

that they have their constitutional court decisions, statutes and other legal materials in English and in Slovenian. I think that represents the best of the brave new world.

Professor D'AMATO: Thank you. You know, in the past, nations have tried to use their power to get their views of international law accepted in the world. But why use force, when being transparent can spread your legal culture to other countries? We hope that governments continue to realize that we all benefit from the practices you have described.

THE PROBLEM OF DEVELOPING AN INTERNATIONAL PROTECTION STANDARD IN TODAY'S MULTICULTURAL, ECONOMICALLY DIVERSE, GLOBAL MARKETPLACE

*By Doris Estelle Long**

I think the other members of the panel have done a good job of outlining some of the issues that are raised in the international arena by the emerging technologies—the concerns about what type of protection should be applied, what standards we should develop and their economic impact. I want to talk more about the difficulty in developing standards and some of the factors that the international community will have to deal with as it tries to structure an acceptable standard for the protection of technology.

“Technology” can be defined in a wide variety of ways: computer hardware, software and firmware; digital enhancement capabilities; robotics; and any number of scientific and technological advances in industry, health and/or medicine. At the heart of the definition of “technology” lie two closely related concepts: information which has a certain value because it is in some way new and useful; and expressions in which this new and useful information may be embodied.

I should note that my use of the terms “new and useful” is not intended to be used solely in the narrow sense of a patentable invention. It simply signifies information that is “useful” in a previously undiscovered manner.

We live in the age of technology; personal computers, digital, radio, CD-ROMs, the Global Information Superhighway and automation in every shape and form imaginable are part of the lifestyle of the developed nations and are becoming part of the lifestyle (if somewhat more slowly) of the developing nations. Such technology has not only had a vast impact on the lives of the people for whom it has been available, it has served to shrink the world. Using the Internet, I can exchange e-mail, access databases and share information with countries I may never have the opportunity to visit—and I can do it on an almost instantaneous basis.

If you equate technology with information and you agree that in today's global economy information is *power*, it becomes undeniably clear that the decision to protect technology through the development of an international protection standard raises issues that may profoundly impact a country's economic, political and cultural milieu.

The effort to develop an international standard for the protection of technology is not a new one. As I tell my students, the history of copyright—which I will define as an intellectual property right that protects expression—is the history of the expansion of law to protect technology. From the development of photography, to sound recordings, to motion pictures, to computer software and the intricacies of the Global Information Superhighway, the history of U.S. copyright has been the history of the law's struggle and expansion to cover the unique problems posed by each advance in technology.

The explosion of the information age—including perhaps most significantly the development of personal computers and their networking through the Global Information Super-

* John Marshall Law School.

highway—in conjunction with the increasing globalization of the marketplace has added renewed impetus to the need to develop some type of international protection standard for technology. Because of the unique relationship between technology and intellectual property laws—which I define as laws protecting trademarks, copyrights, patents and trade secrets—one major focus has been the development of international standards for the protection of intellectual property.

An attempt to develop international standards for the protection of intellectual property is not a new phenomenon. At the turn of the nineteenth century, two major conventions were established which dealt with the international protection of international property rights. The first, the Berne Convention for Protection of Literary and Artistic Works, established minimum substantive standards for the protection of copyrighted works. The Berne Convention, still in existence today and currently administered by the World Intellectual Property Organization, has been the subject of heated debate because it does not expressly cover “computer software or databases” within its enumerated categories of protected works—a problem resolved in part by the TRIPS Agreement.

The second early attempt to establish international standards for intellectual property protection was the Paris Convention for Industrial Property. Like the Berne Convention, the Paris Convention also attempted to establish minimum substantive standards for intellectual property—in this case patents, trademarks and utility designs.

The continuing recognition of the economic role that technology and intellectual property rights play in the industrial and commercial development of a country has helped focus attention on the need to reach agreed-upon standards for the protection of intellectual property on an international basis. The negotiation of the TRIPS Agreement, the increasing attempts to standardize domestic laws through harmonization directives, the continuing efforts to develop uniform registration standards through various treaty regimes, all underscore the efforts of the intellectual community to develop standards of protection for technology and other intellectual property protected works at an international level.

