright issues all arise within this new environment and have both domestic and international consequences.

PATENTS

The U.S. Patent and Trademark Office (PTO) sees the Internet less as a challenge than as a useful tool in managing the rapid growth of patent applications. In the United States, the number of patent applications filed is increasing by more than 5 percent per year — or by around 10,000 filings annually. In the future, simply increasing our staff or making it operate more efficiently, as has been done in the past, will not be a realistic solution for addressing the increased workload.

Patent filings are increasing in many countries around the world. To meet this surge in the use of the international intellectual property system, the United States has proposed that the World Intellectual Property Organization (WIPO) promote the greater use of information technologies within WIPO member states and the WIPO International Bureau, with the objective of creating a secure global network that links intellectual property offices with fast, cost-effective, and secure communication. The long-term goal of this effort will be a more closely integrated worldwide patent examination and granting process. This will be the most significant means to cope with the ever-increasing levels of application filings. On the trademark side, such a network could allow the electronic filing of trademark

applications within the Madrid system of international trademark registration, the exchange of trademark data bases, and the filing of protected state emblems requests.

TRADEMARKS

To understand the impact of information technology on the protection of trademarks, one has only to look at the rapid growth of the Internet and the problems associated with that growth, such as the activities of "cybersquatters" and "cyberpirates." These new categories of wrongdoers have hijacked trademarks, registered them as domain names, and demanded payment from the legitimate trademark owners before relinquishing any rights.

The Patent and Trademark Office is actively addressing a number of trademark issues relative to the Internet, including the relationship between the registration of domain names and the protection of trademarks. As a member of an intergovernmental committee — led by the Commerce Department — PTO is working to develop a suitable transition plan for the registration of Internet domain names. Many trademark owners are not happy with the current system and are very concerned about the protection of trademarks on the Internet. On September 30, the cooperative agreement under which Network Solutions, Inc., the current registrar, administers the domain name registration system will end. The time is short for making major decisions about a new system.

In February, the Commerce Department published a Green Paper on Internet governance that describes how the U.S. government will transfer management of the Internet domain space to a private, not-for-profit corporation. The need for change in this system has been obvious for some time. There has been widespread dissatisfaction about the lack of competition in the domain space, especially in the ".com" domain category. A proliferation of lawsuits raises the possibility of chaos as courts around the world apply different antitrust laws and intellectual property laws to the disputes that arise. The current mechanisms for resolving trademark-domain name disputes are cumbersome and expensive. As the Internet becomes more important as a business resource — and as more of the Internet stakeholders reside outside the United States — it is crucial to have it managed in a professional and accountable way. We want to see a system that will make electronic commerce on the Internet more trademark-friendly and therefore more consumer-friendly.

The U.S. government wants to end its stewardship of the Internet in a responsible manner. This means devising a plan for a stable transition to an accountable body. The proposal is for a U.S.-based not-for-profit corporation that will set policy for such matters as Internet protocol number allocation, the operation of the root server, development of technical protocols, and the establishment of new top-level domains to replace or add to the already existing ".com," ".edu," ".org," as well as the country-based top-level domains. The board of directors for such a corporation will be made up of representatives of Internet-related organizations and the user community. The new corporation's processes should be fair, open, and pro-competitive; its decision-making processes should be open and transparent. It should act as a standards-setting body.

We are also at a rare confluence of events in the world of intellectual property protection. In large part due to the World Trade Organization agreements, countries are rapidly improving, or in some cases establishing, intellectual property protection systems. This development presents us with great opportunities and challenges as we strive to make the most of the revolution in information technologies.

COPYRIGHTS

Modern copyright law is the creature of technological change — from Gutenberg's movable type to digital audio recorders, and everything in between. Today, information technologies — computer hardware and software, and communications technologies such as cable and satellites, are coming together and having an enormous impact on the ways that copyrighted works are created, reproduced, and disseminated.

Digital technology is not the first, and probably not the last, challenge to the ability of copyright owners to authorize or prohibit the reproduction, adaptation, distribution, public display, and performance of their works. Yet combining advances in digital technology with the rapid development of electronic networks and other communications technologies has greatly raised the stakes. Any two-dimensional work can be "digitized" — translated into the series of zeros and ones that are digital code. The work can then be stored and used in that digital format. This dramatically increases the ease and speed with which it can be copied, the quality of the copies, the ability to manipulate and change the work,

and the speed with which copies of it — both authorized and unauthorized — can be "delivered" to the public.

Works also can be combined easily into a single medium, such as a CD-ROM. This is causing a blurring of the lines between types of works. All would agree that an interactive multimedia CD-ROM with text, sounds, and still and moving images is a work, but is it a literary work or an audiovisual work or something else entirely? Answers to this question will have effects on the availability of protection internationally.

High-speed, high-capacity electronic information systems — the information superhighways — make it possible for one individual, with a few key strokes, to deliver perfect copies of digitized works to scores of other individuals virtually anywhere in the world. Users can "post" or upload a copy to a bulletin board or other service, where thousands upon thousands of individuals can download it — or print out unlimited "hard" copies on paper or disks. This convergence of information and communications technologies is changing dramatically how people and businesses deal in information products and services, and how works are created, owned, distributed, reproduced, displayed, performed, licensed, managed, presented, organized, sold, accessed, used, and stored.

The international community well understood its obligation to find a solution to address this potential for massive global piracy. That solution, which took a number of years to emerge, is the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty, both concluded in December 1996. These treaties, which will greatly facilitate commercial applications of on-line digital communications, were submitted to the U.S. Senate in July 1997 for ratification. The treaties, plus implementing legislation, are currently moving through the Congress.

Responding to the same concerns but taking a decidedly different approach, Senator John Ashcroft of Missouri has introduced legislation that addresses the copyright issues raised by the Internet and digital technology by seeking to clarify the liability for copyright infringement. His legislation would provide for a take-down notice procedure for dealing with infringing material, provide a conduct-oriented standard for anti-circumvention, and address issues involving fair use, distance learning, ephemeral copying, and library copying. Meanwhile, on-line service providers maintain that any final implementing bill for the two treaties must contain provisions that limit and clarify their potential liability for copyright infringement.

The Clinton administration believes that treaty implementation and liability are separate issues and that nothing in the two treaties requires Congress to specifically address the issue of liability. However, we are pleased to see these two issues addressed simultaneously so long as the consideration of the liability issue does not impair prompt consideration and passage of the implementation legislation. The sooner the treaties enter into force, the better for all of us.

Cooperation should not end, however, with the entry into force of the treaties. With the rapid growth of the Internet, we see that works can be disseminated from any country in the world to any other country in the world at the speed of light. While there will be no barriers to dissemination, there could be barriers to enforcement of copyrights if countries do not implement these treaties. Given technological advances, it is conceivable — and even probable — that a lax legal regime in one country could provide a haven for pirates who could undermine the market for legitimate "goods" throughout the world. Therefore, it is imperative that industries and governments around the world share in the work that still needs to done to put the principles set into the treaties into practice.

THE FAIR USE QUESTION

As for the issue of "fair use" of copyrighted works, both treaties contain provisions that permit member countries to provide for exceptions to rights in certain special cases that do not interfere with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the author.

The explanatory notes to the treaties make clear that these provisions "permit Contracting Parties to carry forward and appropriately extend into the digital environment limitations and exceptions in their national laws which have been considered acceptable under the Berne Convention."

All of these changes represent practical extensions of copyright law in the international arena in order to deal with electronic reality. Yet there are those who are attempting to use this opportunity to undermine the balance necessary to the functioning of our copyright

system. The vehicle for this attack is a revisionist view in the United States of fair use as a constitutional right. Their mantra is that fair use should be expanded and that everything on the Internet should be free. Yet fair use is by no means the same as free use.

At stake in this argument over fair use is the very preservation of the incentive for authors to create new works and for entrepreneurs in information-based ventures to profit from the creative expressions of the mind — an incentive grounded in the U.S. Constitution. The dawn of the digital age is not the time to debate anew a right to take another's property and means of livelihood without compensation. What we are seeing today in some respects is no less than an attempt to establish a radical new regime that puts fair use ahead of intellectual property rights.

Some aspects of our copyright law will need to be adjusted and revised in light of the realities of the new technologies. But this has always been true. What is different and more threatening is the attempt to recast the debate in anti-property terms, as if copyright protection is an evil nuisance that can and should be banished in cyberspace.

The fallacy in this is that just because so much can be made available on the information infrastructure, this does not mean it will be, absent adequate protections for the authors and purveyors of such works. We should not lose sight of the benefits to society and creativity that flow from maintaining a fair balance between the protections given to the rights of copyright owners and the uses allowed of copyrighted works for education, instruction, and research. Any imbalance favoring one group over another will upset the delicate equilibrium achieved in the copyright law and endanger creativity and innovation. The Internet is the sum of its parts, and if we want it to be something more than a global mailbox and message system with advertising and public domain information, then we have only one choice to make it so — strong copyright protection. ❑

❑ THE CHALLENGE OF COPYRIGHT IN THE DIGITAL AGE

By Marybeth Peters, Register of Copyrights, United States Copyright Office, Library of Congress

Advances in digital technologies are presenting new challenges for national and international copyright law, says Marybeth Peters, head of the Library of Congress's U.S. Copyright Office. However, Peters warns, regulation should be managed by the private sector so as not to stifle creativity and innovation in this rapidly changing field.

ADVANCES IN DIGITAL TECHNOLOGIES

Since its inception, copyright law has responded to technological change. The changes that are grabbing all the headlines today relate to digital technology and digital communications networks. The issues are unquestionably daunting and can be justifiably described as "new" or "unique." But at the same time, they are merely one step in a journey of continual and successful adaptation that characterizes the history of copyright law. This article examines some of the digital issues faced by copyright law today.

Characteristics of Digital Technologies With Copyright Implications

The technologies that are presently raising issues for copyright law are those related to digital storage and transmission of works. There are a number of aspects to these technologies that have implications for copyright law, including the following.

• **Ease and Ubiquity of Reproduction:** Once a work is rendered in digital form, it can be reproduced rapidly, at little cost, and without any loss of quality. Each copy, in turn, can be further reproduced, again without any loss of quality. In this way a single copy of a work in digital form can supply the needs of a multitude of users.

In addition to deliberate reproductions, digital technology creates the phenomenon of ubiquitous incidental copying. One of the inherent qualities of digital technology is that many of the activities that take place in the world of hard copies and analog transmissions necessarily entail making temporary, incidental copies. For example, "browsing" an electronic document requires, at the very least, that a temporary copy of the work be made in the random access memory (RAM) of the browsing computer. In the context of computer programs, such copies have been held to implicate the reproduction right.

Digital transmissions of works over networks similarly entail temporary copying. The work is reproduced in the RAM of the sending computer before it is broken into packets of binary information and transmitted on the network. As the packets traverse computer networks, temporary copies (in RAM and on disk) are made as they move along the way from source to destination. Finally, a temporary copy (or even a permanent copy) is made on the receiving computer. All of these reproductions generally are made automatically and transparently to the user, and many persist only for as long as the activity takes place.

