



**INTELLECTUAL PROPERTY ON THE INTERNET:
A SURVEY OF ISSUES**



December 2002



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PROPERTY
ORGANIZATION



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INTRODUCTION



1. In May 2000, the World Intellectual Property Organization (“WIPO”) published a Primer on Electronic Commerce and Intellectual Property Issues aimed at broadly defining the questions raised by the Internet for the exploitation and protection of intellectual property. Many developments have occurred in the areas concerned since its publication. These developments are reflected in this publication, “Intellectual Property on the Internet: A Survey of Issues” (the “Survey”).
2. Many of the questions covered by the Survey are still unsettled and are likely to remain so, at least for the next few years. Rather than attempting to predict what the future will hold, or prescribe what it should look like, the Survey describes current issues and developments that are of relevance to intellectual property on the Internet, as they are experienced and debated in industry and among consumers, as well as in policy-making bodies. In line with WIPO’s role and mandate, the Survey’s focus is on the international dimension of the issues concerned.
3. In light of its object and purpose, the Survey is primarily addressed to those who would benefit from a general introduction to, and overview of, the topic of intellectual property in the digital environment. It assumes, however, a basic understanding of the fundamentals of the various branches of intellectual property law and the role of certain multilateral institutions, including WIPO, in that context.
4. The Survey is organized into seven chapters:
 - *Chapter I* relying on a number of statistical indicators, outlines the recent evolution of certain aspects of the Internet and provides background to the discussion of the topics covered in the remainder of the Survey.
 - *Chapter II* describes how the Internet has evolved from a technical infrastructure into a virtual market for intellectual property, providing concrete illustrations of this development, as those are occurring in the private sector and public sectors.
 - *Chapter III* addresses the impact of the Internet on the various branches of intellectual property, namely, copyright and related rights, trademarks and other rights in distinctive signs, and patents, as well as the responses that have been developed to date. The Chapter also includes a topic that is integral to any discussion of intellectual property on the Internet: domain names and their relationship to distinctive signs.
 - *Chapter IV* discusses intellectual property dispute resolution on the Internet, and the role of private international law and alternative dispute resolution (ADR) in that connection.
 - *Chapter V* examines certain Internet issues as they relate to developing countries, including the challenges raised by disparities in infrastructure development and the resulting differential levels of participation in electronic commerce (‘e-commerce’), as well as the opportunities that e-commerce offers. It also highlights WIPO’s initiatives in this regard.
 - *Chapter VI* discusses progress in the electronic delivery of intellectual property services by intellectual property public authorities, both at national levels and by WIPO.
 - *Chapter VII* closes with a status report on the WIPO Digital Agenda, a set of guidelines and goals first outlined by the Director General of WIPO at the first International Conference on Electronic Commerce and Intellectual Property in September 1999, and which subsequently received the approval of WIPO’s Member States at their annual Assemblies.

CHAPTER I



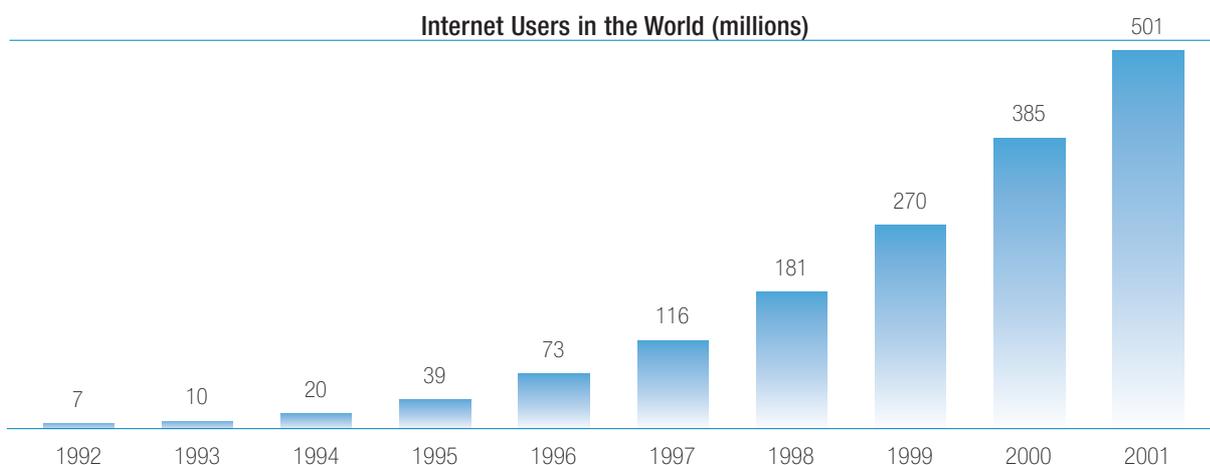
I. THE INTERNET AND THE DEVELOPMENT OF THE DIGITAL SOCIETY

5. The digital age and the global economy are now closely linked. Since the 1990s, information technologies have accounted for a large share of investment and made a significant contribution to economic growth, supported by an intellectual property system that has provided effective protection for digital technologies in the new economy. Businesses, individuals and governments have all profited from the benefits delivered by the ever-increasing and broadening use of the Internet. The explosion of the Internet, and the increase in .com enterprises, has profoundly shaken the economic world and has generated new commercial models; they have also affected the legal world by posing new problems, *inter alia*, in relation to the protection of intellectual property on the Internet. Following a period of sudden growth, in 2001 the businesses of the new economy nevertheless experienced a significant crash, of such a magnitude that questions were raised as to how the Internet would develop in the future.

6. However, after what the Organization for Economic Cooperation and Development (OECD) described as “short-term turbulence”¹ and, even if in certain areas development remains slow, it is likely that the Internet will continue to play a major role in the world economy and intellectual property system. Since the importance of its influence in economic terms can be seen as a result of its own development, it is of interest, by way of introduction, to describe the current developments relating to the Internet by reference to a number of indices. These indices, detailed below, are especially important for this Survey, since they directly affect the world of intellectual property.