Instead of debating the effectiveness of prior efforts or predicting the course of future events, I would like to focus on a few factors that have informed the debate to date over international protection standards for technology and that will continue to have an impact on the ability to develop effective international standards in the future.

The first factor must necessarily be the economic impact that the protection of technology has on a particular country. Few countries, if any, act for reasons other than their own self-interest where economic or trade issues are concerned. As has been amply demonstrated by other members of this panel, the protection or failure to protect technology is perceived as having a profound impact on a country’s ability to compete in the global marketplace. During the Uruguay Round negotiations, the issue of the scope of protection to be afforded copyrighted works—including computer programs and databases—was hotly contested. Developing countries generally do not possess a large body of copyrighted technological works created by their own authors that can be distributed internationally. In the absence of sufficient nationally created technology, such nations often use the protected intellectual property rights of other nations to aid in their internal economic growth. Even the United States, in its early days, used the works of foreign authors to feed the voracious needs of its publishing industry—works that U.S. copyright laws did not protect.

Attempts to restrict a nation’s internal access to technology through the enactment of intellectual protection norms are seen by many developing countries as a direct threat to their ability to play a significant role in the world economy. Phrases such as “common heritage of mankind” and “public policy” are used to reflect the perceived economic desirability of unfettered use of another’s technology.

By contrast, those countries that own and/or export technology are challenged by the

direct economic impact that unlicensed and uncompensated use of such technology has on what such countries perceive as legitimate markets for their products.

The often rancorous debates between developed and developing countries during the TRIPS negotiations regarding the desirability of protection for technology reflects the continuing role that economics will play in the development of acceptable standards for international protection.

The second factor that will continue to play a role in efforts to set standards for international protection of technology is culture—including the structure of a nation's political and legal institutions, the value placed upon ideas, and the use and dissemination of ideas by the culture in question. To state the obvious, we are not a single-culture world. Given the strong relationship between technology, ideas and expression, the value placed on the dissemination and use of ideas, and the proprietary nature of such ideas, can have a profound effect on whether a country supports on a practical basis the protection of the technology of others from unauthorized, uncompensated uses.

In an interesting examination of the impact of culture on current efforts to enforce intellectual property rights in China, William Alford, in his work *To Steal a Book Is an Elegant Offense*, makes a strong case for the view that part of the problem with enforcing technology rights in China is the strength in Chinese culture of the Confucian view that information should be shared without concern for compensation. Similarly, certain tribal cultures, such as the Maori in New Zealand, have a community view of property and information that does not readily translate to the individual proprietorship view of technology that underlies much of the Western European and U.S. approach to the protection of technology.

Cultural diversity in the protection of technology rights is not limited to North–South divisions—between developed “Western” and undeveloped “Third World” nations. Even between developed countries, differences in the philosophical basis for the protection of intellectual property and technology rights can result in markedly different treatment. For example, most common law countries, including the United States and Great Britain, follow a Lockean economic property view of intellectual property law, which emphasizes economic return and incentives. By contrast, continental Western European nations—and even some Eastern European and newly emerging CIS countries—follow a Hegelian view, which places authorship at the center of protection. The creative “spark” represented by an author's personality is protected by theories such as “moral rights”—which can have a strong impact on a third party's ability to modify protected software or firmware.

Even when international standards are established under TRIPS or the Berne and Paris Conventions, the ability to enforce those standards depends strongly on the legal institutions and the role of the rule of law in a given nation. Countries with a strong common law heritage and a relatively well-developed civil litigation system such as Great Britain and the United States rely heavily upon civil enforcement procedures in protecting intellectual property and technology rights. For example, although in the United States criminal penalties exist for the unauthorized reproduction and commercial distribution of computer software, most enforcement of software rights occurs through civil actions. By contrast, those countries with a less highly developed civil law system may use criminal sanctions more frequently to enforce technology rights under existing intellectual property laws.

The final factor that I would like to address briefly is the impact that the nature of technology itself has on the development of international standards.

The first consideration is the perceived close relationship between technology and the development of an internal industrial base that will allow underdeveloped and developing countries to compete in the global marketplace. Not without a degree of merit are claims that perceived restrictions on the ability to utilize such technology will affect public policy.

The second consideration is the international nature of technology itself. In instances

such as the Global Information Superhighway and direct satellite broadcasts of programs, acts in one country may have a direct impact on the right of foreign intellectual property owners.