• **Ease of Dissemination:** The emergence of global digital networks permits the rapid, worldwide dissemination of works in digital form. Like broadcasting, digital networks allow dissemination to many individuals from a single point (although, unlike broadcasting, digitized materials need not reach each individual simultaneously). Unlike broadcasting, though, digital networks allow each recipient on the network to engage in further dissemination of the work, which can cause the work to spread at a geometric rate of increase. This, combined with the ease of reproducing works, means that a single digital copy of a work can be multiplied many thousands of times around the world within a few hours.

• **Concentration of Value:** Digital storage is dense, and it gets denser with each passing year. Ever increasing quantities of material can be stored in a single medium. Compact discs, which can store over 600 megabytes of data, are used by commercial pirates for storing entire libraries of computer programs with an aggregate retail value in the thousands of dollars. Yet the compact disc (CD) technology may soon be supplanted (or at least

supplemented) by the far denser digital video disc (DVD) format.

New Forms of Exploitation

Some of the most difficult challenges posed by new technology are those that enable new means of exploiting copyrighted works. They are not, however, exclusively challenges of public policy. New forms of exploitation have periodically unsettled preexisting business arrangements. This is common, for example, in cases where it is unclear whether a preexisting license from an author or copyright owner grants rights to exploit a work in ways that did not exist when the license was granted. This is a vexing question that has arisen numerous times in this century, with the emergence of radio, broadcast television, videocassette recorders, and the like. It is not, however, necessarily a public policy issue requiring government intervention. In the United States, such issues have generally been worked out in the marketplace and — in the case of disputes between parties — in the courts.

That is not to say that the emergence of new technologies for the exploitation of copyright works has not created the need for legislative action. The advent of digital audio recording devices, for example, rendered the works stored on compact discs vulnerable to flawless multigenerational (serial) copying both privately and on a commercial scale. In the United States, it became necessary to preserve copyright owners' exclusive reproduction rights by requiring technological controls on multigenerational copying and imposing a levy on devices and blank tapes to compensate copyright owners for an inevitable amount of private copying.

One of the challenges, then, facing policy-makers with the advent of any new technology is determining whether the issues raised by the technology can be left to the marketplace to resolve.

COMMON THEMES

Several common themes can be identified in the approach that copyright law has taken to past technological changes.

Embracing New Forms of Expression

Time and again over the last two centuries, the subject matter of copyright had embraced new forms of authorship. Photography, cinematography, electronic databases, and computer programs are some examples. In each case, policy-makers ultimately were able to look beyond the particular technology or medium of expression in order to recognize the common thread of creative authorship that runs through all of copyright.

Maintaining the Framework of Exclusive Rights

The Berne Convention for the Protection of Literary and Artistic Works, the primary international copyright convention, articulates the principle that granting exclusive rights to authors promotes literary and artistic creativity, thus benefiting the public welfare. This same principle is recognized in a provision of the U.S. Constitution authorizing Congress to grant exclusive copyrights "To promote the Progress of Science and useful Arts." As new technologies have expanded the means by which works may be exploited, policy-makers have periodically had to reexamine the exclusive rights granted to authors under copyright, to assure that authors and owners of copyright continue to exercise exclusive control over their works.

On occasion, this has required a more expansive interpretation of existing rights. In the United States, for example, an existing right of public performance was interpreted to include radio and television broadcasts. On other occasions, new rights have been added to the copyright bundle, as when rights of communication to the public were added to the Berne Convention in response to the advent of broadcasting.

At the same time, legislators have had to examine the nature and scope of exemptions from exclusive rights. For example, the limited exemptions for reproduction of computer programs contained in section 117 of the U.S. Copyright Act were considered an appropriate means of tailoring exclusive rights to the need of that technology, namely, the need to make copies in the course of authorized use and the need to make backup copies to guard against mechanical failure or accidental erasure.

Market-Driven Solutions

An exclusive right does not necessarily benefit a rightsholder if inefficiencies in the marketplace make the exercise of the right impracticable. The exploitation of public performance rights in musical works is a classic example in the United States. Typically, the value of any

single public performance of a musical work is small. The class of users, which includes broadcasters, bars, restaurants, supermarkets, and the like, is extremely large. In aggregate, the value of this form of exploitation is substantial, but so is the cost of administering rights over such a large base of users.

This inefficiency of the marketplace has largely been overcome in the United States through a familiar market-driven solution: collective administration of the right of public performance. A similar approach is being attempted for administering reproduction rights — photocopying, electronic copying — with some success.

To maintain a framework of exclusive rights, however, it is essential that collective administration of rights not become the equivalent of a right of equitable remuneration. This requires that any system of collective administration be voluntary, non-exclusive, and responsive to market forces (including market forces brought on by technological change). All three of these factors point toward private entities for collective administration of rights, operating within a competitive environment. In addition, the third factor suggests that collective administration of rights should be decentralized in order to account for different market conditions in different countries.

Another approach to purported inefficiencies of the marketplace has been compulsory licensing. However, the imposition of a compulsory license can be costly to society. First, a compulsory license is a significant derogation from the norm of exclusive rights. Second, a compulsory license can cause significant distortions in the marketplace since it serves to control prices, both directly through the mechanisms for setting royalty rates, and indirectly through the control of supply. Third, once a compulsory license has become established, a web of reliance interests builds up around it, making it extraordinarily difficult to eliminate even after the conditions that justified its adoption cease to exist.

For all of these reasons, compulsory licenses are permitted sparingly under Berne and should be approached with great caution at the national level. Market failure, such as the existence of a natural monopoly in the marketplace, may be one justification for use of a compulsory license.

PRESENT AND FUTURE CHALLENGES

Maintaining the Framework of Exclusive Rights

Because of the degree to which advances in digital technology have facilitated rapid, widespread reproduction and dissemination of works, significant consideration has been given in recent years to the need to adjust the existing framework of exclusive rights to address issues of new technology. The conclusion internationally has been that the existing framework is generally adequate to accommodate the new technologies and needs minor revisions rather than a major overhaul. This is reflected in the modest, though important, scope of the new WIPO Copyright Treaty (WCT).

• **Right of Communication to the Public:** The WCT extends the right of communication that existed under Berne for different categories of works to apply to all works. This right of communication includes the right of the owners to control "the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them." The "making available" component clarifies that on-demand transmissions are a communication to the public as a whole (and therefore within an owner's control), even if each individual chooses when to exploit the work.

• **Distribution Right:** The WCT recognizes the exclusive right of an owner to distribute its work to the public through sale or other transfer of ownership. Though Berne did not contain a general distribution right for all categories of works, this right was already recognized by some countries, including the United States.

• **Rental Right:** The WCT recognizes an exclusive rental right (echoing existing obligations under the TRIPS agreement), as a means of protecting the reproduction right.

A number of issues remain that were not addressed in the text of the WCT. A proposal to clarify the extent to which the reproduction right includes temporary copies (such as copies in RAM) and the appropriate scope of exemptions for such copies was not adopted. Also, in keeping with the general approach of copyright conventions that leaves issues of liability to national laws, the WCT does not address the liability of service providers that, in their role as intermediaries, may participate in the reproduction and distribution of infringing material. These issues are, however, being

examined in greater detail at the national level. They are certainly current issues in the United States — passage of legislation implementing the WCT has been linked politically to a legislative resolution of the service provider liability issue and pending implementing bills include provisions on that issue.

Technological Adjuncts to Copyright Protection

While the WCT leaves the existing framework of exclusive rights largely intact, it does contain provisions, new to international copyright agreements, on technological adjuncts to copyright protection. These adjuncts are intended to further the development of digital networks by making them a safe environment for the exploitation of copyrighted works and by facilitating authorizations for such exploitation.

Under the WCT, countries must put effective legal remedies into place against the circumvention of technological measures that are used by owners to safeguard their rights. Countries must also provide legal remedies against persons who delete or alter rights management information that the copyright owner has attached to the work. In the United States, the principal change to U.S. law contemplated by legislation implementing the WCT is the addition of provisions on technological adjuncts to copyright protection.

The WCT, therefore, recognizes that owners cannot rely on technological measures alone to protect their works, because every technical device can be defeated by someone intent on accessing a work. In other words, while the framework of existing property rights continues to be appropriate, the meaningful exercise of these rights in the context of new uses, such as those on the Internet, requires supplementing them with legal assurances that they can be technologically safeguarded.

Markets and Management of Rights

As discussed above, collective management of rights is a market response to the inefficiencies of individually licensing rights to large numbers of works to large numbers of users, where the value of any individual use is relatively small. Traditionally, individually licensing of such works would result in transaction costs exceeding the value of the license.

At first blush, collective management of rights appears to be an attractive approach to managing rights to at least some works on digital networks. It's unclear, however, to what extent the same conditions apply. The information infrastructure that permits rapid, inexpensive dissemination of works may also enhance the ability of right holders to manage rights individually. Work is currently under way by the private sector to create standards that would facilitate the location and retrieval of digital objects containing works, identification of the right holder and terms and conditions of use, and remitting of payment. The intensive use of automation could reduce the cost of such a transaction to levels that would make individual rights management economically feasible. Alternatively, or additionally, such technologies could be used within a framework of collective management, as a supplement to traditional blanket licenses.

For these technologies to meet their full potential in the marketplace, however, they must be allowed to develop with minimal interference. Whether collective management of rights, individual management of rights, or some combination prevails must be determined by market forces and not by governments.

Multimedia works are a case in point. There have been suggestions in the past several years that the difficulty of clearing rights may stifle the creation of multimedia works. The implication is that rights should be managed collectively, or even through compulsory licenses. In the absence of these, however, the United States has a thriving industry developing multimedia works. Thus far, at least, the market has been working to the benefit of creators and users alike. ❑

❑ INTELLECTUAL PROPERTY IN THE TRIPS ERA

An Interview With Joseph Papovich, Assistant U.S. Trade Representative for Services, Investment, and Intellectual Property, and Claude Burcky, Director for Intellectual Property in the Office of the U.S. Trade Representative

The United States is urging developing countries to prepare now to meet their obligations in the multilateral Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) when that agreement becomes fully binding on them in January 2000, two Office of the U.S. Trade Representative (USTR) officials say. USTR has had success so far in prevailing in TRIPS cases it has filed in the World Trade Organization (WTO) against developed countries already bound by the agreement. Even as USTR uses the TRIPS agreement and seeks to negotiate expansion of it, they say, the Special 301 trade law will also remain in use.

The two officials are Joseph Papovich, assistant U.S. trade representative for services, investment, and intellectual property, and Claude Burcky, director for intellectual property. They made their comments during an interview conducted May 5 by USIA Economics Writer Bruce Odessey.

Q: If piracy is a profitable business, why should countries outlaw piracy and enforce intellectual property laws?

Papovich: If a national government wants to encourage the development of the arts and sciences in its country, then it's a fairly well-established fact that one needs strong intellectual property protections.

Mark Twain made exactly that argument 100 years ago for why the United States needed strong intellectual property protection. He said: "A country without a patent office and good patent laws is just like a crab that can't travel any way but sideways or backways." In the late 1800s, Americans apparently were fairly freely copying the works of other countries' writers, but I think in retrospect most Americans involved in this area now see that as a mistake. Twain and other American writers campaigned successfully for strong intellectual property protection in the United States. Today's American writers and inventors continue to do so.

Q: What about the argument that intellectual property rights protection is a plus for attracting foreign investment?