World Online Population

7. About 10% of the world’s population is now online, representing more than 605 million users.² This figure is increasing more quickly than earlier foreseen, given that 1999 forecasts envisaged 250 million Internet users in 2002. Certain optimistic forecasts even estimate that the world online population could reach one billion by 2005.³

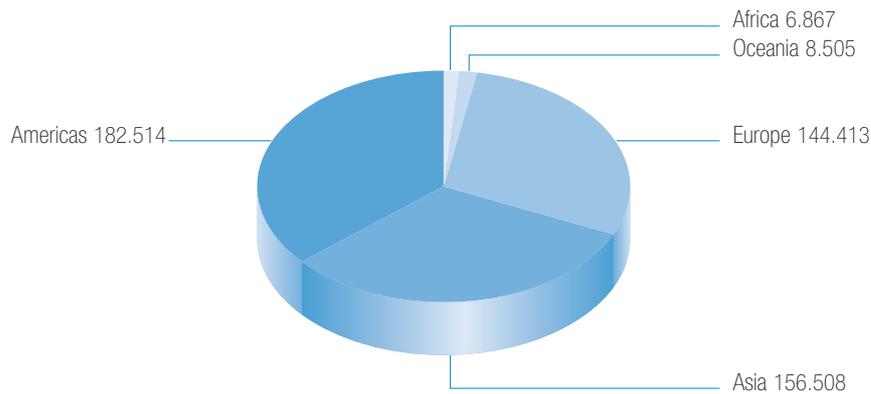


Source: World Telecommunication Development Report, ITU, March 2002

Countries Connected to the Internet

8. The number of countries connected to the Internet has increased significantly in the past ten years. Whereas at the beginning of the 1990s, a little over ten countries were connected to the Internet, this figure stood at 214 at the end of 2001.⁴ However, the rate of Internet penetration still remains imbalanced throughout the different regions of the world. The regions with the largest numbers of users are mainly the North American (37%), Asian (31%) and European (29%) regions. However, recent statistics demonstrate that the regional pattern in terms of number of Internet users is changing. In May 2002, the countries or regions with the highest level of Internet penetration were located primarily on the European continent: Sweden (64.6%), Denmark (60.3%), Netherlands (58.07%), United Kingdom (56.88%) and Norway (54.4%); in the Asian region: Hong Kong, SAR of China (59.58%); and in North America: United States (59.22%) and Canada (52.79%).⁵ By contrast, although the number of users has increased slightly in Africa, the lack of telecommunications infrastructure means that this region of the world still represents less than 2% of the world online population.

Geographical Distribution of On Line Population (millions)



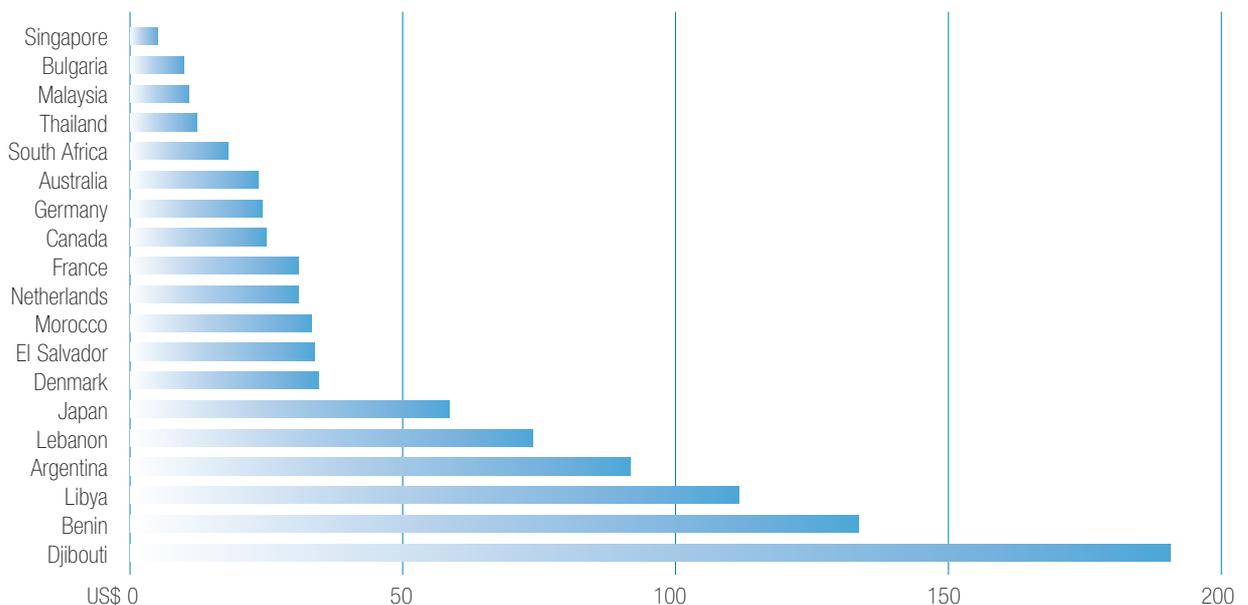
Source: World Telecommunication Indicators, ITU, March 2002

Cost of Internet Access

9. A variety of factors explain the variation in the rate of Internet penetration in different regions. The cost of Internet access, which varies widely between countries and regions, is one of these factors. In this regard, the Secretary General of the International Telecommunication Union (ITU) has noted that the costs of access are often higher for developing countries.⁶

Dial-up Internet Tariffs, 2001

(30 hours per month)



Source: World Telecommunication Indicators, ITU, March 2002

Languages Used on the Internet

10. The culture of the Internet, which was largely Anglo-American in its early stages, is in transformation. Where once the English language dominated, increasingly some of the 6700 languages that are spoken in 228 countries throughout the world are finding a voice on the Internet. It is envisaged that by 2003, non-English speakers will represent one third of the community of Internet users,⁷ the major part of this expansion coming from Asia and Latin America. This diversification of the languages used online is in no way surprising when it is considered that 92% of the world population has a mother tongue other than English. It can therefore be anticipated that the Web will increasingly reflect the diversity of cultures and that this will be accompanied by an increase in its non-English content. According to forecasters, the most widely used language on the Web in 2007 will be Chinese.⁸ The table below provides some statistics on the languages used online. The effect of this globalization of the Internet on intellectual property and, in particular as regards domain names, is discussed in Chapter III(c) of this Survey.