For example, the United States is even now struggling with the issue of the application of its own intellectual property laws to works transmitted on the Global Information Superhighway. Whether referred to as the Internet, the National Information Infrastructure, or the Global Information Superhighway, the development of a worldwide network of linked personal computers has had and will continue to have an enormous effect on the way information is exchanged. Many works transmitted by means of the Internet fall within the scope of protection granted to expressive works under copyright laws. The U.S. government has established a task force that is considering the interplay between the potentialities for worldwide communication, the protection of an author's legitimate rights under copyright of works that might be communicated through the Internet, and the free exchange of ideas (fair use issues) underlying such exchanges.

With its worldwide reach, the Internet poses a challenge to enforcement of intellectual property rights. I could upload (copy) onto the Internet an unauthorized copy of copyrighted software. This pirated software could be transmitted to China, downloaded there, copied and eventually sold in Eastern Europe. In each step of this parade of horrors, issues arise regarding what rights the original proprietor of the software (the copyright owner) has. Without international standards, an owner will be at the mercy of vague and ever-changing domestic laws.

Despite my (admittedly abbreviated) list of factors that will continue to have an impact on efforts to develop international standards for the protection of technology rights, I do not mean to suggest that the development of an acceptable international standard is an impossible task. To the contrary, nations can work together to reach at least the beginning of a consensus on what acceptable standards should be.

What I do want to suggest is that the development of a truly international standard for the protection of technology rights will require a continuing appreciation of, and sensitivity to, the economic, philosophical and cultural diversity of the world. I think that agreed-upon standards can be achieved, but only where such standards coincide with the culture and history of a country. The problem of the enforcement of intellectual property rights in many Third World countries arises in large part from the disalignment of Western views of intellectual property rights with the culture, history and legal traditions of the developing and emerging marketplace countries. This disalignment can be overcome if cultural differences are absorbed into the standards.

I would like to give one brief example arising from a problem that the United States has faced in harmonizing its own laws with those of another country. Article 6bis of the Berne Convention requires protection of an author's noneconomic ("moral") rights. Briefly, these rights reside in the author as a result of the act of creation and include the right to control any adaptations of the work. Continental countries have moral rights protection as a result of their philosophical founding of copyright law in the Hegelian personality-rights school of philosophy. The U.S. law, as I noted earlier, is firmly based on Lockean economic rights. Efforts to impose moral rights on the U.S. copyright system were largely unsuccessful. Nevertheless, a type of moral rights existed under U.S. trademark law. As a market economy, the United States could begin to fit the idea of moral rights into its legal protection system—not by imposing it directly on a copyright system that was not designed to recognize such rights, but by finding a basis in another category of law from which to begin to build a consensus: trademark and false advertising law. Over time, the concept of moral rights has been accepted in the United States so that revisions are being made to the U.S. copyright law to reflect this new acceptance. (The

adoption of the Visual Artists Rights Act¹ is an example of this change.) This same approach of finding ways to make foreign concepts fit within culturally diverse systems could be used to help develop and strengthen international standards for technology in the future.

In conclusion, the technological advances that are driving the push toward development of an agreed-upon standard for the international protection of technology under intellectual property laws will only continue. The challenge is for the international community to continue to develop consensus-based approaches that acknowledge the cultural diversity of the international community.

Professor D'AMATO: Let me ask you how much of a cultural relativist you really are. Suppose Walt Disney says: we have a new cartoon, but would like to be paid for it to cover production costs. Some country says it does not believe in paying for things like that. It believes that all this information should be shared. Do you think that those are two equally correct points of view, or would you take sides?

Professor LONG: I have less of a problem with cultural relativism when talking about technology, because I believe technology and computer software programs lead to industrialization. Since I have been in private practice and have represented a lot of copyright owners, I feel a certain degree of sympathy for the person who created the copyrighted work and is not getting paid for it.

I was told that a month before Windows '95 came out that in Moscow you could buy it for four dollars. Let's assume that it's the same program. My version of Windows '95 cost me a lot more than that. The question raised by someone who had bought the program in Moscow was, "Why should I pay more money?" The only response I could make is that at some point, the well runs dry. If we don't provide sufficient economic returns, there's a possibility that people will stop developing products.