Papovich: One of the things developing countries always say they want is the transfer of technology. They see that as the path to development; they need to have made available to them the most modern inventions in the developed world. Our reply is that the only way that will happen is if the inventors of such technology know that their inventions will receive the same kind of intellectual property protection that they receive in the developed world.

We know of many instances where U.S. companies keep their latest inventions off the market in developing countries because they do not want to have them unfairly copied. They make available instead older, off-patent technology, for which intellectual property protection is no longer available. So the message to developing countries is this: Provide strong intellectual property protection, and the most recent technology will come your way.

Q: How did the U.S. program for promoting intellectual property in other countries come about? How has it been working?

Papovich: In the 1980s the United States began facing chronic trade deficits, so our government undertook a rather intensive examination about how we should address these deficits. One of the things that became apparent was that we needed to emphasize exports of products for which we had a comparative advantage. The area of intellectual property, creations of the mind, is one in which the United States has a strong comparative advantage. It became apparent to U.S. policy-makers that potential U.S. exports were not being exported because people in other countries were copying, were counterfeiting these U.S. products.
So in 1988 the Bush administration and the U.S. Congress decided on a two-track approach to combating piracy and counterfeiting of our products. One track

involved creating the so-called Special 301 program, through which we undertake an annual review of which countries deny adequate and effective protection of American intellectual property. The other track involved pursuing an international agreement on intellectual property that was binding and had enforcement provisions as part of the Uruguay Round trade negotiations in the GATT (General Agreement on Tariffs and Trade) that were beginning at that time. That was finally achieved when the Uruguay Round was concluded in 1994 with the TRIPS agreement (the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights).

We continue to use vigorously Special 301. Claude just led the annual review this year, the results of which were made public May 1. Simultaneously, we are aggressively pushing for full implementation of the TRIPS agreement. One thing that was disappointing in the outcome of the TRIPS negotiation was that developing countries were given five years before they have to meet most of the obligations of the agreement. That five-year period expires on January 1, 2000. We are pressing hard to ensure that developing countries are taking steps now to meet their obligations, to be fully in compliance with their obligations when January 1, 2000, arrives.

Q: It has been sort of a mystery to me how you make Special 301 decisions. For example, this year USTR announced initiation of WTO dispute-settlement proceedings concerning Greece and identified Paraguay as a priority foreign country. Yet Russia was not identified as a priority foreign country even though your report describes it as having pervasive piracy. How do you make those calculations, and do foreign policy considerations enter into them?

Burcky: The first thing to look at is the IPR (intellectual property rights) regime itself — whether adequate and effective laws have been passed and the level of enforcement of those laws. Certainly, Russia has come a long way in changing its legal regime, but, as you point out, enforcement is a problem. And as a reflection of our concerns about enforcement and the parts of the legal regime that are still deficient, we elevated Russia to the priority watch list last year. We continue to work with Russia on enforcement and development of laws. To the extent countries make progress in between reviews, we reflect that in their status in the Special 301 announcement. Russia has just over the past year agreed to work with us on the enforcement issue; since we are making progress on this issue, no further action on Special 301 appeared to be warranted this year.

Paraguay, on the other hand, doesn't have adequate and effective copyright, patent, or trademark protection. Enforcement is totally lacking. And transshipment of pirated and counterfeited goods from Asia through Paraguay to the rest of Latin America is a tremendous problem. So because Paraguay has not made progress over the past several years in addressing that problem, the country was steadily elevated through the Special 301 lists and was eventually designated as a priority foreign country.

So we make these decisions based on the regime as we see it and the progress that the country is or is not making to address the problems that we have identified.

Q: Does it also matter how much the piracy affects U.S. business?

Burcky: The industry submissions that we get every year estimate the losses that a particular industry is suffering, so the higher the losses the higher the priority, certainly.

Q: Is China the country where piracy costs U.S. business the most?

Papovich: Yes, I think that's true.

Burcky: Yes, and Russia is a close second.

Papovich: Mexico is near the top of the list. Who else are some of the big ones?

Burcky: Bulgaria until recently.

Papovich: It's a strange thing. People will ask, How can a smaller country like Bulgaria or Paraguay really be that much of a thorn in the side of our intellectual property industry? Their markets are small. But what happens is they export all over their respective regions, all over Eastern Europe in the case of Bulgaria and all over Latin America in the case of Paraguay.

Q: How does U.S. enforcement compare with that in other countries? For example, you can walk around the corner and you'll find guys selling t-shirts with blatant copyright violations, and they've been doing it for years.

Papovich: There's going to be *some* piracy and

counterfeiting; there's no getting around that. In most instances, we ask other countries to do what we do — to have laws that prohibit this kind of behavior and an effective judicial process for acting against those who would break those laws. It's impossible to police every instance of that, but the mechanism for policing must be there.

I thought your example about the street vendors would include the selling of pirated copies of videos. This was occurring here in Washington, D.C. — but now is not. The reason is that the Motion Picture Association of America, upon discovering that these videos were for sale, persuaded the local police to conduct raids run not so much against the retailers but against the manufacturing and distribution facility in Maryland. The trademark owners apparently haven't decided to pursue their rights against the t-shirts these guys continue to sell. The point is that we want the rights holder to have the mechanism available to get relief if he or she so desires. You can do that in the United States. In other countries, it's not so easy.

Q: Are the problems in developing countries related more to passing adequate laws or to enforcing laws already passed?

Papovich: Getting a country to enact a law is fairly straightforward and relatively uncomplicated. Enforcement is much more complex. Many developing countries' enforcement systems, judicial systems, civil and criminal justice systems are much less developed than in the developed world. It can be difficult to get prompt enforcement. Police and judges may or may not be corrupt. Even if everyone is honest, there often are not enough police or judges. So it's hard to get raids run. It's hard to get your case heard promptly. It's not that countries don't want to protect intellectual property. They just don't have the infrastructure in place to provide the kind of prompt justice that you get in most developed countries.

Q: How well has the TRIPS agreement been working so far?

Papovich: Well, so far so good, but, as I said earlier, most of the obligations in the countries that matter the most to our intellectual property industry don't kick in until January 1, 2000. The TRIPS agreement came into full effect for developed countries on January 1, 1996. Most developed countries have pretty good laws. It's the developing world that we're more concerned about. So the jury's still out. But I think one has to say that we have used the TRIPS agreement very aggressively even against developed countries that are not meeting their obligations — I think 10 or so cases.

Burcky: Yes, it's 10 now with the Greece case.

Q: What's the record of U.S. cases on TRIPS in the WTO? How many have been decided? How many are still pending?

Papovich: Most of the cases have been settled out of court, so to speak. The first case we brought was against the Japanese on sound recordings, and that was settled before it had to go to a formal panel. The next case we brought was against the Portuguese, where provisions of their patent law were TRIPS-inconsistent; that was settled too. Basically, "settled" means that the country changed its law or its practice to be in compliance with TRIPS.

The only case that went through a panel process so far involves India. The TRIPS agreement has a 10-year transition before patents must be provided for pharmaceutical products. Yet there's a provision requiring, immediately on January 1, 1995, that countries taking advantage of that 10-year transition have a place — called a mailbox — where applications can be filed to preserve their novelty. Neither Pakistan nor India had a mailbox. So we brought cases against them simultaneously. Within a few months the Pakistanis agreed that we were right, and they took the legislative steps necessary to create a mailbox. So that case was withdrawn. The Indians, on the other hand, disagreed with our decision. So we went to panel; went through the whole process. The panel found that we were right. The Indians appealed the decision, which is their right. And the appellate body affirmed the decision that we were right. Now the Indians have to take steps to comply. They're doing that now.

We haven't lost any of our cases, but there are a few that are still outstanding.

Q: Is the kind of IPR problems we have with Europe and Japan different from the kind of problems we have with Paraguay and India?

Papovich: Certain developing countries have no IPR laws at all — no law protecting patents, no law protecting trademarks, or very elementary versions. In the developed world, countries tend to have sophisticated laws, and the

problems that we have might be with respect to relatively narrow interpretations or with respect to inadequate enforcement.

Take the case with Sweden and Denmark, for example. Our software industry needs the right to conduct surprise searches of the premises of a corporation if the corporation is using copies of U.S. software without authorization. Denmark and Sweden feel that the right to have surprise searches is limited to criminal cases, not civil cases. The U.S. copyright industry prefers to bring civil complaints because it has a hard time persuading prosecutors to consider software piracy comparable to murder, robbery, and such. Yet software companies can't make their case against these corporations unless they can have these surprise searches. So that's the dispute we're having with Sweden and Denmark. It's a rather sophisticated issue compared to the absence of a copyright law. We have broader problems of inadequate enforcement in Greece and Italy.

Q: What's ahead in negotiations? What kind of further agreements does the United States want in intellectual property?

Papovich: In the multilateral context, there are a couple of things. One question is whether to incorporate into the TRIPS agreement the recent agreement at the World Intellectual Property Organization that electronic transmissions are protected under copyright. Another is how we can better protect biotechnology products under the provisions of the TRIPS agreement.

One of my predecessors said the TRIPS agreement provides intellectual property protection for what amounts to a snapshot of the state of intellectual property as of 1990. In 1990 nobody was sending e-mails, documents, or software over the Internet. Now they are. If we want TRIPS to be a state-of-the-art agreement, then we have to think about incorporating into it the world's latest developments. ❑

❑ PANEL DISCUSSION: INTELLECTUAL PROPERTY AND THE GLOBAL MARKETPLACE:

What are the challenges of promoting intellectual property in today's global economy? How is the equation changing for developing countries and emerging economies at the dawn of the 21st century? What impact is the digital age having on traditional approaches to protecting intellectual property?

In April, a panel of intellectual property experts assembled at the invitation of the U.S. Information Agency to discuss these and other issues. An abridged version of their discussion appears below. The views they express are their own.

The participants were:

• ***Eric H. Smith**, President, International Intellectual Property Alliance (IIPA), Washington, D.C. The IIPA is a coalition formed in 1984 to represent the U.S. copyright-based industries — films, videos, recordings, music, business and entertainment software, books, and journals — in international efforts to improve the protection of copyrighted works. Mr. Smith is the author of numerous articles on copyright and communications and has lectured widely on subjects ranging from international copyrights to broadcasting and the new technologies.*

• ***Deborah Hurley**, Director, Harvard Information Infrastructure Project (HIIP), Cambridge, Massachusetts. The HIIP was established in 1989 under the aegis of Harvard University's John F. Kennedy School of Government. It provides an impartial, interdisciplinary forum for discussion of a wide range of policy issues relating to the development, use, and growth of information infrastructure. Dr. Hurley is the co-author of a forthcoming book entitled* Internet Publishing and Beyond: The Economics of Digital Information and Intellectual Property, *to be published by the MIT Press.*

• ***Robert Sherwood**, International Business Counselor, Alexandria, Virginia. Mr. Sherwood is a business consultant specializing in the reform of intellectual property regimes in developing and emerging economies. He has spoken and written widely on the subject of intellectual property.*

• ***Peter Fowler**, Attorney-Advisor, Office of Legislative and International Affairs, U.S. Patent and Trademark Office. Mr. Fowler is a specialist in international intellectual property law based at the U.S. Patent and Trademark Office. He served as moderator of the panel.*

***Q**: How has the challenge of promoting intellectual property protection changed in recent years in the wake of the TRIPS agreement? Are the stakes higher today than before? Are countries with weak intellectual property protection losing ground in the competition for investment and access to technology?*

Sherwood: I find myself marveling at the TRIPS agreement and this linkage of intellectual property with trade. In one sense, the TRIPS agreement is almost old news, it goes back five years. On the other hand, for most of the world it's still on the horizon since so many developing countries have until the turn of the century to comply. I think some of them are a little bit asleep at the switch; they're not quite aware of what to do and what it implies for them. In any event, the linkage of intellectual property with trade has done some interesting things. It has turned intellectual property into an issue of trade contention as well as an instrument of trade facilitation. Intellectual property evolved historically as a means of stimulating people to do things. In modern terms, we talk about this as stimulation to invest, to take risks in backing new ideas, new ventures, new expressions. Yet in a lot of countries that I've visited, there is a feeling that the TRIPS agreement is the top of the hill, as far as you need to go, that TRIPS is it. And that bothers me a lot because it seems to me that the TRIPS agreement is perhaps half way to what will be sufficient for mobilizing the developing world and the transition countries. I'm a little worried that for a time there will be a false expectation that the TRIPS agreement standard of protection will bring the fullest set of benefits to these countries.

