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EVOLVING INTELLECTUAL PROPERTY PROTECTION IN THE WORLD: PROMISES AND LIMITATIONS

ARTICLE

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I. INTRODUCTION

AT NO OTHER TIME IN ECONOMIC HISTORY HAVE COUNTRIES BEEN MORE economically interdependent than they are today. Despite the current global recession since late 2008, most countries in the 21st century have not shunned globalization and are likely to continue their globalization trend. The globalization trend has been supported by the belief of firms in the efficiency of global supply chains. Even a firm that is operating in only one domestic market is not immune to the influence of economic activities external to that market. The net result of these factors has been the increased interdependence of countries and economies, increased competitiveness, and the concomitant need for firms to keep a constant watch on the international competitive and technological environment.

As the nature of value-adding activities in the world shifts more and more to information creation, manipulation, and analysis, both developed and emerging nations have started taking an increased interest in international intellectual property protection measures. Imagine a farmer in the nineteenth century headed into the twentieth century. The intrinsic value of food will not go away in the new century, but as food becomes cheaper and cheaper to produce, the share of the economy devoted to agriculture will shrink (in the United States agriculture contributes less than 3 percent to the GDP) and so will the margins for the farmer. It would be advisable to move into manufacturing, or at least into food processing, to maintain margins.

An analogous situation faces a content maker for information-related products such as software, sheet music, movies, newspapers, magazines, and education in the late-twentieth century headed into the twenty-first century. Until recently, content has always been manifested physically — first in people who knew how to do things; then in books, sheet music, records, newspapers, loose-leaf binders, and catalogs; and most recently in tapes, discs, and other electronic media. At first, information could not be *copied*: it could only be re-implemented or transferred. People could build new machines or devices that were copies of or improvements on the original; people could tell each other things and share wisdom or techniques to act upon. (Reimplementation was cumbersome and re-use did not take away from the original, but the process of building a new implementation — a new machine or a trained apprentice — took considerable time and physical resources.)

Later, with symbols, paper, and printing presses, people could copy knowledge, and it could be distributed in *fixed* media; performances could be transcribed and recreated from musical scores or scripts. Machines could be mass-produced. With such mechanical and electronic media, intellectual value could easily be reproduced, and the need (or demand from creators) to protect intellectual property arose. New laws enabled owners and creators to control the production and distribution of copies of their works. Although reproduction

was easy, it was still mostly a manufacturing process, not something an individual could do easily. It took time and money. Physical implementation contributed a substantial portion of the cost.

However, with the advent of the Information Age, firms face a new situation; not only is it easy for individuals to make duplicates of many works or to re-use their content in new works, but the physical manifestation of content is almost irrelevant. Over the Internet, any piece of electronically represented intellectual property can be almost instantly copied anywhere in the world. Since more and more of value creation in the developed nations is coming from the development and sale of such information-based intellectual property, it is no surprise that developed nations are highly interested in putting strong international intellectual property laws in place. Obviously, it is costly for corporations to protect their intellectual property, and to adjust for losses in productivity and perceived damage to corporate brand and share price. The U.S. insistence on the inclusion of provisions relating to intellectual property in the World Trade Organization's (WTO's) Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement is a direct consequence, and is understandable as cyber crime affects all parties with intellectual property. Technology-based protection of electronic information through hardware, software, or a combination thereof in the form of encryption and digital signatures has been suggested as the means of circumventing the problem of unauthorized copying.¹

Further hurdles exist for content creators with the emergence of electronic commerce (e-commerce). One is the rise of a truly efficient market for information. Content used to be *unfungible*: it was difficult to replace one item with another. But most information is not unique, though its creators like to believe so. There are now specs for content such as stock prices, search criteria, movie ratings, and classifications. In the world of software, for instance, it is becoming easier to define and create products equivalent to a standard. Unknown vendors who can guarantee functionality will squeeze the prices of the market leaders. Of course the leaders (such as Microsoft) can use almost-free content to sell ancillary products or upgrades, because they are the leaders and because they have reinvested in loyal distribution channels. The content is advertising for the dealers who resell, as well as for the vendors who create. This transformation in the form of value creation and ease of dissemination implies a jump in economic integration as nations become part of an international electronic commerce network. Not only money but also products and services will flow faster.