Global Internet Statistics by Language

Language	Speakers (millions)
English	230.6
Total non-English including:	403.5
Chinese	68.4
Japanese	61.4
Spanish	47.2
German	42.0
Korean	28.3
Italian	24.0
French	22.0
Portuguese	19.0
Dutch	12.4
Malay	8.0
Swedish	6.8
Arabic	5.5
Turkish	4.6
Danish	3.5
Czech	3.1
Thai	2.4
Romanian	2.3
Farsi	2.2
Greek	2.0
Hebrew	2.0
Total Online Population	619

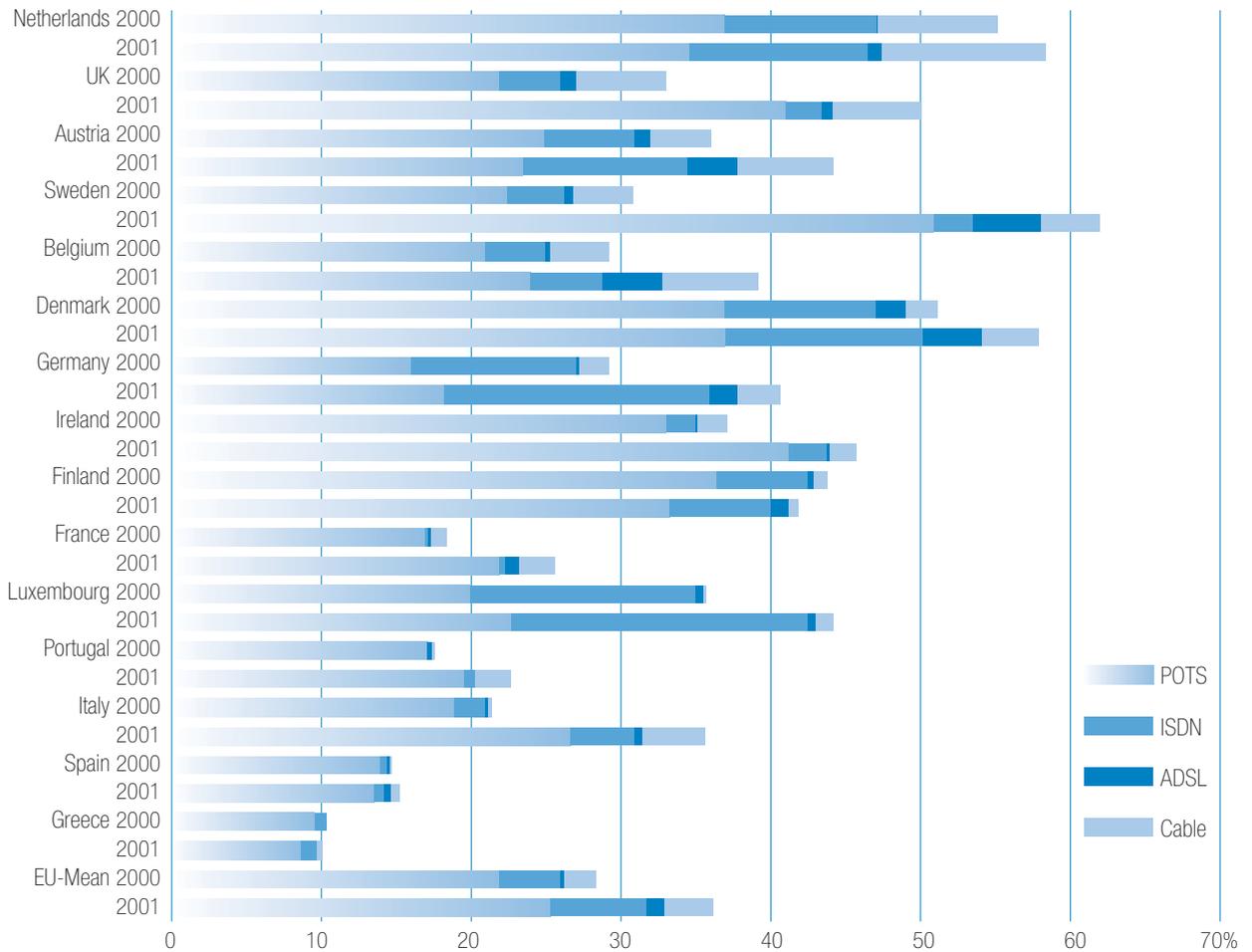
Source: Global Reach (last revised September 30, 2002), at <http://www.global-reach.biz/globstats>

Developments in Means of Internet Access

11. Faced with users' demands for faster Internet connections, the technologies that enable access to the Internet have undergone significant changes. Broadband technologies have developed, including ADSL (Asymmetric Digital Subscriber Line). Various methods of Internet access now exist, and include the telephone system (Plain Old Telephone System (POTS)), the Integrated Services Digital Network (ISDN) and ADSL.

12. As shown by the table below, the rate of penetration of each of these technologies varies considerably among the countries of the European Union. It is noted that, despite increased demand for faster Internet connections, the telephone system remains the most popular mode of Internet access. The rate of penetration of other technologies such as ADSL, the high performance of which when compared to the conventional telephone system is well recognized, is still low. Nevertheless, since 2000 there have been rapid developments of these new technologies. In addition, ADSL is now present in all European Union member States except Greece.⁹ The countries with the highest rate of ADSL penetration are Sweden (4.6%), Denmark (3.9%), Belgium (3.9%) and Austria (3.3%).

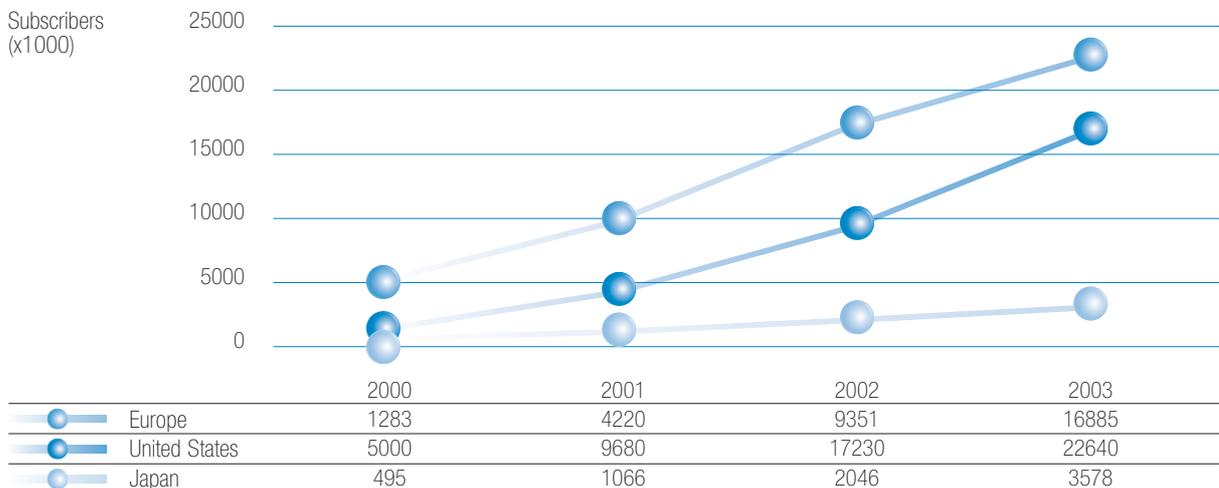
Growth of EU Household Penetration of Internet Access Platforms - Ranked by Broadband Platforms