Professor WISE: I don't agree. I think it does come down to cultural beliefs and values. I believe that human beings will create things whether we give them an economic incentive or not.

Professor D'AMATO: The starving artist theory.

Professor WISE: I am a big proponent of the starving artist theory. I think that one of the things driving this is the fact that the useful product life of a lot of information is so short that copyright law will never catch up to it. By the time that an enforcement mechanism gets around to Windows '95, it will be too late. At that point, no one will care that they copyrighted it.

Professor REICHMAN: I have a number of comments on the remarks that have been made. First let me discuss the new economics of information technology. I believe that efforts to protect what I call legal hybrids with modified patent and copyright principles are dead wrong. Those efforts use an exclusive property right when we should be using a default liability regime, one that performs the procompetitive economic functions of classical trade-secret law even in the absence of legal or actual secrecy. Where the nineteenth-century intellectual property system breaks down is not in the doctrinal logic of patents and copyrights, which work perfectly well with regard to their historical objects of protection, but in the classical trade-secret realm, which undergirds free competition. In other words, we depend on trade-secret laws to provide investors in subpatentable innovation with natural lead time, but under modern conditions, there is a chronic shortage of lead time because applied scientific know-how is embodied on the face of mass-produced products. Rather than reverse engineer the process from which the product derives, as trade-secret law requires, second comers may simply duplicate the innovator's applied

¹ 17 USC §106A.

know-how and capture the market with no corresponding investment in research and development.

Data structures and information technologies do not fit under trade-secret laws. But if you look at the economic side of trade-secret law, you will find that it is really a default liability regime. While innovator A can enjoin second comer B from appropriating his know-how by dishonest means—say, industrial espionage, he or she can never enjoin second comers C, D and E from reverse engineering by honest means. However, it is an imperfect regime, since it makes secrecy important—and secrecy is arbitrary, irrelevant, and has nothing to do with social value.

We need to modernize the economics of classical trade-secret law and devise a default liability regime for information technologies that would give the innovator a short period of artificial lead time with respect to “clones.” Then, after two or three years, we should open up the information to anyone who wants to use it, in return for a voluntary or involuntary contribution to the cost of compilation or research and development.¹ You cannot have a world of free-riders. If users do not contribute, innovators stop producing and we end up with oligopolists. I think that is also the correct solution to the non-copyrightable components of the computer program.² We need a general purpose innovation law built on modified liability principles, not more exclusive property rights, and the empirical evidence suggests there will be just as much bargaining and contracting around such a liability rule as there would be in the case of an exclusive right.

Professor D'AMATO: But then you won't collect it.

Professor REICHMAN: Yes, you would. You would have to use the “collection society principle.” The government has to authorize a collection society, which would otherwise violate antitrust laws, and the relevant communities of innovators and borrowers must organize themselves around collection societies with built-in rules on dispute resolution and competition.³

Even if you disagree with my argument, I would submit that this applies to one technology—databases. The notion that we can use exclusive property rights to protect databases conflicts with our entire constitutional history. It was constitutionally illegal for a copyright to protect data. Now, we are going to put an exclusive property right on them. We are at risk if we follow the Europeans. In the European Union, publishers got hold of the original liability regime and turned it into a grotesque exclusive property right. In contrast, in the United States, virtually all raw scientific and technical data is supplied gratis by the government, a fact that is not very well known. In my view, that is why we have the world's strongest basic research establishment and the world's weakest industrial policy. We fund the data and then let private enterprise determine what uses can be made of applications of scientific discoveries. This database directive is a direct threat to the American system of government-funded free data to scientific and technical users. I submit that we might kill the goose that lays our golden eggs if we follow the Europeans and put an exclusive property right on data.

Now let me discuss security and the Internet. These are puzzling questions which should be examined disinterestedly in high-level debate rather than leaving it all to backroom deals. If there is poor security on the Internet, nothing worthwhile will be transmitted because people will not put information on the system. On the other hand, the USPTO proposal to use encryption and make it a world crime to de-encrypt and decode has a

¹ See *supra* note 19.

² See Samuelson *et al.*, *Manifesto*, *supra* note 5, at 2426–29.

³ See Reichman, *Legal Hybrids*, *supra* note 19, at 2555–57.