The other consequence of fungible content, information products, and electronic networks is an additional assault on the power of national governments to regulate international commerce. Ford uses a product design process whereby designers at Dearborn, Michigan, pass on their day's work in an electronic form to an office in Japan, which then passes the baton along to

¹ See RAVI KALAKOTA & ANDREW B. WHINSTON, *FRONTIERS OF ELECTRONIC COMMERCE* (Pearson Education 1996).

designers in Britain, who pass it back to Dearborn the next day. When the information represented in the design crosses borders, how do the governments of the United States, Japan, and Britain treat this information? How will such exchanges be regulated? Less-open societies like China and Malaysia, recognizing the power of electronic networks, are already attempting to regulate the infrastructure of and access to the electronic network.

In this article, we examine how intellectual property is protected domestically as well as internationally, and how this mechanism has been evolving in recent years. Such knowledge is important in an era of globalization as an increasing number of firms, both domestic and international, have begun to realize that intellectual resources that are valuable, rare, and difficult-to-imitate are major sources of their competitive advantage.

II. INTELLECTUAL PROPERTY PROTECTION

Intellectual property refers to “a broad collection of innovations relating to things such as works of authorship, inventions, trademarks, designs and trade secrets.”² Intellectual property rights broadly include patents, trademarks, trade secrets, and copyrights. These ideas typically involve large investments in creative and investigative work to create the product, but fairly low costs of manufacturing. As such they are amenable to being duplicated readily by imitators. Imitation reduces the potential returns that would have accrued to the innovator, thereby limiting its ability to appropriate the large investments made. With increasing movements of goods and services across borders the potential loss of revenues to innovator firms, most of which reside in industrialized countries, is significant.

Few topics in international business have attracted as much attention and discussion in recent years as intellectual property rights.³ In 2007, the Organization for Economic Cooperation and Development (OECD) released a report estimating the annual value of the international, physical trade of counterfeited consumer products at approximately \$200 billion. This amounts to about two percent of the entire world trade and surpasses the GDP of 150 countries.⁴ Apart from hurting legitimate businesses and trade, intellectual property infringement leads to the loss of government tax revenue.

Piracy is most rampant in the software industry. For example, according to the Business Software Alliance, a global anti-piracy watchdog group, 38% of the

² SUBHASH C. JAIN, *Intellectual Property Rights and International Business*, in EMERGING ISSUES IN INTERNATIONAL BUSINESS RESEARCH 37-64 (Masaaki Kotabe & Preet S. Aukakh eds., E. Elgar 2002).

³ See Clifford J. Shultz III & Bill Saporito, *Protecting Intellectual Property: Strategies and Recommendations to Deter Counterfeiting and Brand Piracy in Global Markets*, 31 COLUM. J. WORLD BUS. 18, 19-27 (1996).

⁴ See Andreas Geiger, *A View From Europe: The High Price of Counterfeiting, and Getting Real about Enforcement*, THE HILL, Apr. 30, 2008, available at <http://thehill.com/business-a-lobbying/3565-a-view-from-europe-the-high-price-of-counterfeiting-and-getting-real-about-enforcement>.

software installed in 2007 on personal computers (PCs) worldwide was obtained illegally, amounting to nearly \$60 billion in global losses due to software piracy. In percentage terms, Central/Eastern Europe topped the piracy rate at 68% of all software used, followed by Latin America at 65%, Middle East/Africa at 60%, Asia Pacific at 59%, the European Union at 35%, Western Europe at 33%, and North America at 21%.⁵ More concerning is the counterfeiting of medicines, which threatens public safety and poses a growing threat around the world.

Between 2000 and 2006, the Food and Drug Administration saw an eightfold increase in the number of new counterfeit drugs cases. In developing countries with weak regulatory systems, approximately 10 percent to 30 percent of all medicines could be counterfeit. Worldwide sales of counterfeit drugs are forecast to reach \$75 billion by 2010.⁶

Various anti-counterfeiting tools and technologies are developed by firms to aid others' anti-counterfeiting efforts, or to enhance their own. Hewlett-Packard's Specialty Printing Systems, for instance, has expanded its offerings to the pharmaceutical industry with the introduction of a new ink cartridge which allows individual capsules or tablets to be marked. Eastman Kodak Co. developed a Traceless System for anti-counterfeiting on its branded rechargeable lithium-ion digital camera batteries supplied by Sanyo Electric. With "forensically undetectable" markers put on printed materials, product packaging or product components, the system can help fighting against counterfeiting as only handheld Kodak readers can detect the markers. Also among the firms deploying this anti-counterfeiting technology are DonRuss Playoff and Liz Claiborne. However, in spite of anti-counterfeiting tools and technologies, litigation, as well as legislation that we will discuss later in this section, piracy is still rampant around the world.⁷