Source: BDRC Ltd. Report, "The Development of Broadband Access Platforms in Europe" commissioned by the European Commission, from Figures 1a and 1b, at pp.7 and 8, August 2001

13. At the international level, it is observed that the development of broadband technologies is uneven among the different regions in the world. The table below, which compares the potential growth of these technologies in Europe, the United States of America and Japan, indicates a high number of subscribers in the United States of America. However, a recent report commissioned by the European Commission,¹⁰ foresees significant development of these technologies in Europe and Japan between 2002 and 2003. In 2003, the rate of penetration of broadband technologies is expected to reach 11% in Europe and 8% in Japan.

Predicted Growth of Household/SME Broadband in Europe, US and Japan



Source: BDRC Ltd. Report, "The Development of Broadband Access Platforms in Europe," commissioned by the European Commission, at p.139, August 2001

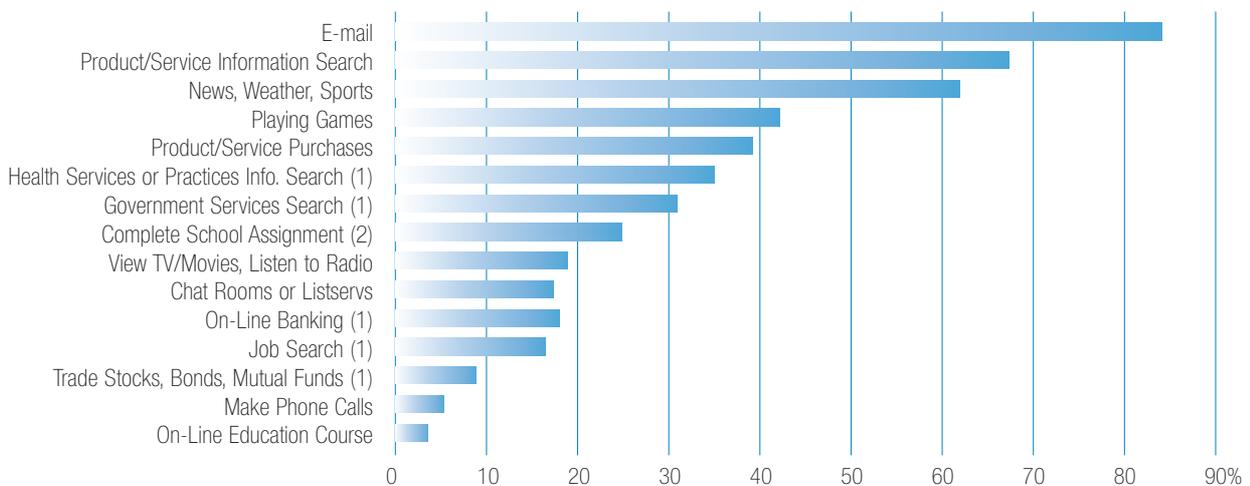
14. Although these new technologies are still at an early stage of development, their progress merits examination because, in the long term, they could have a significant impact on the intellectual property system. To a large extent, they facilitate the downloading of intangible assets protected as intellectual property, including music and video and, as a result, their growth could substantially increase the number of online transactions relating to these works.

Online Activities

15. According to the OECD, in most countries the Internet is used mainly for e-mail and searching for information relating to goods or services. In the United States of America, for example, e-mail and information searches represent the most common uses of the Internet, constituting 84% and 67% respectively of individuals' activities online. There is, however, a trend toward other categories of activities, such as purchasing of goods and services, watching films, or listening to the radio. These developments in Internet use inevitably have an impact on intellectual property, insofar as these activities involve works protected by intellectual property laws. This issue is dealt with in Chapters I and III(a) of this Survey.

On-Line Activities of Individuals, United States, 2001

As a percentage of Internet users, persons aged 3+



1. For these online activities, only individuals aged 15 and over were surveyed.

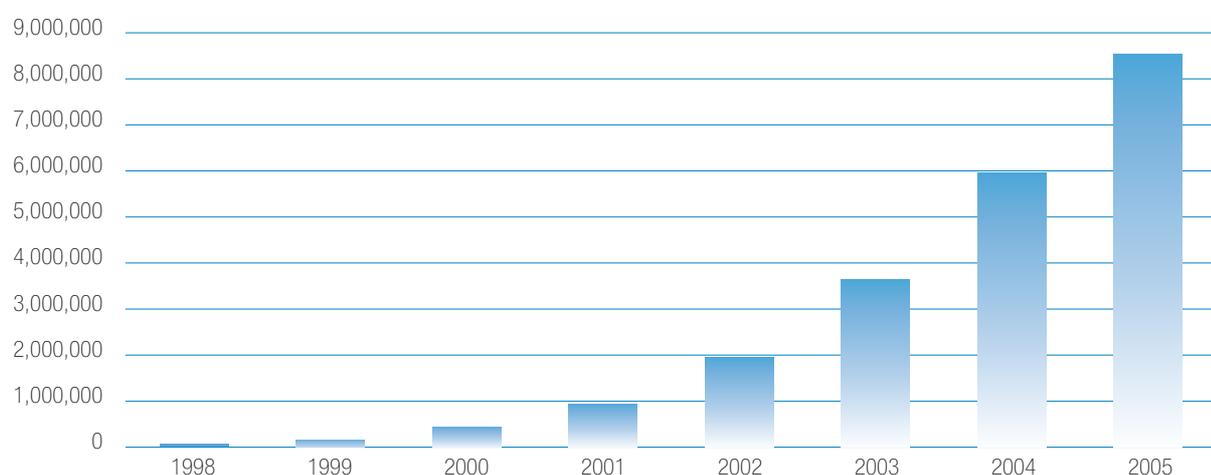
2. All respondents were asked about this activity. If the response is restricted to individuals enrolled in school, the share of Internet users completing school assignments would increase to 77.7%.