Hurley: The TRIPS was meant to be a threshold. Over time, some people have forgotten that it was meant to be a *minimum* set of standards, not the final word. I think it's worth reminding everyone of that as often as possible. Still, there are very few countries and very few government officials who would say that intellectual property laws are unnecessary. Most would say they think intellectual property laws are a good idea and often it's a matter of development goals and the ability to adapt and absorb a set of regulations at a given point.

We live in a time of unbelievable asymmetry. We've been talking about developed country values directed toward the developing world, but in this whole swirling set of asymmetries we're seeing another type of flow. Back in 1992, the OECD (Organization for Economic Cooperation and Development) organized a conference with the Max Planck Institute that looked at intellectual property protection in Eastern Europe, at a time when the Eastern European countries were adopting a lot of new legislation. Their laws relating to biotechnology were much closer to American and Japanese laws than to those of Western Europe. So in terms of encouraging investment by biotech companies, the countries in Eastern Europe were much more welcoming places to invest and create new operations than those of Western Europe. It was interesting because many of the European intellectual property lawyers wanted to deliver this message as strongly as possible to their government officials and the European Patent Office and the European Parliament.

As new countries come on line, they clearly look around the world to see what is the state of the art, what are the models, what are the best practices. In doing so, they may put pressure even on developed countries to change their level of protection and their means of protecting certain types of inventions and works.

Fowler: The growth and expansion of the Internet is forcing countries to consider harmonizing global copyright laws, and probably trademark laws as well. I was struck at the 1996 WIPO (World Intellectual Property Organization) diplomatic conference that while some 160 different countries had somewhat different approaches, or disagreed on certain issues, they felt the need for a global set of treaties to address copyright protection and sound recording protection in a digital environment. That was kind of a given, and then the parties moved on to the details. I don't think that would have happened 10 or 15 years ago. There would have been a huge disagreement.

***Q:** Is piracy still on the rise? How serious a problem is it? Why should developing countries care?*

Smith: We've done some studies and tried to rank regions of the world in terms of piracy rates. The worst region — with piracy levels between 75 and 80 percent of all copyrighted products — is Eastern Europe, the CIS, and Russia. There is no tradition of good judicial machinery, of the rule of law and criminal prosecution, other than through political mechanisms, and that has put this region at the very top in terms of piracy levels. Correspondingly, their economies are going to be among the weakest. If we could launch a worldwide effort to boost judicial effectiveness around the world, they could have economic gains in those countries that we haven't seen in any period.

Hurley: The principal conclusion of the OECD conference on Eastern Europe I mentioned earlier was the need for much better enforcement mechanisms. Again, it is a complex area. In the United States, we had to create a special court of appeals to deal with these issues. We should reach out and provide a better way of training those in the judicial process in other countries; it would do a massive amount of good, and it doesn't require any new legislation or international accords.

Fowler: It's not surprising because these areas are terribly complicated and for some countries there is not a lot of trained expertise in the first place. From the economic standpoint, perhaps smaller countries should not be channeling a lot of their highly skilled engineers into being patent examiners. They would be better and more productive working in the private sector and in research. A number of countries – for instance, Thailand, the Philippines, Panama — have begun to opt for specialized judicial courts and prosecutors to deal with intellectual property crimes. They're recognizing that, in many cases, their own judiciaries are not up to the task and that they have to do something to provide incentives for better trained judges and prosecutors, more predictable enforcement, and fewer delays. This may be the whole thrust of what the Patent and Trademark Office and other branches of the U.S. government will do for the next decade or more: working on enforcement issues and training judiciary, training prosecutors, and, in many cases, training the local practicing bar. It's critically important.

Sherwood: The idea that every developing country ought to technically examine patents strikes me as absurd. The redundancy of a technical examination is being exposed more and more now. The Patent Cooperation Treaty (PCT), which permits an applicant to file one application and in effect use it in a number of countries around the world, is a movement toward a more unified approach. It would reduce the costs of patent administration in a lot of developing countries if they would decide that if one of the PCT-treaty-designated examining centers has indicated that this is a patentable invention, they would then automatically grant a patent, subject to some conditions. The cost of creating a cadre of patent examiners is the single largest item in the administration of intellectual property. If you consider that, under the international classifications, there are some 200 discrete fields of technology in which applications are filed, it would suggest that any country, in order to conduct a technical examination, ought to have at least 200 examiners. That's simply not possible in a lot of countries. So it makes a great deal more sense to rely on the international system that is beginning to emerge for that.

There are probably more inventions made in the world than is realized. From visiting a number of Latin American universities, I am persuaded that they have indeed made significant inventions with commercial potential. And yet not thinking about patents, and also aware of their cost and so forth, many of these inventions have been written up as papers that have enriched the library of a university, but nothing of commercial value has developed.

Smith: In developing countries, the people who depend on intellectual property protection have been hurt so badly by the lack of it that they tend to recede into the background. They're not accustomed to lobbying their government or being out front politically, and they don't have the funds to organize themselves. Typically, it is U.S. industry that screams and yells about how much it is losing as a result of piracy. Yet the Mexican record industry, for example, is facing a 60 percent piracy rate, and it is now becoming very active within Mexico because its members collectively lose more money than their American counterparts operating in Mexico. Often, U.S. industry goes in guns blazing, but we should be spending more time helping the local creative community because that's where the politics are. No country that I know of has passed a good law solely because of U.S. pressure. They've got to believe in it themselves; the country will come along when it's pressed by its own local industry. Indonesia and its music industry are a great example. It was those folks that got a copyright law passed, not the U.S. industry and not pressure from the U.S. Trade Representative.

***Q:** What are the benefits for developing countries of protecting intellectual property? What strategies can developing countries adopt?*

Smith: The best way to see what can be done is to look at countries where it has worked. I'd like to name just two or three countries – although I could point to 50 or so right now — starting out in the mid-1980s, and what's happened because they decided to protect intellectual property. You can start with Singapore, which initially had no performers or record companies. Instead, pirates were exporting 180 million units of sound recordings to other countries. Piracy was basically at 100 percent across the board; they had no law, they did not protect any foreign copyrighted works. Then Singapore passed a law and started enforcing it; today the country is exporting the efforts of its own performers. They quadrupled the number of recording studios. None of that was possible when there was no law.

Another example is Indonesia, where there is a huge music culture. Today, Indonesia has a piracy rate of 30 percent, which is still too high, but back then it was 100 percent and no local person could make a living recording and selling music. That is now no longer true.

Finally, there is the publishing industry in Korea. Again, no protection whatsoever in 1985. There were 2,000 publishers in Korea, and they bitterly opposed the passage of a copyright law. What those publishers did for a business was to pirate foreign educational, reference, and medical books, which were used almost exclusively in Korea. The quicker you got a pirated book on the market, the bigger the profit. If you were slow, you didn't make a profit. Now the Korean publishing industry is very prosperous, and it is made up of real publishers. They bring on authors, they edit, and they promote and distribute; the pirating of books is down from 95 percent in 1985 to about now 20 percent.

These examples are not unusual -– it's happening all over the world. Without intellectual property protection, you cannot have a healthy domestic publishing industry where authors are compensated for their works, you cannot have an effective local music industry. And you

can talk to good software developers in any country — in Russia, in China, in India, no matter where — they're going to have people who are geniuses in software. The first software program that's going to be pirated is theirs, and they cannot make a living without an intellectual property regime with a high level of protection. I've been in this business for 15 years, and when intellectual property is protected, piracy rates have come down while income and creativity have gone up.

Sherwood: I'm reminded of a story about a leading Ecuadorian film producer who made two highly acclaimed films, and as soon as he released them, they were pirated and all the corner video stores throughout the country were selling them. He made a dramatic statement in front of Ecuadorian officials. He said, "Steven Spielberg and Walt Disney do not need copyright protection in Ecuador. But I do, and I suffer greatly for not having it."

Where creative people are not supported by the intellectual property system, and thus cannot produce and disseminate their creative expression, a country loses something very important. These are the people who first absorb the new things that are happening in the world and reinterpret them in terms of an existing culture. When a culture is frozen in time, a country tends in some ways to become reactive. There's a sense that people are not embracing what's coming and evaluating it for others, and then expressing the reaction, so that the whole community begins to move forward. In countries where the local artists are supported, where the work of the cultural people does go forward and the reactive mindset is changed and overcome, there's much more openness to the new things that are happening. And that's critical in the face of the enormous changes we are seeing today with the Internet and so many other things.

If there isn't a fairly strong belief in a country that intellectual property is good for that country, the system isn't going to work. If a country says under pressure, OK, we'll fix our intellectual property system, that system is so full of discretion of all kinds that it's difficult to make it work if those operating it don't believe in it. This puts a lot of pressure, I think, on growing local demand for stronger intellectual property protection.

Intellectual property is not something that the U.S. Trade Representative's office invented, although it seems to many that is the case. Intellectual property is really a very ancient creation. Villages discovered it was useful to the whole community if the bright people, the creative people, could be given special encouragement. What they produced benefited the whole community. Trademarks were first recognized when potters created water vessels that held water much better than other vessels. Copyright goes back to the printing press, patents to the northern Italian states at a time when trade with the Orient increased and inventiveness was flourishing. The point is that it was valuable to the community to protect and encourage works done by its bright and inventive people. They saw the value of harnessing a natural resource that was available to them.

***Q:** What is the impact of the new technologies, including the Internet, on copyright and trademarks? What will be the impact on economic growth of an altered intellectual property landscape? Who will be the winners and losers?*

Hurley: There are two strong trends that we see now in the intellectual property area –- and they are curious and divergent. In the area of privacy and data protection, we see a powerful tendency toward treating personal data as a trade issue, but there is also a strong trend of handling it as a human right. The human rights portfolio is expanding, and more and more things are going into that basket. I think that basket is going to get too full and tip over because there's an attempt to cram so many things into it.

On one side, people argue that data protection should be treated more and more as a property right, that the correct analysis is that personal data is property and that the individual should be able to claim the value in that property. For example, when direct marketers take your personal data and use if for ancillary purposes, then you should be able to claim some of the value and be renumerated for that use. New technology will allow some of these micropayments or instant brokering, where you would get an instant payoff of 50 cents or so when your information is used in some sort of survey or some kind of aggregated data. But that's only one way of analyzing it — by looking at the value of "commoditizing" personal data.