Now, with convenient online access, it is even more difficult to ensure that copyright rules are not violated in cyberspace. Recently, Google Books was sued by the Association of American Publishers, the Author's Guild, and several authors and publishers, which accused it of breaching copyright laws. Presently, Google Books has reached a settlement agreement with authors and publishers, which will allow Google Books to work closely with these industry participants in order to make more books available online. Google aims to put up to 40 million books online from top US libraries. The critics worry that if the people can read a book online for free they would not bother purchasing it. As easy as a click to download music online to listen to offline, a recent court ruling clearly states that even though the copyright of music has lapsed, reproducing and distributing the music is a breach to the copyright law. According to New York's highest court, Naxos was found illegal to release classical recordings by Yehudi

⁵ See BUSINESS SOFTWARE ALLIANCE, FIFTH ANNUAL BSA AND IDC GLOBAL SOFTWARE PIRACY STUDY (2007), http://global.bsa.org/idcglobalstudy2007/studies/2007_global_piracy_study.pdf.

⁶ Drew Buono, *Counterfeit Drugs a Growing Worldwide Danger*, DRUG STORE NEWS, June 23, 2008, at 60-62, available at http://findarticles.com/p/articles/mi_m3374/is_7_30/ai_n27909769/.

⁷ See Jill Jusko, *Counterfeiters Be Gone*, INDUSTRY WEEK, July 2008, at 67-68.

Menuhim and others because such recordings were still covered by the common law.⁸

Counterfeiting is not restricted to poor countries, either. Milan, Italy, for example, is a leading producer of counterfeit luxury products; the U.S. state of Florida is an international haven for fake aircraft parts; and Switzerland is a big player in pharmaceutical counterfeit production with almost forty percent of fake medicines seized by the European Union (EU). There is a globalized trend of counterfeiting activities; increasingly, all member countries of the WTO are required to implement Trade Related Aspects of Intellectual Property Rights (TRIPS) to execute intellectual property protection and companies are joining together to fight against the violations.⁹

A. Patents

A patent, if granted, offers a patent holder a legal monopoly status on the patented technology and/or process for a certain extended period (usually between fifteen to twenty-one years depending on the country). Patent laws in the United States and Japan provide an example of the differences in laws across countries and their implications for corporations.¹⁰ The most significant difference between the two countries is on the *first-to-file* and *first-to-invent* principles. While most countries follow the *first-to-file* principle, only the United States (along with the Philippines) follows the *first-to-invent* principle. In the majority of countries, the patent is granted to the first person filing an application for the patent. In the United States, however, the patent is granted to the person who first invented the product or technology. Any patents granted prior to the filing of the patent application by the *real* inventor would be reversed in order to protect rights of the inventor. The difference between the two principles is no small matter. See Perspective 1 for far-reaching implications.¹¹

⁸ See BBC News, *Court Secures Classical Copyright*, Apr. 6, 2005, available at <http://news.bbc.co.uk/2/hi/entertainment/4415829.stm>.

⁹ See *Imitating Property is Theft*, THE ECONOMIST, May 15, 2003, at 52; Office of the United States Trade Representative, *Trade Delivers: Real Results April 2007*, available at <http://www.qbpc.org.cn/uploads/download/USTR%20IPR%20Fact%20Sheet.pdf>; BBC News, *Honda Wins China Copyright Ruling*, Dec. 24, 2004, available at <http://news.bbc.co.uk/2/hi/business/4123319.stm>; Buono, *supra* note 6, at 60-62.

¹⁰ See Masaaki Kotabe, *A Comparative Study of U.S. and Japanese Patent Systems*, 23 J. INT'L BUS. STUD. 147 (1992).

¹¹ Forty-one nations, including the United States, the European Union, and Japan, reached a basic agreement to draft a treaty for standardizing the patent approval process based on the first-to-file principle in September 2006.

*Perspective 1. Two Worlds Apart: First-to-Invent vs. First-to-File*¹²

A diplomatic conference to discuss the initial draft of patent harmonization treaty was convened by the World Intellectual Property Organization (WIPO) in May 2002. Most neutral observers would suggest that U.S. domestic politics is one principal impediment to the conference's success. In the United States, the *first to invent* wins the patent, while in the rest of the world a patent is awarded to the *first to file* an application. The conference examined the virtue of the U.S. *first-to-invent* principle vis-à-vis the *first-to-file* principle espoused in the rest of the world. The conference's recommendation involved changing the law to award patents to the *first to file* instead of to the *first to invent*, which has guided the awarding of U.S. patents since Thomas Jefferson looked at the first ones filed in 1790.