Source: OECD "Information Technology Outlook - ITCs and the Information Economy," Figure 9 at p.197. Copyright OECD, 2002

Value of Commercial Transactions on the Internet

16. The value of commercial transactions on the Internet has increased substantially over the past five years. Whereas in 2000, it was estimated at US\$433 billion, it is envisaged that in 2002 it will represent US\$1.9 trillion and, by 2004, US\$6 trillion.¹¹

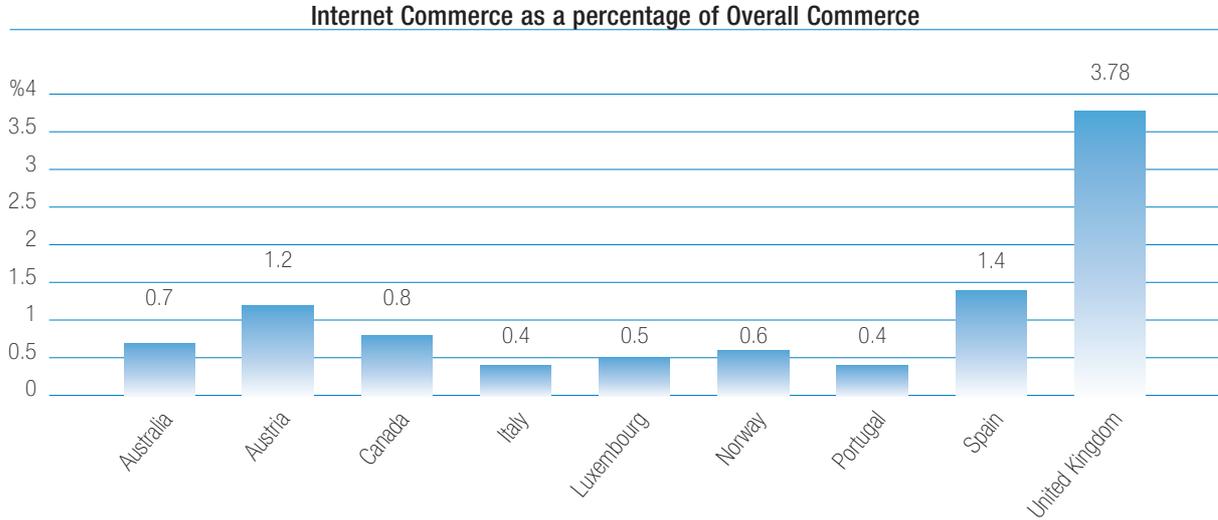
Predicted Growth of Internet Commerce Value



Source: Data published by Gartner, Inc.

Percentage of Online Commercial Transactions Compared to Overall Commerce

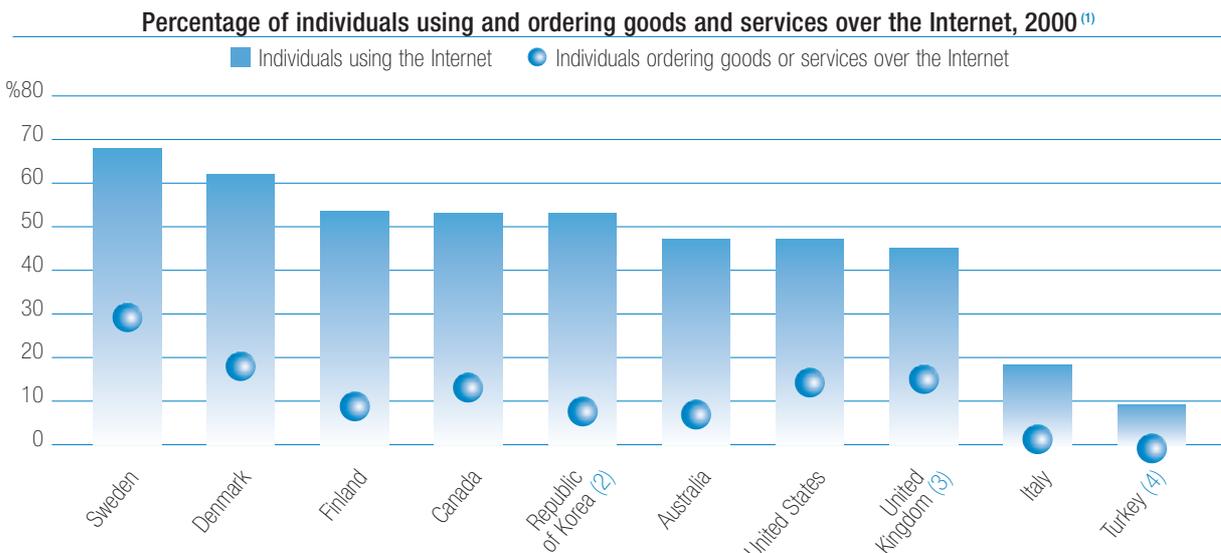
17. Despite the significant value of commercial transactions over the Internet (including sale or purchase of goods or services between businesses, households, individuals, public or private organizations, over the Internet),¹² their share of global trade remains small. As indicated in the table below, in certain OECD countries the use of the Internet in commercial transactions represents 0.4 to 3.78% of all commercial transactions. It appears, therefore, that businesses use the Internet mainly as a marketing tool rather than as a commercial tool and that consumers are still reluctant to make transactions over the Internet.



Source: OECD "Information Technology Outlook - ITCs and the Information Economy," Figure 5 at p.140

Percentage of Individuals Purchasing Goods and Services over the Internet

18. The number of individuals who purchase goods and services over the Internet is generally quite small in relation to the overall number of Internet users. This percentage varies considerably between countries. Among OECD countries, Sweden, for example, has the highest figure, given that 43% of individuals residing in Sweden and using the Internet bought goods online in 2000. It is followed by the United Kingdom (33%) and the United States of America (30%). In Finland and Australia, as reported by the OECD, one in seven individuals buys goods on the Internet, and there would appear to be potential for even greater growth given that around half of all households in these countries owned a computer in 2000. This relatively small amount of business-to-consumer (B2C) commerce can be explained, *inter alia*, by the increasing concern of users with respect to protection of personal data and security of Internet transactions.