On the other side of that, people are saying, Wait a minute. Maybe personal data and privacy are a human right. They argue that under the various human rights conventions, that kind of protection is contemplated and that it's something inalienable like voting in the United States — you can't mortgage or lease your vote — or like organ sales in many countries.

Ten or 15 years ago, there was a very small minority in the United States saying that copyright was not the right way to go in protecting computer programs. Meanwhile, the U.S. government was arguing that it was the way to go since it addressed the problems of reproduction and it fit under existing international conventions. What has been so surprising and interesting to me over the past decade is to watch what was a very small minority view in the United States grow so that it's almost a half and half split between what I would characterize as a traditional intellectual property analysis and those who are a bit more heretical and say that notions of intellectual property that we have had for 250 years or so don't work in a digital era, or don't work in a globalized economy, or infringe on people's basic rights. I don't see that debate going away. Other countries may take comfort from the fact that there is a fairly vocal schism in the U.S. legal community about this set of issues; that was reflected clearly in the recent WIPO diplomatic conference. In general, though — and this is perhaps being a bit optimistic — there is a slow trend toward consensus and better intellectual property protection.

Smith: I agree with your analysis, although I would argue that 15 years ago there was almost no one in the academic community who thought that copyright was the right way to protect software. My view was the traditional view. Fortunately for my point of view, the world has gone the route of protection of software as a literary work under copyright; the nonacademic world seems to be moving very quickly in that direction, while the academic world is still challenging that view pretty regularly.

Hurley: Many of these things may be process problems. The entertainment industry in the United States is extremely powerful and able to move quickly and move with a lot of resources and overtake a debate before the other parties have been able to assemble about the debate. So a lot of the screaming and yelling has to do with process rather than substance.

Smith: If you look at the Internet, you're certainly right. If you look at any of the copyright sites, it's almost 100 percent the opposite view from the business community. No question about it.

Fowler: There have been some recent press reports about academics, primarily in higher education, who are beginning to say, well wait a minute, all this talk about free information on the Internet, all this discussion about everything being covered by fair use was fine. But I want to control my class notes, I want to control my material; I don't want someone putting that up on the Internet. Perhaps there is the beginning of a trend toward a more traditional view of authors retaining some control over their works, even on the Internet.

The Internet and electronic commerce are also having a tremendous impact on trademark law. In some respects, the trademark system is being dragged kicking and screaming into the Internet age, and the domain names and addresses are just the tip of the iceberg. Multinational companies have a lot of resources invested in the development and marketing of their trademarks and logos. The Internet is providing a great vehicle for expanding their use, but at the same time it is providing the same sort of counterfeiting and piracy potential as exists in the copyright field. The United States has not yet even ratified the trademark law treaty; we're behind on this.

Q: How widely shared will be the fruits of electronic commerce and the digital economy?

Fowler: Although we focus so much on the new digital technologies, there are estimates that 97 percent of the world still doesn't have access to the Internet. What is this doing to the gaps that already exist between developed and developing countries in terms of their ability to use technology for economic advancement? Is this gap widening?

Smith: It shouldn't widen. It should be closing as a result of electronic technology. Books are expensive to distribute to developing countries, particularly textbooks. If you could do that by electronic means, transaction costs are lowered and the cost of information to students is reduced. Ultimately, the new technology portends great benefits for developing countries. But it's not going to happen unless a country puts itself in the position to protect the material that's going over those telephone lines — or fiber optic lines, or whatever. If that doesn't happen, then electronic commerce will stay within the developed world, and what you suggest might very well happen.

Sherwood: I think there are a lot of barometers indicating that the 97-to-3-percent split is under a lot of pressure. The World Bank is beseiged by requests from countries for help in moving into the information technology age.

The Bank is trying to respond –- but it's an enormous problem. What it does say is that political leaders in a lot of governments are seeing that this is the way to go. I think they see the potential of broadening distance learning, of making more information available to their populations. The costs of doing so are very great, and both the public and private sectors are going to be challenged to find new balances and new equations.

Hurley: One of the significant differences now for developing countries is that the barriers to their entry as publishers and broadcasters have come down enormously through the Internet. They're able to get on the World Wide Web and become publishers and broadcasters to the world. The search for novel, high-quality content is not going to diminish in any way, and that's true around the world, including in developed countries. People want that, and many developing countries are able to offer content that is different from, although appealing to, Western markets and the kind of mainstream content that's out there now. The returns may not be as big as those of the Hollywood studios, but it's still worth seeking and asserting property rights in them.

***Q:** Will copyright standards spur more electronic commerce or stand as an impediment? Are concerns in the United States about an erosion of "fair use" access to information warranted?*

Hurley: There were certainly some very strong voices within the academic community arguing for greater access to information. But I think people in the academic community sweat long and hard to write all those seminal articles or seminal books. They want to make sure that there's a return from it. I think at any point in the time spectrum if there were efforts to strip them of that, they'd be pretty upset about it. So I think it depends on which issue you're facing at any given moment.

Certainly there has been a culture on the Internet of, Oh, this stuff's all out there so anyone can use it. It has been fairly easy to download it or copy it. And again, this is a very transitional moment. A lot of people are saying, We want to claim the value of what we're putting up there. There's been a great deal of attention paid to electronic copyright management systems. There are many pilot projects and technology prototypes being developed, both by industry groups and the European Commission. It's going to happen; it's natural for people to want to claim some of the value in their work, and that's reinforced by the traditional intellectual property regimes that we're used to. So we will see people using these kinds of electronic copyright management systems to be able to gauge people's access and take renumeration.

One of the things that it offers that people don't think about is the potential for greater access by the public to protected works. For example, you may not be able to buy a $25 book, but if you can go into that book and it's on the Web, and it costs you 50 cents to look at the chapter that you like the most, that's access you didn't have before. And we can all reel out a number of examples like that. The potential for more access for more people is definitely there.

There's also a huge amount of discussion in the U.S. academic community right now about fair use principles. Some American legal specialists argue that the institution of electronic copyright management systems would vitiate fair use. In other words, the copyright holders would gauge everything, and so they would charge for it.

Fowler: There is an interest in other countries about the process here, to try to develop guidelines about educational fair use in the Internet digital environment. The concepts that we have of fair use are not going to be restrictive, but in fact will have the effect of expanding fair use in many countries that have had very narrow jurisprudence. I do a lot of reviewing of legislation and legislative changes in other countries, and I can see this on a regular basis. As they're going through changes in their copyright laws to bring them into TRIPS compliance or just to update them generally, countries are adopting what are really American fair use concepts into their own statutory frameworks. So I think the reality is that we're actually having the effect of expanding fair use globally as opposed to seeing it restricted in the United States. Ironically, I think the real issue for fair use down the road — whether it's in copyright information management systems, encryption, or other kinds of protections — is whether fair use is a right of access to works. I'm sure that there are some in the current debate who would like to suggest that fair use equals access, as opposed to the more traditional view that it is an affirmative defense to infringement.

Hurley: That's right. I think there are people arguing that fair use is the right of access. If you're a teacher in Ohio and you can pay 10 cents on the Internet to show your class something, is that a fair use? I think under U.S. jurisprudence now we might say yes. So that field still needs a lot of tilling.

Smith: There's a fundamental misunderstanding of what fair use is. If you make works available on the market in ways that they've never been made available before, for example by selling excerpts of books for small amounts of money relative to the whole, the Berne Convention rule is there's no exception from the reproduction right if that exception would interrupt the normal exploitation of the work. Until the digital age, there was no way to get access to little pieces of a work without just taking them because they weren't available for licensing. Now we've created a system in which people can get back the value of their work in small increments.

Librarians and the educational community feel that this is somehow fundamentally wrong. They could get it for free before in a world where it wasn't being sold anyway. But I think what we have now is the ability — you might have to pay for it, but there are tons of information out there, much more than ever before. There's nothing fundamentally wrong with having to pay for what someone else has created. I think there's just a lot of fear here. I don't think, for example, copyright owners would encrypt everything. It wouldn't make sense to encrypt everything. People wouldn't know it was out there. This debate is going on in Congress right now, and it will be most interesting to see how it comes out.

Hurley: Also, one has to posit a competitive marketplace if my content is too expensive. If I charge 25 cents a page, then someone else is going to write something and charge 10 cents a page, and it's going to be almost the same or better. So I think we're going to see a lot more competition in real time. The technology is going to make it much easier.

Fowler: It means that copyright protection in this case is really being driven by the electronic commerce potential.

Hurley: I hadn't thought of it that way. I think people are focusing on the negative of copyrighted works going up on the Web. But there are definite positives both for producers and users.

Smith: We should not forget that it will be a very long while before copyright protected material is available generally on the Internet. Most of this material will be in a physical medium still for years to come. Some books and movies are going to move into the electronic context. But a lot is still going to be available where normal rules of fair use apply, just like they have in the past.

***Q:** What will the concept of intellectual property mean 10 years from now? How will it be different from today? Can the delicate balance between the innovators and the public be maintained in a global economy and a networked world?*

Sherwood: You will begin to have voices in developing countries stand up in the political process and demand stronger protection and enforcement of their rights. And as that happens, there will be a higher quality, better balanced political debate. Over time — and we're talking about maybe 10 to 15 years — there will be a growing indigenous demand for intellectual property rights in many countries. This is probably the best hope for building up a country's technical base and support for the local creativity that is so obviously there.

I think the great difficulty is going to be the judicial systems. About 80 percent of the countries in the world have judicial systems that really are not up to the task of enforcing intellectual property rights. It's a very complicated and esoteric area of the law, and it requires a level of knowledge not usually had by judges, even in this country. It is difficult to say what will happen as intellectual property systems are created and rights are available and yet not enforceable. In many places, it is difficult to make the argument that the judicial system ought to be cranked up to a higher level of efficiency purely for the sake of intellectual property protection. There are so many other issues that these countries face that it seems to me very important to make the broader argument that judicial systems in general need to be improved for the sake of many factors, including intellectual property.

Along with a World Bank economist, I have been looking at the question of what is the loss to a national economy if a judicial system is dysfunctional. In Brazil, a think tank has derived a methodology for measuring the discrete influence of dysfunctional judicial systems on national economic performance. They completed their work recently and found that the growth trend for Brazil is impaired by a factor of about 20 percent directly traceable to the malfunctioning judicial system. That methodology is now being applied in Peru, and hopefully it will also be applied to some other countries so that we can get a sense of the magnitude of the economic loss to countries as a result of a judicial system's poor performance. It turns what traditionally has been a kind of ethical or moral approach to judicial reform into an economics-based assessment. It brings a whole set of new

minds to work on the question of the importance of judicial systems functioning well. Within that general framework, we're beginning to find that it may be possible to determine which factors of dysfunction contribute most to impeding economic performance. In the Brazil study, it was found that extended, unreasonable delays in processing court proceedings was the single largest contributor to the loss that they found.