Under current U.S. law, an individual applicant for a patent must prove that he had the idea first, not simply that he won the race to the courthouse. He can assert his priority to the invention at any time; he is entitled to a patent if thereafter he has not "suppressed, abandoned, or concealed" the invention. The U.S. system was established to protect the inventor who lacks the resources to keep up a stream of patent applications merely to invoke their priority. Not surprisingly, the system is championed today by resource-poor universities and independent inventors.

Supporters of the *first-to-file* system, largely lawyers and corporations, argue that it would better serve the public because it is simpler and conforms to the systems in the rest of the world. Moreover, it would spur inventors to file for patents earlier and to disclose their inventions sooner, thus speeding the progression from idea to finished product. Many supporters also note that most U.S. companies are equipped to act on a first-to-file basis, since they typically apply for patents as soon as inventions are produced. With the adoption of the first-to-file system, this date would also affect patent rights abroad, and thus provide greater reliability for U.S. patents worldwide.

Many are apprehensive about such a change. The principal objection to the first-to-file system is that it fosters premature, sketchy disclosure in hastily filed applications, letting the courts work things out later. Although unlikely, it leaves open the possibility of someone stealing the profits of an invention from the true inventor by beating him to the courthouse steps. In the end, the Patent Office could be deluged with applications filed for defensive purposes, as is the case in Japan where this phenomenon is called *patent flooding*.

Sensitive to these criticisms, the commission recommended several other reforms to ensure fairness in implementing the *first-to-file* proposal. These reforms include issuing a provisional patent application at reduced cost while the patent itself is undergoing examination, and establishing a grace period for

¹² Lee Edson, *Patent Wars*, ACROSS THE BOARD, April 30, 1993, at 24-29; Q. Todd Dickinson, *Harmony and Controversy*, IP WORLDWIDE, September 2002, at 22-24.

public disclosure without affecting patentability. Most importantly, the commission suggested adopting the rule of *prior-use right*, allowing users of inventions to continue their use under certain conditions, even after a patent on the invention is obtained by another party.

The effect of *first to file* vs. *first to invent* may be best illustrated by the case of the laser, a discovery generally credited to physicist Charles Townes, who won a Nobel Prize for elucidating the principle of the maser, the theoretical father of the laser. Townes owned the patent on the device. Years later, Gordon Gould, a former graduate student at Columbia University, where Townes taught physics, proved by contemporary notebooks and other means that he had developed the idea long before Townes patented it in 1958.

Gould could not have brought his case to the courts in foreign countries that give priority to the first to file. In the United States, however, the court accepted Gould's evidence of priority and awarded him the basic patents to the laser in 1977 and 1979, ruling that Townes and his employer, at the time AT&T Co., had infringed on Gould's idea. Patlex Corp., of which Gould is a director, now collects fees from laser users throughout the world.

The marketing implications of this difference for U.S. companies as well as foreign companies are significant. To protect any new proprietary technologies, U.S. companies must ensure that their inventions are protected abroad through formal patent applications being filed in various countries, especially the major foreign markets and the markets of competitors and potential competitors. For foreign companies operating in the United States, the implications are that they must be extremely careful in introducing any technologies that have been invented in the United States. A *first-to-file* mentality could result in hasty patent applications and significant financial burden in the form of lawsuits that could be filed by competitors that claim to have invented the technology earlier.

In some extreme situations, governments have broken patent law for public health reasons. For example, Brazil's government, after signing an intellectual property protection agreement, announced in August 2001 its plans to break a patent for a drug used to treat AIDS despite the international patent held by Roche, the drug's Swiss-based pharmaceutical company. Federal officials held they could not reach an agreement with Roche to lower the prices the country paid for nelfinavir, a drug blocking the HIV virus from "replicating itself and infecting new cells."¹³ The Brazilian government is not the only one to grab a company's patent rights in the interest of public health. Scared by the anthrax outbreaks in the United States, Canada's health ministry decided that public health came first. It commissioned a generic drug company to make a million doses of ciprofloxacin, a drug used to treat one of the nastier forms of the disease whose patent belongs to German drug giant Bayer.¹⁴

¹³ Cristiana Mesquita, *Brazil to Break Patent, Make AIDS Drug*, CNN WORLD, Aug. 23 2001, available at <http://www.cnn.com/2001/WORLD/americas/08/23/aids.drug0730/index.html>.

¹⁴ See Editorial, *Patent Problems Pending*, THE ECONOMIST, Oct. 27, 2001, at 14.