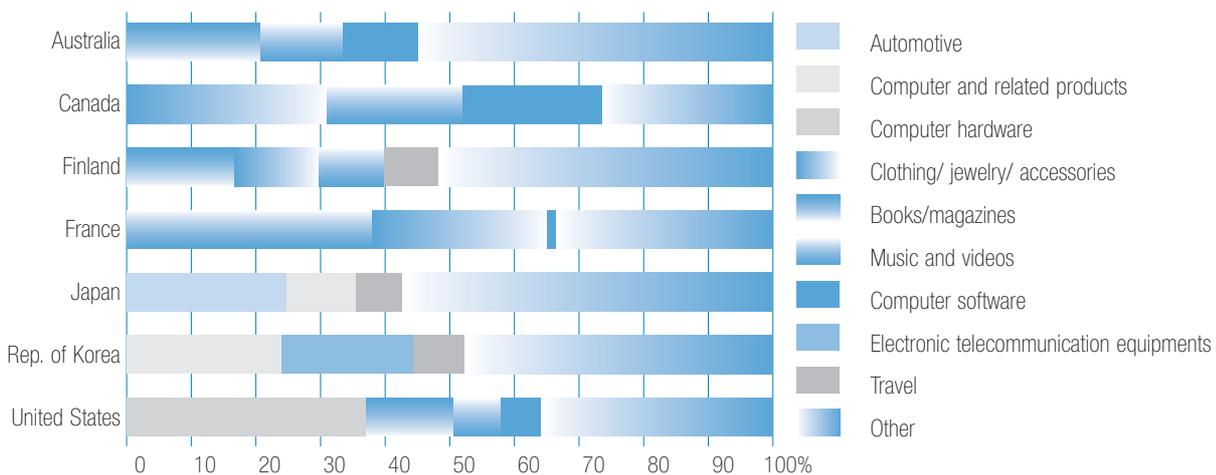
1. Age cut-off: 16 years and older except for Canada and Finland (15+), Italy (11+), the Republic of Korea (6+) and Australia and Turkey (18+).
2. Third quarter 2001.
3. Last quarter 2000.
4. Individuals belonging to households in urban areas.

Source: OECD, "Information Technology Outlook - ITCs and the Information Economy," Figure 7 at p.143. Copyright OECD, 2002.

Categories of Goods Purchased on the Internet

19. In the same way that habits of consumption differ from one country to another, the type of goods purchased on the Internet also varies among countries. Overall, computer goods, clothing and digital products represent the largest share of Internet sales. For example, computer goods represent the largest number of Internet sales in the United States of America, Japan and the Republic of Korea. Digital goods such as music, computer software and books also represent a significant source of sales. This is notable insofar as transactions of these goods, which may be the subject of intellectual property rights, either as a mark, patent or copyright, will necessarily have an impact on the intellectual property system and rightsholders.

Consumers' Internet purchases by product

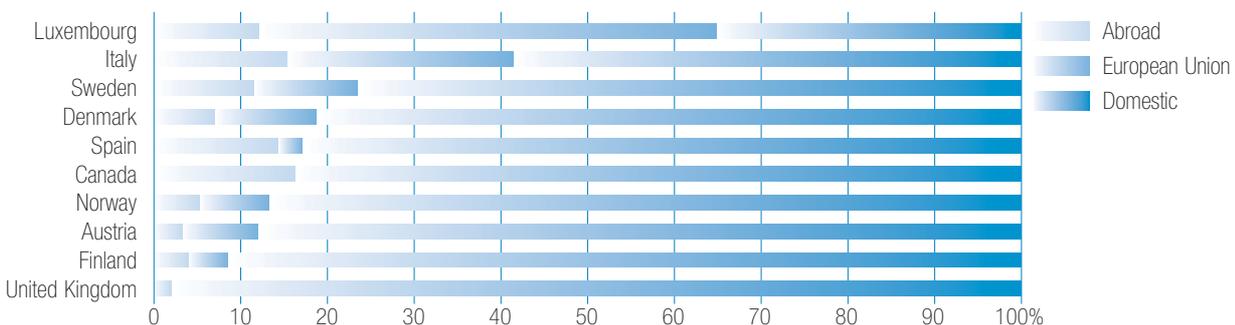


Source: OECD, "Information Technology Outlook - ITCs and the Information Economy," Figure 11 at p.145. Copyright OECD, 2002.

Distribution of Internet Sales between National and International Markets

20. Transactions that take place over the Internet are mainly concluded between parties located in the same territory. The statistics for online sales for nine European Union countries (see table below) indicate that European companies have a strong propensity to sell over the Internet to purchasers located in their countries, or in the European Union. According to the OECD, these results reflect a global trend of European commerce. In addition, they constitute relevant information from the point of view of the discussion of private international law and the extrajudicial settlement of Internet-related disputes (see Chapter IV of this Survey).

Share of Internet sales in domestic and international markets, 2000



Source: OECD, "Information Technology Outlook - ITCs and the Information Economy," Figure 13 at p.147. Copyright OECD, 2002.

1. See OECD Report, "Information Technology Outlook - ITCs and the Information Economy," (2002), available at <http://www.oecd.org/pdf/M00030000/M00030907.pdf>.
2. See Nua Internet Surveys, Nua.com report, "More than 600 million people have Net access," (November 1, 2002), at <http://www.nua.com/surveys>.
3. See Nua Internet Surveys, at <http://www.nua.com/surveys>.
4. See International Telecommunication Union (ITU), "World Telecommunication Development Report," (March 2002).
5. See Nua Internet Surveys, at <http://www.nua.com/surveys>.
6. See the statement by Mr. Yoshio Utsumi at the United Nations General Assembly, on June 17, 2002, at <http://www.un.org/News/fr-press/docs/2002/AG1295.doc.htm>.
7. Statistics as at September 2002, provided by Walid, Inc., see <http://www.walid.com>.
8. Statistics as at September 2002, *ibid*.
9. At the time the information to produce the graph in question was collected.
10. See BDRC Ltd. Report, "The Development of Broadband Access Platforms in Europe," commissioned by the European Commission (August 2001).
11. These statistics compiled by Gartner Group cover only business-to-business (B2B) transactions.
See http://www4.gartner.com/5_about/press_room/pr20010313a.html.
12. See OECD (2002), *supra* note 1, Table 1 at p.131.