I think if this approach to judicial systems can be established more broadly it will turn the issue into a pocketbook issue. The elite in a lot of countries that have benefited from weak judicial systems will begin to realize that their pocketbooks are being adversely affected by the weakness, and this may begin to build a broader consensus that there is a need to fix the judicial systems. And that would, in turn, help promote not only intellectual property but a lot of other factors like investment and greater bureaucratic discipline. Even legislation would improve if the judicial systems functioned better and had a better sense of their importance.

Smith: The software industry has done regional studies trying to estimate what governments lose in tax revenue at various piracy rates. In Latin America and in the Middle East, the governments are losing staggering amounts by allowing high piracy rates. It's very easy to see. Pirates don't pay taxes; legitimate businesses do. This is what you lose if you have this kind of rate of piracy. This has been a very effective way of pushing finance ministers and other political leaders to begin to rethink the economics of piracy and the positive role that intellectual protection provides for their country. ❑

❑ INTELLECTUAL PROPERTY IN THE DEVELOPING WORLD: CHALLENGES AND OPPORTUNITIES

Observations by Visiting Intellectual Property Specialists

In the wake of the TRIPS agreement and the rapid globalization of the world economy, there is a growing consensus among developed and developing countries alike that intellectual property protection is a vital component of economic development and prosperity. However, the degree to which intellectual property standards are being strengthened in practical terms differs from place to place — and often varies considerably even within a given country.

The editors of Economic Perspectives *asked five intellectual property experts with recent experience in the developing world to share their observations about the challenges and opportunities for promoting intellectual property there. The views they have expressed are their own.*

***Ralph Oman** is counsel at the Dechert, Price & Rhoads law firm in Washington, D.C., as well as a lecturer in intellectual property and patent law at the George Washington University Law School. He spent two weeks in Sri Lanka in 1998 at the invitation of the Computer and Information Technology Council of Sri Lanka.*

Sri Lanka is a very special country with a bright future. On a recent two-week working visit, I talked with some of the best and the brightest people in Sri Lanka. The good news is that these men and women have concluded that strong intellectual property protection — for patents, copyrights, and trademarks — will spur strong economic growth and cultural development.

Sri Lanka has a long tradition of folk poetry and authorship, and its contemporary writers have unique stories to tell. I actually met and talked with Romesh Gunesekera, who was a 1994 Booker Prize nominee. He told me that he was both proud and thankful that strong copyright protection for his books already exists in Sri Lanka. Its literature, poetry, architecture, art, and music all represent a high level of artistic achievement. The future of Sri Lanka's ceramics industry is also promising — a future that will depend increasingly on copyright protection. The same is true for the needlework and textile design industry. And Sri Lanka's computer wizards are already writing software for the world market. Some of the best known international companies are waiting in the wings, ready to make major investments in Sri Lanka once it gets its intellectual property laws in order.

Even with these bright spots, however, piracy of software, motion pictures, and music continues, and this activity hurts Sri Lankan creators far more than it hurts foreign companies. While foreigners lose some money to pirating, they always have access to other markets. On the other hand, Sri Lankan creators have fewer alternatives, and piracy destroys their livelihood. Without copyright protection, a Sri Lankan computer programmer has problems on two levels. First, she cannot compete against a cheap, pirated version of an American software package. Second, even if she could get her program published, she could not stop her own countrymen from stealing her work. Just as bad money chases good money out of the marketplace, pirated products displace legitimate products, whatever their nationality. So Sri Lankan creators can't pay the rent and feed their children. That is bad for them, bad for the country, and bad for world trade.

Copyright gives creative men and women — and the companies that hire them — strong incentives to invest time and money in the creation of books, software, movies, art, and music. A copyright expert from Ghana put it this way: "Why plant the field if someone else can harvest the crop?" In an environment of strong copyright protection, music, literature, art, and science can flourish.

A new copyright law in Sri Lanka would recognize that there is no future in piracy. Pirates are low-tech parasites. A Sri Lankan software company that designs custom-tailored programs for the needs of Sri Lanka and its businesses will give Silicon Valley a run for its money — but only if its software is protected. And this local enterprise will pay taxes, and it will employ far more people, at better pay, and in technologically far more sophisticated and satisfying jobs, than a back-room copy shop whose stock in trade is pirated computer diskettes. In a non-pirate market, the Sri Lankan software will drive

down the price of the foreign software. That is how competition works.

One of Sri Lanka's best-known motion picture directors, Vishwaneth Keerthisera, has a real problem competing with pirated videocassettes. At a recent awards ceremony where he was honored for one of his films, he said: "My biggest award will be my ability to show it to a full cinema hall. If I can draw the audience to see my film, that's my real award."

The same is true on the patent side of the shop. Without strong protection, inventors cannot find the financial backing they need to commercialize their innovative ideas. The Sri Lankan inventor P.N. Nandadasa developed an environmentally friendly packaging technique using coconut husks, and, with his patent in hand, he has made it a commercial success. With international patent protection, his idea should really take off.

Sri Lanka has decided to upgrade its intellectual property laws. With these changes, it will establish itself as a leader in intellectual property protection, as an example to its neighbors, and as an avid booster of its own talented people. With a strong regime for protecting authors and inventors, Sri Lanka will stand out as an attractive target for foreign investment in this year of her golden jubilee, and for many years to come.

Judith M. Saffer *is president of the Copyright Society of the United States and Assistant General Counsel of Broadcast Music, Inc. (BMI) in New York, one of the world's leading music copyright agencies. She took part in a regional conference on intellectual property rights held in Cotonou, Benin, in 1997.*

The purpose of the conference was to develop a strategy to combat the piracy of intellectual property in West Africa. The focus was primarily on music; the participants considered various ways of reducing the unauthorized reproduction of music and encouraging regional cooperation.

Most of the conference participants acknowledged that those who create and market intellectual property should be compensated — at least theoretically. In practice, technological advances make piracy easy, and combating it in emerging markets is a particularly difficult task.

Yet there is a growing awareness among developing countries that protection for creators and entrepreneurs will serve not only the interests of industrialized nations, but will also benefit their own economies. In emerging markets, it is imperative to foster creativity. If countries wish to promote national economic progress, protection must be available for owners of intellectual property, whether the creator is a national of that country or a foreign individual or entity.

There is no doubt that providing protection for intellectual property benefits creators. What is harder in developing countries is to convince government officials that everyone benefits when there is a reasonable level of enforcement of intellectual property laws.

When there are inadequate economic incentives, developing countries find it difficult to attract foreign investment to their nascent industries. Without proper enforcement of copyright, trademark, and patent laws, infringement, piracy, and misappropriation run rampant. Under these circumstances, investors are reluctant to finance new businesses. The television, motion picture, and music industries -– which rely heavily on intellectual property -– flourish in many countries. However, these same industries hesitate to export products or invest in the development of new products in places where protection is ignored. In countries with weak intellectual property laws and weak enforcement, there is no opportunity for the establishment of distribution chains or for the development of licensing skills and expertise. It turns out that the argument that less developed countries cannot afford to pay for "legitimate" copies of intellectual property is shortsighted and counterproductive.

However, perhaps the most important reason for protecting intellectual property is that, without adequate laws and aggressive enforcement of those laws, a country is far less likely to be able to develop its own intellectual property industries. Local creators need to be rewarded economically and must be assured that there will be protection for their creations. Further, local entrepreneurs in developing countries must have some assurance that their efforts and investments will be defended from those who would exploit them without compensation. In short, creators must feel that if they are successful, they will be able to earn a living from their endeavors.

After lengthly meetings and much debate, the participants at the Cotonou conference were able to draft a report and to adopt a declaration that may reduce piracy and unauthorized performance of music in West

Africa. The declaration calls for the creation of national intellectual property commissions and for the creation of independent collection societies that would license music to broadcasters and collect royalties. It remains to be seen whether the conference participants will be able to convince their respective governments about the importance of eradicating piracy. Many countries in Africa already have adequate copyright laws. The key is whether these laws are sufficiently enforced, through both civil and criminal penalties, and whether countries in the region will agree to adopt regulations concerning border controls to keep infringing materials from going from one nation to another.

***Karl F. Jorda** is the David Rines Professor of Intellectual Property Law and Industrial Innovation at the Franklin Pierce Law Center in Concord, New Hampshire. He gave a series of lectures in Pakistan in 1997 on the economic benefits of intellectual property protection.*

When I visited Pakistan I had the opportunity to speak before a variety of business and legal groups, to give a series of media interviews, and to visit law firms, publishers, and the Pakistani patent, trademark, and copyright offices.

Over the years, I have come to some basic conclusions about the role of intellectual property rights, and I tried to convey some of these observations to my audiences in Pakistan.

An effective intellectual property system is indispensable to technological and cultural development — which is in turn indispensable to economic growth and social welfare. For that reason, intellectual property protection should be part of a country's infrastructure from the beginning rather than postponed until a country has reached a more advanced state of development. Intellectual property rights benefit more than just foreign corporations; they can benefit citizens in any given country. After all, there is genius and creativity everywhere that needs nurturing.

There is also a strong correlation between the quantity of investments a country can generate and the quality of its intellectual property systems. Technology transfer, licensing, and investment are much easier to bring into fruition when strong patent and copyright protections are in place.

Several of the groups I addressed in Pakistan were skeptical. Some argued that the degree of commitment to intellectual property rights in any country should be commensurate with a country's degree of economic development. Others claimed that stronger intellectual property laws would restrict the access of millions of poor people to needed medicines. One newspaper reported on a speech I gave in Lahore by suggesting that "the protection of intellectual property rights was a matter of greater concern for the developed world than the protection of basic rights," which was certainly not the message that I was carrying.

However, the realization that inadequate intellectual property protection has negative effects on Pakistan's economic development is beginning to set in. One chief executive officer at an Islamabad record firm described to me how pirating was driving local recording companies and publishers out of business. The number of employees in his firm had dropped from 400 to just 11; another company had recently folded up completely.

Among the problems Pakistan faces in upgrading its intellectual property protection are understaffed and underfinanced government intellectual property agencies, a lack of teaching on the subject in universities, and a cumbersome judicial system that passes down rather nominal damage awards and penalties for pirating. Yet a number of people I met with felt that the climate for intellectual property protection was improving. They pointed to better laws being enacted, more anti-piracy raids, and a greater consciousness in government circles of the importance of intellectual property in fostering economic development and foreign investment.

***Salli A. Swartz** is a practicing attorney specializing in intellectual property law with the firm of Masson, Pieron, Swartz, Beaucourt & Associes in Paris. She visited Madagascar in 1997.*

While I was in Madagascar, I conducted a series of seminars, workshops, and talks on intellectual property issues. I met with a wide spectrum of Malagasy, including govenment officials, journalists, TV and radio executives, business people, and attorneys. I also distributed hundreds of pages of documents as well as the forms required for royalty payments.

I wanted to learn as much as I could about the situation there so that I could offer my different audiences a working concept of intellectual property rights and help

them find practical solutions to the problems they were facing. While Madagascar has, on paper, one of the most complete intellectual property laws I have ever reviewed, along with an established government office for the protection of artists' rights, there remains a certain level of misunderstanding concerning the concept of ownership of intellectual property rights and the corresponding obligation to obtain authorization and remit payment for the use of music and movie rights. During radio and television interviews, the first question I was invariably asked was "What are intellectual property rights?"