B. Copyrights

Copyrights protect original literary, dramatic, musical, artistic, and certain other intellectual works. Copyright protection lasts 50 years in the European Union countries and Japan, compared with 95 years in the United States.¹⁵ The difference in the lengths of period of copyright protection could cause tremendous price differences between countries for those products whose copyrights expired in the EU or Japan but are still effective in the United States. This price difference may cause gray marketing activities to emerge.¹⁶

A computer program is also considered a literary work and is protected by copyright. A copyright provides its owner the exclusive right to reproduce and distribute the material or perform or display it publicly, although limited reproduction of copyrighted works by others may be permitted for fair use purposes. In the United States, the use of the copyright notice does not require advance permission, or registration with, the Copyright Office. In fact, many countries offer copyright protection without registration, while others offer little or no protection for the works of foreign nationals.¹⁷

In the United States, the *Digital Millennium Copyright Act* (DMCA) was passed in 1998 to address a growing struggle in the cyberspace between industries supplying digital content and those arguing against strict enforcement of copyright on the Internet. The DMCA bans any efforts to bypass software that protects copyrighted digital files. Similar laws have been passed in other countries as well. For example, selling *mod* (modification) chips, a device used to play copied games, tinkering with a game console to play legally and illegally copied software, is a practice that has turned into a legal landmine for the video game sector. In 2004, Sony filed a lawsuit against David Ball, a British national, in Britain's High Court for selling thousands of *mod chips* called *Messiah 2* for Sony's PlayStation 2 game consoles. He also published information explaining how to install the *chips* in PlayStation 2 consoles. He was found guilty of violating all counts of UK copyright law.¹⁸

C. Trademarks

A trademark is a word, symbol, or device that identifies the source of goods and may serve as an index of quality. It is used primarily to differentiate or distinguish a product or service from another. Trademark laws are used to

¹⁵ See Editorial, *Copyright Revisions Have Japan's Majors Jumping into the Vaults*, BILLBOARD, Apr. 18, 1998, at 52; Editorial, *Companies in U.S. Sing Blues As Europe Reprises 50's Hits*, N.Y. TIMES, Jan. 3, 2003, (Late Edition), at A1.

¹⁶ Gray marketing refers to the legal export/import transaction involving genuine products into a country by intermediaries other than the authorized distributors to take advantage of existing price differentials between the markets.

¹⁷ See Jain, *supra* note 2.

¹⁸ See *Game Over for Mod Chip Dealer*, MANAGING INTELLECTUAL PROPERTY, Sept. 2004, at 113-14.

prevent others from offering a product or service with a confusingly similar mark. In the United States, registration is not mandatory, since *prior use* technically determines the rightful owner of a trademark. However, because determining who used the trademark prior to anyone else is difficult and subject to lawsuits, trademark registration is highly recommended. In most foreign countries, registration is mandatory for a trademark to be protected. In this sense, the legal principle that applies to trademarks is similar to the one that applies to patents: the *first-to-use* principle in the United States and the *first-to-file* principle in most other countries. Therefore, if companies are expected to do business overseas, their trademarks should be registered in every country in which protection is desired (see Perspective 2 for the extent to which U.S. firms could legally protect their own copyright and trademark used by other firms abroad).

Perspective 2. Could U.S. firms always protect their own Copyrights and Trademarks used by other firms abroad? The answer is clearly no¹⁹

Infringement of intellectual property rights is not confined to the United States. Inadequate protection of intellectual property rights in foreign countries could also result in copyrights and trademarks illegally used abroad making their way back to the United States. In many industrialized countries, it is possible to stem illegally used copyrights and trademarks from entering the home country. For example, in the United States, the U.S. Customs Service provides protection to copyrights and trademarks.

Prior to receiving U.S. Customs protection, copyrights and trademarks have to be registered first with the U.S. Copyright Office and the U.S. Patent and Trademark Office, respectively. Then for U.S. Customs protection, each copyright and trademark must be recorded at the U.S. Customs Service Office. The fee is \$190. Although there are no standard application forms, the application requirements for recording a copyright and a trademark are listed in Section 133.1-133.7 of the U.S. Customs regulations. An application should include the following information: (1) a certified status copy and five photocopies of the copyright or trademark registration, (2) the name of its legal owner, (3) the business address of the legal owner, (4) the states or countries in which the business of the legal owner is incorporated or otherwise conducted, (5) a list of the names and addresses of all foreign persons or companies authorized or licensed to use the copyright or trademark to be protected, (6) a list of the names and addresses of authorized manufacturers of goods, and (7) a list of all places in which goods using the copyright or bearing the trademark are legally