CHAPTER II



II. THE MIGRATION OF INTELLECTUAL PROPERTY TO THE INTERNET

21. When the World Wide Web was first developed in the 1990s, it transformed the Internet from a technological infrastructure into a popular network linking people in diverse communities throughout the world. The Internet, and 'killer apps' such as the Web, became the instrument by which people throughout the world exchanged and shared ideas, information and, gradually, goods and services. What had begun as a military and research tool became the conduit for electronic commerce forecast to be worth US\$6 trillion by 2004,¹³ and the harbinger of the 'information age'. The Web now contains several billion pages of information, growing at the rate of more than seven million pages each day.¹⁴ It is this ready availability of information on every conceivable subject, combined with advancements in digitization, that has made the Internet such a revolutionary tool.

22. There are numerous .com companies that rely on business models that trade in physical objects of intellectual property. The online traders Barnes and Noble and Amazon, for example, utilize vast databases of book, video and music titles and user-friendly purchasing systems to attract consumers away from the shopping mall, and then send these products (each a work of intellectual property) to consumers using postal mail. Travel sites and airline companies such as EasyJet and RyanAir and entertainment ticket sellers such as Ticketmaster, profit through saved overheads by conducting sales online, using e-ticketing or mailing tickets to purchasers. Numerous small and medium sized enterprises have used the Internet in this way, as a marketing tool to locate buyers for their products in a huge global marketplace.

23. It is, however, the digitization of works of intellectual property, by a process that reduces text, visual images and sound to computer-readable binary code of '0's and '1's, grouped in bits and bytes that can travel over the networks, that has enabled intellectual property to transfer so efficiently to the Internet. This rising trend led John Perry Barlow, Internet commentator and co-founder of the Electronic Frontier Foundation, to speak of the "digitization of everything not obstinately physical."¹⁵ Internet traffic has been doubling every six months,¹⁶ and the flow of this data over the Internet, first measured in megabits and gigabits, and now in terabits and petabits (1,000 trillion bits), includes the transmission of works of intellectual property. The Internet offers an unprecedented channel through which foreign markets that number more than half a billion users¹⁷ and the diaspora of nationals living abroad and hungry for access to their cultural heritage, can be exploited.

24. The character of the intellectual property system is evolutionary and while the nature of the rights themselves, to control and exploit the products of one's creativity and innovation, remains relatively constant, the manner by which they are expressed and exchanged is constantly adapting to developments in the underlying technologies. The invention of, in turn, the printing press, phonograms, radio and television broadcasting, cable and satellite transmission, videocassette recorders, compact disc (CD) and digital versatile disc (DVD) technology and, now, the Internet, has affected both the form and the substance of intellectual property rights. Ever adaptable, intellectual property has now migrated to the Internet and is being modified to suit the online environment in ways that are described in the following chapters. Intellectual property has gained importance in this digital environment as, increasingly, business assets are reflected in intellectual as opposed to physical property. The value of many online companies, for example, may be found in their vast databases of customer information, which may be the subject of intellectual property protection.¹⁸

25. This migration of intellectual property onto the Internet can be seen with respect to each species of rights. In the field of copyright, vast numbers of works of literature, film and art, and notably computer programs, have already transferred to the digital environment. Software, protected as a form of intellectual property by patent and copyright law, underlies the operation of all digital technologies.¹⁹ Systems software, including utilities and operating systems, enable our computers to operate, while utilities software provides us with the programs that make the digital networks so useful. Much software is protected by intellectual property law, and its theft is endemic.²⁰ It is estimated that 40% of business software programs worldwide were pirated in 2001, at a cost to the industry of some US\$11 billion.²¹ As one commentator stated: "[C]omputer security and digital rights are so vexing because their solutions seek to protect technology from itself. How does one make computer systems secure from code writers whose goal is to defeat such security? And how does one protect digital content when technology, by its nature, encourages copying?"²²

26. Textual works such as books and newspapers are ideally suited to digitization and, although online publishing of popular literature has had a mixed reception with a public accustomed to paper and ink, there is evidence of a growing demand for e-books.²³ There has been real success in the online availability of science, technology and medical publications, where the demand for fee-based research has supported the e-publishing industry.²⁴ Demand has also grown for the online collections of more than 7,300 libraries that have provided free remote access to the texts of hundreds of thousands of e-books, with particular demand for non-English language texts.²⁵ One commercial operation, Ebrary, offers consumers paid access to more than 10,000 recently published titles, as well as maintaining a database of digital books for libraries.²⁶ Online newspaper publishing is also prolific,²⁷ although many of these initially free sites are now seeking to introduce subscription access. In September 2002, for the first time,

The New York Times received more visitors to *nytimes.com* (1.28 million daily), than its weekday paper circulation (1.2 million daily). Increasingly, numerous journalists and aspiring writers have engaged in online publishing to post 'blogs', Web logs or journals, that allow individuals to make their views available to the public without the need for intermediation by large publishing houses or distributors.²⁸

27. In the field of fine art, indigenous craft and artifacts, numerous museums and art galleries have digitized their collections and made them available for viewing on the Internet.²⁹ One such site, Artnet,³⁰ allows users to access works by over 16,000 artists and in over 1,300 art galleries. Interesting questions have arisen as to whether the digital images of works of art, themselves, become derivative works entitled to copyright protection.³¹ There are also many artists using the digital technologies themselves, to create art specifically for the digital networks.³² One site, the Digital Art Museum,³³ provides an online resource for information and works of digital art.

28. Intellectual property, through the trademark system, also facilitates the identification of goods and services and allows consumers to distinguish those produced by a certain enterprise. The importance of commercial branding, traditionally achieved through the use of trademarks combined with advertising and marketing strategies, is heightened in an online environment where consumers are naturally cautious, traders may be remotely located and there is little or no physical contact to reassure purchasers of a company's financial security and bona fides. The Web is a territory where *caveat emptor* is the rule and, as a result, consumers increasingly rely upon strong brand awareness and brand performance for the confidence to engage in e-commerce.³⁴ While trademarks are of greater importance in this virtual environment, they are also more vulnerable to infringement, dilution and anticompetitive practices, as described in Chapter III(b) below. Trademark owners expend vast resources, engaging automated 'web crawling' software and cybersurveillance firms, to monitor the billions of Web pages and protect their intellectual property rights.