I was particularly interested in finding out more about the problems Madagascar was having in enforcing its intellectual property laws, since it became increasingly apparent as my visit progressed that the major problem in respect to intellectual property in Madagascar was enforcement. From what I was told, infractions occurred almost daily in both the public and private sectors.

For example, I learned that certain television stations often purchased videos of well-known American or French movies and played them over the air. An attorney who represented one private television station stated that he was unaware of the obligation to pay royalties and indicated that he did not know to whom such royalties should be paid and how to pay them. I discovered that Madagascar has no movie theaters, and as a result, videotapes of popular movies are often shown in public places. One person I met expressed the concern that if royalties had to be paid, the public videotape showings would stop and children instead would go unattended in the street. Another attorney explained that many judges were unaware of the country's intellectual property law. Even when they were alerted to the law's contents, they hesitated to apply it.

The government officials with whom I spoke appeared to be aware of these violations but were somewhat frustrated by their inability to do anything about the situation. One complicating factor they cited was the frequent turnover among ministers, which made it more difficult to enact the enabling legislation that these officials deemed necessary to enforce the law. I disagreed with the necessity of putting more legislation into place before taking other positive steps, but I also came to recognize that changing political leadership could indeed complicate effective enforcement.

When I addressed my audiences in Madagascar, I made the point that intellectual property violations damaged the country's economic standing. Yet since the country's economy faced a whole host of urgent challenges, it was difficult to convince the government officials with whom I spoke of the urgency of taking steps to ensure the enforcement of intellectual property rights. Understandably, many of these officials were focused on what they felt were more pressing problems, such as education and the provision of basic infrastructure such as roads, telephones, and electricity outside the major cities.

Yet the consequences of lax intellectual property enforcement were already being felt. I was told that several Malagasy recording artists were extremely frustrated over their inability to collect royalties when their songs were played over the radio. Certain had reportedly already left Madagascar, and others were seriously considering leaving the country.

Most of the groups I addressed did seem sensitive to the argument that major pharmaceutical companies would not consider investing in Madagascar (which has a wealth of plant and animal life) if intellectual property rights were not respected. I also pointed to the loss of potential investment by clothing and other manufacturers from abroad due to the perception that intellectual property rights, such as trademarks, would not be effectively protected. And although Madagascar is a developing country, I reminded my audiences that it must live up to its international obligations under the TRIPS agreement.

After I left the country, I learned that two private radio stations had filled out the forms to pay royalties and that the Malagasy Order of Journalists was to launch an information campaign about intellectual property rights. Several months after my visit, a French joumalist sent me a note, after having visited the country on behalf of the French government, informing me that the issues I raised were still being debated publicly.

Steven Robinson *is an intellectual property attorney based in New York City. He spent a month in Vietnam in 1998, where he presented a series of lectures and seminars to law school faculty and students, the business community, economists, and government officials.*

Vietnam, in the area of intellectual property rights and in many others areas, is the mass of contradictions I had been told to expect. Still, it was impossible for me to

come out of this smart, friendly, and industrious country without optimism for it.

The current environment for intellectual property and information law inVietnam is, basically, a demonstration on the national level of why intellectual property rights are also referred to generically as "economic rights." A growing number of entrepreneurs owe their success, in part, to the adoption and use of trademarks, which are legally protected under the law of Vietnam. But infringements of successful and well-known marks are rampant, and enforcement is lacking. There is also a growing software industry in Vietnam. Yet despite legal protection for copyrights in software and in other works, pirated software is everywhere.

One is often told that Vietnam is different and that principles of intellectual property rights that have served the development of other national economies are inapplicable here. But the observation is misleading, and for large sections of the economy, simply untrue.

First, it is worthwhile looking to La Vie, the established brand leader in Vietnam for bottled water and the ongoing target of multiple, flagrant infringements of its trademark and trade dress. In the North, where infringing bottles are ubiquitous, anyone asking for a bottle of La Vie is likely to be given a bottle labeled La Vi, Le Vile, Le Vu, La Vio Le, or the better known La Ville and La Villa, all of which sport carefully detailed imitations of La Vie's label design and bottle decoration. In a class of about 100 law students I taught in mid-April, the entire class, without exception, had at one time or another been sold a bottle of water that infringed La Vie's trademark, trade dress, or both.

La Vie became the market leader because it meets or exceeds the requirements for water purity set by the government of Vietnam. The company places an analysis of the mineral content on the side panel of its bottle. Its competitors are not so detail oriented. Despite the company's ongoing, well-publicized efforts, the enforcement of La Vie's trademark rights has been spotty at best, and often the same group of infringers who stop using one imitation of La Vie will simply start up again using another. As trademark attorneys everywhere will attest, there is nothing like success to inspire infringement. But in this case, the frequency of confusing imitation is not simply a matter of measuring damages for trademark infringement; there are additional, important public health considerations and related public costs.

A second example is a Ho Chi Minh City software developer whose company launched its first mass market application, a Vietnamese language product, and sold 5,000 copies. The CEO also estimates that there are 60,000 pirated copies of the program in circulation in Vietnam. The copyright interest in software, as well as in other forms of work typically protected by copyright, exists under the law of Vietnam. But again, enforcement is lacking.

On this basis, the case for optimism about intellectual property rights in Vietnam may not be obvious. However, these examples show that economic forces that support wider recognition and respect for intellectual property are at work in Vietnam. Notwithstanding an ineffective enforcement environment, La Vie has been able to establish national recognition for its brand of bottled water. Consumers now routinely rely on the La Vie name in making purchasing decisions. In the second case, so many people were willing to pay more for an authorized copy of domestically produced software that the developer could break even, even in the face of widespread piracy.

Enforcement of intellectual property has lagged because it is only now becoming a priority. Less than 10 years ago, there was hunger in Vietnam, and in some areas the memory of that time remains fresh. In those days, most people's economic interests were simply too fundamental to permit considerations of intellectual property rights to be a factor. A sale, any sale, whether of a genuine brand name item or a counterfeit, of an authorized copy of software or a pirated version meant food for a family. Simply put, in a subsistence economy, intellectual property rights are a luxury.

But that time is now history. Today, Vietnam is one of the largest exporters of rice in the world. In such a climate, intellectual property rights are increasingly recognized as important and, for some, as essential tools for continued development.

In 1996, Vietnam instituted a new Civil Code that provides substantial protections for intellectual property rights. In June 1997, Vietnam signed a bilateral copyright agreement with the United States in which it promised to recognize the rights of copyright owners from the United States whose works were published or distributed in

Vietnam. The basic intellectual property rights are now in place, and there is general recognition that Vietnam's next set of intellectual property challenges lies in enforcement.

Substantial reform is needed. Right holders must be assured that there is a regular mechanism, whether through administrative agencies, the courts, or both, to enjoin infringements and award damages, and to resolve ownership disputes and other matters. At present, the press describes officials dealing with infringements as "requesting" that the offending activity cease. Effective enforcement will begin as soon as these "requests" are replaced with lawful orders from the proper authorities requiring that intellectual property rights violations stop on pain of meaningful civil, criminal, and administrative penalties.

The incentive to undertake such reforms seems likely to develop as the consumer goods, media, entertainment, and publishing industries grow and make a greater contribution to Vietnam's economy. In 1994, the courts of Vietnam issued their first judgment ever in favor of a copyright infringement plaintiff, a Ho Chi Minh City composer, arranger, and performer, and the court awarded damages. By the standards of developed economies, the damages were negligible, but a precedent was set. In short, now that intellectual property rights are having greater economic impact, there is reason to think that a consensus for the political, administrative, and legal reforms necessary to improve enforcement will grow. In the programs I taught, participants asked more questions about how the government's enforcement efforts could be improved than about any other single topic.

In sum, Vietnamese experience with intellectual property is beginning to look like that of other market economies. That is good news, because it means that Vietnam can draw on the experience of other countries in developing its system of intellectual property rights protection and enforcement. It also means that the lessons learned in the development of Vietnam's intellectual property rights infrastructure may provide important insights as to how and when this vital area of law can play a part in the economic development of other countries. ❑

❑ THE U.S. SPECIAL 301 PROCESS

"Special 301" is the part of U.S. trade law that requires the U.S. Trade Representative (USTR) to identify countries that deny adequate and effective protection for intellectual property rights (IPR) or that deny fair and equitable market access for U.S. persons who rely on IPR. Once "identified," the country could face bilateral U.S. trade sanctions if changes are not made to address U.S. concerns.

Under Special 301, countries that have the most onerous or egregious acts, policies, or practices, or whose acts, policies, or practices have the greatest adverse impact (actual or potential) on relevant U.S. products and are not engaged in good faith negotiations to address these problems, must be identified as "priority foreign countries."

USTR must decide which countries to identify each year in a Special 301 review that is issued within 30 days after the release of the United States' annual National Trade Estimate Report, generally done around March 31. If a trading partner is identified as a priority foreign country, USTR must decide within the following 30 days whether to initiate an investigation of those acts, policies, and practices that were the basis for the identification.

Within six months of the date that the investigation is initiated, USTR must determine — after investigation and consultations — if the circumstances that prompted the original action still exist. If the determination is affirmative, then USTR must decide what action, if any, to take. The actions can include bilateral trade sanctions under Section 301 of the Trade Act of 1974. The deadline for making this determination can be extended to nine months from the date of initiation if USTR decides that complex or complicated issues are involved or if substantial progress is being made.

USTR maintains separate categories for countries about which the United States has concerns regarding IPR protection, but that either no longer merit priority status or that have not been so designated. Countries with practices that have less of an impact but that are still very serious are placed on a "priority watch list." These countries are the focus of increased bilateral discussions concerning the problem areas.

USTR uses a separate "watch list" for countries about which the United States has concerns regarding the pace of progress in implementing IPR protection and providing comparable market access for U.S. products. There is also an "other observations" category for countries having practices that concern USTR enough to mention them in the annual review report.

In the USTR annual Special 301 review, countries can be moved up to priority status or moved to a different list or completely removed from the lists.

Out-of-cycle reviews can be, and often are, conducted at any time during the year. These reviews are the same as the regular annual review: Priority foreign countries are identified, and other countries can be added or removed from the watch lists.

On May 1, 1998, USTR announced that, as a result of the annual Special 301 review, 14 countries and the European Union were placed on the priority watch list, and 30 countries and the Hong Kong Special Administrative Region were designated for the watch list. Seventeen other countries were cited under the "other observations" category.

USTR also announced that the Section 301 investigation of Paraguay, begun when that country was identified as a priority foreign country in January 1998, will continue. Additionally, it announced that the United States will initiate dispute settlement actions within the World Trade Organization (WTO) against Greece and the European Community because of piracy of U.S. television programs and films. This is the 10th time the United States has taken an IPR-related dispute to the WTO.

USTR further stated that it will monitor China's compliance with bilateral IPR agreements. Since China is not yet a WTO member, USTR may move directly to trade sanctions if there is a slippage in China's enforcement of bilateral agreements. ❑

❑ LEGISLATION ON INTELLECTUAL PROPERTY BEFORE THE U.S. CONGRESS

The issues of copyright protection on the Internet and extension of the "fair use" of copyrighted materials figure prominently in intellectual property rights legislation working through the U.S. Congress this session.

Various bills would give immunity from copyright infringement suits to providers of Internet and on-line services, redefine how libraries and archives can make copies of copyrighted works, and change laws governing what constitutes infringement in the reception of musical performance broadcasts.