¹⁹ Maxine Lans Retsky, *Curbing Foreign Infringement*, *MARKETING NEWS*, Mar. 31, 1997, at 10; *Brazilian ISP Prevails in AOL Lawsuit*, a news report provided by "LatPro.com ejs@LatPro.com, May 31, 1999; *No Free Ride*, *LATIN TRADE*, May 2001, at 54; *AOL Latin America Launches Upgraded Wireless E-Mail in Brazil, Mexico and Argentina*, *WORLD IT REPORT*, Feb. 17, 2002, at N.

manufactured. Although it is not necessary to submit a separate application for protection of each copyright or trademark, the filing fee of \$190 still applies to each and every copyright or trademark being recorded with the Customs Service. Additional information can be obtained by contacting the U.S. Customs Service at the Intellectual Property Rights Branch, Franklin Court, 1301 Constitution Avenue, N.W., Washington, D.C. (Ph. 202-482-6960).

Unfortunately, the U.S. Patent and Trademark Office has little or no legal recourse when it comes to U.S. copyrights or trademarks used by foreign companies outside the United States. For example, in Brazil, America Online's famous *aol.com* domain is legally owned by StarMedia Network, a small Internet services Brazilian company in the fast-growing Latin American market. America Online (AOL) had sued StarMedia Network alleging trademark infringement and contested the Brazilian provider's use of the domain name *aol.com.br*. However, the Brazilian court ruled in May 1999 that since Brazil's America Online registered the name first, it would not have to surrender the domain name to its US rival. As a result of the Brazilian court's ruling in favor of StarMedia Network, its shares rose 74 percent in its first day of trading. AOL was then forced to market its Brazilian services under *br.aol.com*.

Although no other news leaked on a possible out-of-court settlement on StarMedia's *aol.com.br* vs. AOL's *br.aol.com*, recent news articles suggest that AOL may have eventually purchased the right to use *aol.com.br* for an undisclosed sum of money (which would not come cheap).

The decision may touch off concerns about international cybersquatting as many Internet dotcom companies begin to launch overseas operations, only to find that country-level version of the domain name is already registered. For example, the AOL domain had been registered in about 60 countries in addition to Brazil, and not all of these registrations were made by the American company.

D. Trade Secrets

A trade secret is another means of protecting intellectual property and fundamentally differs from patent, copyright, and trademark in that protection is sought without registration. Therefore, it is not legally protected. However, it can be protected in the courts if the company can prove that it took all precautions to protect the idea from its competitors and that infringement occurred illegally by way of espionage or hiring employees with crucial working knowledge.

III. INTERNATIONAL TREATIES FOR INTELLECTUAL PROPERTY PROTECTION

Although patent and copyright laws have been in place in many countries for well over a hundred years, laws on trademarks and trade secrets are of relatively recent vintage, having been instituted in the late nineteenth century

and beginning of the twentieth century.²⁰ These laws are essentially national laws, and as such, do not protect intellectual property across national boundaries. There are many international treaties to help provide intellectual property protection across national boundaries, however. Some of the most important treaties are the Paris Convention, Patent Cooperation Treaty, Patent Law Treaty, European Patent Convention, and Berne Convention.

A. Paris Convention

The Paris Convention for the Protection of Industrial Property was established in 1883, and the number of signatory countries currently stands at 140. It is designed to provide *domestic* treatment to protect patent and trademark applications filed in other countries. Operationally, the convention establishes rights of priority that stipulate that once an application for protection is filed in one member country, the applicant has twelve months to file in any other signatory countries, which should consider such an application as if it were filed on the same date as the original application.²¹ It also means that if an applicant does not file for protection in other signatory countries within a grace period of twelve months of original filing in one country, legal protection could not be provided. In most countries, other than the United States, the *first-to-file* principle is used for intellectual property protection. Lack of filing within a grace period in all other countries in which protection is desired could mean a loss of market opportunities to a competitor who filed for protection of either an identical or a similar type of intellectual property. The two new treaties, explained below, are further attempts to make international patent application as easy as domestic patent application.

B. Patent Cooperation Treaty.

The Patent Cooperation Treaty (PCT) was established in 1970, amended in 1979 and modified in 1984. It is open to any signatory member country to the Paris Convention. The PCT makes it possible to seek patent protection for an invention simultaneously in each of a large number of countries by filing an *international* patent application. The patent applicant can file his or her international patent application with his or her national Patent Office which will act as a *PCT Receiving Office* or with the International Bureau of World Intellectual Property Organization (WIPO) in Geneva. If the applicant is a national or resident of a contracting State which is party to the European Patent Convention, the Harare Protocol on Patents and Industrial Designs (Harare Protocol) or the Eurasian Patent Convention, the international application may

²⁰ See Bruce A. Lehman, *Intellectual Property: America's Competitive Advantage in the 21st Century*, 31 COLUM. J. WORLD BUS. 8, 8-9, (1996).

²¹ See WORLD INTELLECTUAL PROPERTY ORGANIZATION, PARIS CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY, available at http://www.wipo.int/treaties/en/ip/paris/trtdocs_woo20.html.

also be filed with the European Patent Office (EPO), the African Regional Industrial Property Organization (ARIPO) or the Eurasian Patent Office (EAPO), respectively.²²

C. Patent Law Treaty

The Patent Law Treaty (PLT), adopted in Geneva in June 2000, comes as the result of a World Intellectual Property Organization (WIPO) initiative. Its aim is to harmonize the formal requirements set by patent offices for granting patents, and to streamline the procedures for obtaining and maintaining a patent. Initially, PLT will apply to all European Union countries, the United States, Japan, Canada, and Australia. Eventually it will include virtually all countries in the world. While the PLT is only concerned with patent formalities, many of the provisions will prove extremely useful when the PLT comes into force for a large number of states, providing speedier and less costly procedures for years to come.²³

D. European Patent Convention

The European Patent Convention is a treaty among thirty-six (as of March, 2010) European countries (not necessarily members of the EU) setting up a common patent office, the European Patent Office, headquartered in Munich, Germany, which examines patent applications designated for any of those countries under a common patent procedure and issues a European patent valid in all of the countries designated. The European Patent Office represents the most efficient way of obtaining protection in these countries if a patent applicant desires protection in two or more of the countries. The European Patent Convention is a party to the Paris Convention, and thus recognizes the filing date of an application by anyone in any signatory country as its own priority date if an application is filed within one year of the original filing date. The European Patent Office receives applications in English. The application are published 18 months after the filing, consistent with the *first-to-file* principle. Once a patent is approved, registrations in, and translations into the language of, each designated country will be required. The European Patent Convention does not supersede any signatories' pre-existing national patent system. Patent applicants still should file and obtain separate national patents, if they would prefer national treatment (favored over pan-European treatment by individual national courts).²⁴

²² See WORLD INTELLECTUAL PROPERTY ORGANIZATION, PATENT COOPERATION TREATY, available at <http://www.wipo.int/pct/en/treaty/about.htm>.

²³ See Q. Todd Dickinson, *Harmony and Controversy*, IP WORLDWIDE, Sept. 2002, at 22-24.

²⁴ See Martin Grund & Stacey J. Farmer, *The ABCs of the EPC 2000*, MANAGING INTELLECTUAL PROPERTY, Apr. 2008, at 85-88.

E. Berne Convention

The Berne Convention for the Protection of Literary and Artistic Works is the oldest and most comprehensive international copyright treaty. This treaty provides reciprocal copyright protection in each of the fifteen signatory countries. Similar to the Paris Convention, it establishes the principle of national treatment and provides protection without formal registration. The United States did not join the Berne Convention until 1989.²⁵

Although there are separate laws to protect the various kinds of intellectual property, there appears to be a strong correlation between the levels of intellectual property in various countries. Although a new study is not available, the 1996 study provides some of the results of a 1996 academic study based on survey questionnaires administered to experts/practitioners in the various countries (See Table 1).

Table 1. Ratings for the Level of Intellectual Property Protection in Various Countries (Minimum = 0 . . . 10 = Maximum)²⁶

COUNTRY	PATENTS	COPYRIGHTS	TRADEMARKS	TRADE SECRETS
Argentina	3.8	5.7	7.1	4.4
Brazil	3.3	5.2	3.3	3.3
Canada	8.1	7.7	9.0	7.8
Chile	5.7	5.7	7.6	7.8
China	2.4	2.9	6.2	3.3
Germany	8.6	8.6	9.0	10.0
India	3.3	5.7	3.8	3.3
Israel	7.1	7.1	8.6	8.9
Mexico	3.3	7.6	3.8	3.3
New Zealand	7.1	8.1	9.5	7.8
Philippines	7.1	6.2	7.6	7.8
Singapore	7.1	6.7	8.6	5.6
South Korea	3.3	4.8	3.8	3.3
Thailand	2.4	4.8	6.7	5.6
United States	9.0	8.1	9.0	7.8

A feature that corporations as well as individual managers have to deal with is the growing importance of intellectual property as a significant form of

²⁵ See Nancy R. Wesberg, *Canadian Signal Piracy Revisited in Light of United States Ratification of the Free Trade Agreement and the Berne Convention: Is This a Blueprint for Global Intellectual Property Protection?* 16 SYRACUSE J. INT'L L. & COM. 169, 169-205, (1989).