The balance between protecting the creators of copyrighted content on the Internet and assuring that on-line services are not hampered by fears of lawsuits was addressed in a bill introduced by Senator John Ashcroft of Missouri. That bill would have amended U.S. copyright law so that people or groups that provide Internet and on-line services without exercising control over the content would be protected from liability in the case of copyright infringements by persons who buy and make use of the services.

The copyright liability protections provisions that Ashcroft proposed were incorporated into a larger bill reported by the Senate Judiciary Committee to the full Senate at the end of April.

These provisions set forth "safe harbors" from liability for both Internet service providers and on-line service providers under clearly defined circumstances that both encourage responsible behavior and protect intellectual property rights, said Senator Patrick Leahy of Vermont, one of the provision's supporters. Leahy is the ranking Democratic member of the Senate Judiciary Committee.

The bill, entitled the Digital Millennium Copyright Act of 1998, also contains provisions granting certain immunities when copies are made by libraries and archives. The bill would exempt a library from having to pay money damages in copyright infringement suits "if it was not aware and had no reason to believe that its acts constituted a violation," said Leahy in a May 5 speech on the Senate floor. It would also grant other special conditions, including allowing qualified libraries and archives to preserve digital works. The bill would also replace current law that restricts libraries to making a single photocopy for preservation or replacement purposes. The new law would allow up to three versions in any format — including digital form.

As of May 12, the legislation had not yet been voted on by the full Senate. Similar legislation has not yet been acted on in the House of Representatives. To become law, all legislation must be passed by both chambers, then signed into law by the president.

Another piece of legislation, which extends "fair use" exemptions for use of copyrighted materials, is the Fairness in Musical Licensing Act of 1997. This legislation was passed in the House of Representatives in March as part of the Copyright Term Extension Act.

This legislation excludes from copyright infringement laws the reception of transmissions of nondramatic musical works under certain specific circumstances.

The legislation stipulates that the reception of a broadcast, cable, satellite, or other transmission of "a performance or display of a nondramatic musical work" is not a copyright infringement, unless an admission fee is charged to see the performance or display, or the transmission is not property licensed.

The original bill had sought to expand the infringement exemption if the music is heard at agricultural or horticultural fairs, exhibits, in a commercial establishment when the purpose is to promote audio, video, or other devices; and at organized children's camp if the children sing, dance, or participate in all or a portion of such work. The language finally included in the bill that passed the House and was sent to the Senate, however, instead merely stipulated that the rooms where the transmission is intended to be received must not exceed 3,500 square feet (325.5 square meters).

The American Society of Composers, Authors, and Publishers, an industry group, has called the bill "a threat

to the entire American music community." If passed, the bill would mean "we would not be paid when our music is played in bars, restaurants, and many retail stores." The Senate has not acted on the Fairness in Musical Licensing Act.

Other legislation pending in the Congress are the bills to implement U.S. participation in the World Intellectual Property Organization (WIPO) treaties concluded in December 1996. In the Senate, the Digital Millennium Copyright Act contains the provisions to implement the two treaties, the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty. In the House of Representatives, similar legislation to implement the treaties has been reported to the House floor.

Other intellectual property issues are being considered by the Congress, including the issue of domain names. Senator Leahy has introduced legislation to fund a comprehensive study by the National Research Council to explore ways to improve the Internet's domain-naming system. A recommendation by the U.S. Commerce Department to add new top-level domain names would be one focus of the study. "The addition of new generic top-level domain names would allow more competition and more individuals and businesses to secure addresses that more closely reflect their names and functions," Leahy observed. "But many firms understandably are concerned that the proliferation of generic top-level domain names may make the job of protecting their trademarks from infringement or dilution more difficult." ❑

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Washington, D.C. 20506 U.S.A.
Telephone: (202) 586-8800
http://www.ustr.gov

U.S. Department of Commerce
Patent and Trademark Office
Office of Legislative and International Affairs
Crystal Park
Arlington, Virgina 22202 U.S.A.
Telephone: (703) 305-9300
http://www.uspto.gov

U.S. Department of State
Bureau of Economic and Business Affairs
Office of Trade Policy and Programs
2201 C Street, N.W.
Washington, D.C. 20520 U.S.A.
Telephone: (202) 647-1310
http://www.state.gov/www/issues/economic

U.S. Library of Congress
United States Copyright Office
101 Independence Ave., S.E.
Washington, D.C. 20540 U.S.A.
Telephone: (202) 707-8350
http://lcweb.loc.gov/copyright

OTHER KEY INTERNET SITES

U.S. House of Representatives
Internet Law Library
http://law.house.gov

World Trade Organization (WTO)
http://www.wto.org/wto/intellec/intellec.htm

World Intellectual Property Organization (WIPO)
http://www.wipo.org/eng/newindex/index.htm

Intellectual Property Reference Library Reference Collection
Government Agencies World Wide
http://www.servtech.com/~mbobb/ref_govt.htm

Franklin Pierce Law Center
Intellectual Property Web Pointers
http://www.fplc.edu/pointbox.htm

Intellectual Property Law Society, Temple University
http://www.temple.edu/ipls

Harvard Information Infrastructure Project
http://www.ksg.harvard.edu/iip

Center for Advanced Study and Research on Intellectual Property, University of Washington
http://www.law.washington.edu/~casrip

Copyright and Fair Use, Stanford University Libraries
http://fairuse.stanford.edu/

Hal R. Varian's "The Information Economy" Web site
http://www.sims.berkeley.edu/resources/infoecon/Intellectual_Property.html#general

International Intellectual Property Alliance
http://www.iipa.com

Business Software Alliance
http://www.bsa.org

Electronic Frontier Foundation
http://www.eff.org/pub/Intellectual_property

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GLOSSARY OF INTELLECTUAL PROPERTY TERMS

Berne Convention: The 1886 multinational treaty on copyright protection signed at Berne, Switzerland; officially titled The International Union for the Protection of Literary and Artistic Works. Prior to the 1996 World Intellectual Property Organization (WIPO) Conference, the Berne Convention was revised in 1914, 1928, 1948, 1967, and 1971. The convention grants the moral rights of attribution and integrity, and certain exclusive economic rights to a work's translation, reproduction, performance, and adaptation. The United States became a signatory to the Berne Convention in 1989.

Copyright: An exclusive right conferred by a government on the creator of original literary or artistic works such as books, articles, drawings, photographs, musical compositions, recordings, films, and computer programs. International in scope, copyright grants the creator reproduction, derivation, distribution, performance, and display rights. The Berne Convention mandates that the period of copyright protection cover the life of the author plus 50 years. Current U.S. copyright law is based on the Copyright Act of 1976 and its amendments.

Domain Names: The names and words that companies designate for their registered Internet Web site addresses, such as the "Forbes" name in the URL http://www.forbes.com. Trademark disputes arise when more than one company tries to use the same domain name, or one company appropriates another company's brand or product name for its URL.

Electronic Copyright Management Systems: Digital technology that controls access to electronic information, in order to protect the intellectual property rights of content owners. A variety of electronic copyright management systems are being developed, including marking technologies — watermarking, fingerprinting, and data hiding — that ensure the user's legal authorization, serial copy management systems embedded in digital recorders that determine whether a digital audio tape is copyright protected, and new secure marketing and distribution strategies.

Fair Use: Codified in the 1976 U.S. Copyright Law and frequently used by scholars, journalists, and librarians, the fair use provision permits the limited use of copyrighted scientific and artistic material to supplement or briefly illustrate oral or written commentary, literary or artistic criticism, or teaching materials. In determining that a use is fair, four factors must be considered: (1) the purpose and character of the use — whether it is commercial or nonprofit; (2) the nature of the copyrighted material; (3) the amount of the total work used; and (4) the effect of the use upon the potential market — whether or not the author is deprived of sales.

Intellectual Property: Creative ideas and expressions of the human mind that possess commercial value and receive the legal protection of a property right. The major legal mechanisms for protecting intellectual property rights are copyrights, patents, and trademarks. Intellectual property rights enable owners to select who may access and use their property, and to protect it from unauthorized use.

1996 WIPO Diplomatic Conference: The December 1996, 18-day World Intellectual Property Organization summit held in Geneva, whose goal was to revise the Berne Convention. Conference delegates drafted two treaties — the WIPO Copyright Treaty, which covers literary and artistic works including films and computer software, and the WIPO Performances and Phonograms Treaty, which covers recorded music. Each treaty, if ratified by the individual member countries, will grant copyright owners protection for distributing their work in digital form. The Performances and Phonograms Treaty is the first global agreement to protect the rights of recording artists and producers against digital piracy of their works.

Patent: A legal grant issued by a government permitting an inventor to exclude others from making, using, or selling a claimed invention during the patent's term. The TRIPS Agreement mandates that the term for patent applications filed after June 7, 1995, runs 20 years from the filing date. To receive patent protection, an invention must display patentable subject matter (a process, machine, or article of manufacture), originality, novelty,

nonobviousness, and utility. Current U.S. law is based on the 1952 Patent Code. As a signatory to the 1883 Paris Convention for the Protection of Industrial Property, the United States belongs to the premier international patent treaty organization, the Paris Union.

Patent Cooperation Treaty: A multilateral treaty among more than 50 nations that is designed to simplify the process of an applicant's seeking a patent on the same invention in more than one nation. Administered by the World Intellectual Property Organization and effective since 1978, the Patent Cooperation Treaty enables an inventor to file a single international application in addition to the main patent application filed in a treaty-member country.

Trademark: A name or symbol secured by legal registration that identifies a manufacturer's or trader's product or service and distinguishes it from other products and services. Icons, company names, brand names, and packaging can all have trademark protection. Trademark owners have the right to prevent others from using the same, or a confusingly similar mark, but cannot prevent others from making or selling the same goods under a nonconfusing mark. Current U.S. law is based on the Lanham Act of 1946. This act also incorporates the trademark obligations of the United States under the Paris Convention.

Trademark Law Treaty: An international treaty that harmonizes and simplifies the requirements and procedures for filing, registering, and renewing trademarks, and gives service marks the same legal status as trademarks. Adopted at the 1994 World Intellectual Property Organization Diplomatic Conference in Geneva, the treaty has entered into force. Currently, the United States Senate has not yet ratified the Trademark Law Treaty.

TRIPS Agreement: International rules governing the Trade-Related Aspects of Intellectual Property Rights (TRIPS), formulated at the December 1993 Uruguay Round of GATT. All GATT member-countries agreed to rewrite their national laws to conform to internationally agreed norms for protecting patents, trademarks, copyrights, industrial designs, and trade secrets. The TRIPS agreement also extended protection to such technological areas as pharmaceutical products and computer software, which were previously unprotected in many countries. The general timetable for implementing the TRIPS agreement, which entered into force on July 1, 1995, is one year for industrialized countries; five years for developing countries and countries shifting from centrally planned economies; and 11 years for least-developed countries.

WIPO (World Intellectual Property Organization): A Geneva-based specialized agency of the United Nations, created in 1967, that promotes international cooperation in intellectual property protection. WIPO administers various "Unions," including the Paris Union and the Berne Union, and other treaty organizations founded on multilateral treaties. The organization also creates model laws for adoption by developing nations. More than 160 countries are WIPO members. ❑