²⁶ Adapted from Belay Seyoum, *The Impact of Intellectual Property Rights on Foreign Direct Investment*, 31 COLUM. J. WORLD BUS. 51 (1996), at 56.

competitive advantage. The laws to deal with this issue are neither uniform across countries, nor are they extended across national boundaries (outside of the government pressure). Even if they are similar, the implementation levels vary significantly. Essentially, protection of intellectual property requires registration in all the countries in which a firm plans to do business. Managers need to be cognizant of this and take proactive measures to counteract any infringements.

One of the most recent developments in international copyright protection is the WIPO Copyright Treaty, which entered into force in March 2002, addressing copyright protection in the Internet era. This treaty updates and supplements the Berne Convention by protecting the rights of authors of literary and artistic works distributed within the digital environment. The treaty clarifies that the traditional right of reproduction continues to apply in the digital environment and confers a right-holder's right to control on-demand delivery of works to individuals.²⁷

F. Further Developments

In 2007 a select handful of the wealthiest countries began a treaty-making process to create a new global standard for intellectual property rights enforcement, the Anti-Counterfeiting Trade Agreement (ACTA). ACTA "is spearheaded by the United States, the European Commission, Japan, and Switzerland — those countries with the largest intellectual property industries."²⁸ Other countries that have joined ACTA's negotiation process are Canada, Australia, Korea, Mexico, New Zealand, and United Arab Emirates. Noticeably absent from ACTA's negotiations are leaders from developing countries who hold national policy priorities that differ from the international intellectual property industry.²⁹

At the 34th G8 summit held by Japan in July 2008, the eight leaders in their document on the world economy called for finalizing negotiations of the much-debated ACTA by the end of the year. As of today, negotiations are still ongoing and the 8th Round of Negotiation is scheduled to be held on April 2010 in New Zealand.³⁰ The summit also declared patent harmonization a topic of high importance, asking for , accelerated discussions of the Substantive Patent Law Treaty (SPLT), a proposed international patent law treaty aimed at harmonizing substantive points of patent law. In contrast with the Patent Law Treaty which only relates to formalities, the SPLT aims at going far beyond formalities to

²⁷ Amanda R. Evansburg, Mark J. Fiore, Brooke Welch, & Lusan Chua, & Phyllis Eremitaggio, *Recent Accessions to WIPO Treaties*, 16 INTELL. PROP. & TECH. L.J. 23, 23 (2004).

²⁸ *The Anti-Counterfeiting Trade Agreement (ACTA)*, IP JUSTICE, available at <http://ipjustice.org/wp/campaigns/acta/>.

²⁹ See *id.*

³⁰ See Malini Aisola, *ACTA New Zealand Meeting Agenda*, KNOWLEDGE ECOLOGY INTERNATIONAL, March 21, 2010, available at <http://keionline.org/node/809>.

harmonize substantive requirements such as novelty, inventive step and non-obviousness, industrial applicability and utility, as well as sufficient disclosure, unity of invention, or claim drafting and interpretation.³¹

IV. SUMMARY

Despite increased business activities transcending national boundaries and the importance of intellectual property in international business, protection of intellectual property in foreign countries is granted essentially by registration in those countries. International business managers should be aware that domestic protection usually cannot be extended beyond their national boundary because the laws are essentially national and do not extend to foreign countries. As a rule of thumb, firms should apply for such protection in every single foreign market in which they sell products that use intellectual property. Various international agreements are primarily designed to make this application process easier across national boundaries.

However, some of the illustrations indicated all countries are inherently interested in protecting or giving preferential treatment (both consciously or unconsciously) to their domestic firms although various international agreements are supposed to treat all intellectual property equally regardless of the source of its origin. This is where politics comes to play. Business has been considered an integral part of economic forces. Indeed, economics was once called *political economy*, and as such, business could not be conducted devoid of political and legal forces. Although we tend to take political and legal forces for granted most of the time in doing business domestically, they could become central issues in international business and cannot be ignored.

³¹ See Liza Porteus Viana, *Business, Governments See Momentum for ACTA, But EU Snags*, INTELLECTUAL PROPERTY WATCH, Mar. 4, 2008, available at <http://www.ip-watch.org/2008/03/04/business-governments-see-momentum-for-acta-but-eu-snags/>; see also *Substantive Patent Law Harmonization*, WORLD INTELLECTUAL PROPERTY ORGANIZATION, <http://www.wipo.int/patent-law/en/harmonization.htm>.