29. Identity on the Internet also goes beyond the trademark system, because of the role played by the Internet domain name system, which facilitates users' ability to navigate on the network. Domain names are user-friendly addresses that correspond to the unique Internet Protocol numbers that connect our computers to the Internet and enable the network routing system to direct data requests to the correct addressee. Domain names were originally intended to perform a purely technical function in a user-friendly way, but because they are intuitive and easy to remember they now perform a function as business or personal identifiers. Most businesses, whether e-commercial or not, advertise their domain name to signal a Web presence. In this way, although, as such, not a form of intellectual property, domain names now perform an identifying function similar to that of a trademark. Because of the way in which people and search engines operate, most businesses use their trademark or trade name as their domain name, and this has caused conflict with the advent of predatory practices, known as 'cybersquatting.' These developments, and international efforts to resolve these conflicts, is described in Chapter III(c) below.

30. The patent system has also migrated to the Internet, as businesses have sought to recoup research and development costs in digital technologies by patenting their online business methods. The Japanese Patent Office defines 'business method inventions' broadly as "inventions which are concerned with methods or systems of doing business using computers or the Internet."³⁵ In fact, the technology-intensive nature of e-commerce means that many of its constituent processes may be patentable subject matter so long as the legal criteria for patentability are met. Some controversy has developed over patents granted with respect to business methods, originally by the United States Patent and Trademark Office and increasingly in other jurisdictions such as Australia, Canada, Japan and the Republic of Korea.³⁶ High profile patents in America have included the U.S. 5,851,117 (Priceline.com), U.S. 5,960,411 (Amazon.com) and U.S. 5,193,056 (State Street Bank).³⁷ A case involving *State Street Bank*, raised awareness of the patentability of business methods, as the United States Court of Appeals held that methods of doing business should be subject to the same legal requirements for patentability as applied to any other processes, that is, they should be new, useful and non-obvious.³⁸ Patents have since been granted for electronic shopping carts,³⁹ online credit card payment systems,⁴⁰ and for a system to manage personal privacy in a computer network.⁴¹ The European Patent Office has taken a more restrictive approach, requiring that the subject matter of a patentable invention have a 'technical character' or involve 'technical teaching'. Some countries, such as Chile and South Africa, exclude protection for business method patents under their patent laws.⁴²

31. The 'global information society' foreseen in the early days of the Internet has yet to become a worldwide reality, but the focus on information remains the key to the e-commerce economy. Although a good proportion of the information on the Web is in the public domain, that is, freely available to use and copy, an increasingly significant amount is protected as intellectual property.⁴³ The enthusiasm excited by the availability of so much online information, easily accessible through browsing and hyperlinking, contributed to a general expectation that this information was free and its use uncontrolled. Even the term 'hacking', as initially understood, was a positive concept that implied expertise in computer programming.⁴⁴ The intellectual property community has been addressing the challenge of this perception, in an effort to determine and exert legal rights over digital content, ever since.⁴⁵

32. Difficult issues are raised for this community by the vast availability of intellectual property on the Internet, the ease of copying and distribution of copies and the relative anonymity afforded to these digital transactions. Key among these challenges is the expectation among many users that information and intellectual property sourced or downloaded from the Internet should be free of charge. Many .com companies took the approach that it was initially more important to make their products (information) available freely, and thereby establish a market presence, and to address issues of revenue and profit at a later stage. Most of these companies did not endure the burst of the .com bubble in March 2000. Many companies that continue to operate in the online environment have developed other business models, often relying on advertising revenue or value-added service charges to finance their free services and information. Surveys have shown that consumers are gradually becoming more willing to pay for online content.⁴⁶ However there remains a general reticence to pay for material that was once free. The business and financial news sites, offered by CNN, ABC and The Wall Street Journal, for example, have been relatively successful in charging for content, as they established an early pattern of charging for information and found customers who saw value in their purchase.⁴⁷ This trend suggests that education of online consumers is key, through programs designed to raise awareness at an early age of the value of intellectual property and the realization that unauthorized copying of such works is theft.

33. The intellectual property community, including film and music creators, software developers, authors and publishers, are now exploring ways in which to make their products available online, while protecting their rights and recouping their investment. To some extent, the uptake of fee-based intellectual property services is dependent on the efficient management of these rights, as well as the availability of workable and secure methods of micropayments that would enable pay-per-unit purchases, and the building of consumer confidence in online payment security, privacy and consumer protection. At the same time, however, creators and intellectual property rightsholders need to feel sure that they can protect their property from piracy and control its use, before they will be willing to make it available online.

34. The current levels of online piracy were described by an American litigant as "a 21st century piratical bazaar."⁴⁸ New international laws such as the WIPO Internet Treaties, described in Chapter III(a), adapt the intellectual property laws to facilitate the dissemination of protected material over the Internet. Technological tools such as encryption and watermarking provide practical solutions and, together with digital rights management initiatives, contribute to meeting this concern. However, many creators and rightsholders remain apprehensive. When the American singer-songwriter, Bruce Springsteen, released his new CD 'The Rising', only ten advance discs were released and none were available online before being sold in stores, in an effort to thwart online piracy.⁴⁹ Conversely, some music executives use online 'leaks' of forthcoming musical releases to win fans and media exposure, and thereby boost disc sales.

35. One approach is to employ business models by which subscribers, eager to access intellectual property in the form of music, film, software or text, can be persuaded to legitimately purchase these products, instead of relying upon illegal markets. Surveys have shown that the priority for users of online music file-trading services was availability of a wide number of compositions, and ready access, while the free price was a lesser consideration.⁵⁰ Subscription services, based on secure and monitored access are being explored. In the music industry, for example, subscription music downloads and streaming services are available through a variety of proprietary systems including, eMusic, MusicNet, FullAudio, Rhapsody, Liquid Audio, Inc. and Pressplay,⁵¹ that seek to replace the popularity of more than 200,000 unauthorized online music sharing sites, including Napster, Morpheus and KaZaA.⁵² These 'peer-to-peer' (P2P) networks enable millions of users to upload and share their music and film files via the Internet, often infringing copyright in the works they trade. As described in Chapter III(a) below, the copyright industry in various countries has taken legal action to prevent the widespread piracy via the P2P networks, with some success, although the problem is not yet solved. Some systems, like Napster, use a centralized server to process the transfers, while others are decentralized and more difficult to regulate, and the industry has grappled with how to target millions of individual pirates and rapidly evolving technological methods. Although the music industry is now embracing the online medium, it continues to grapple with the problem of piracy, as 950 million pirated music discs were sold in 2001, in a world pirate-music market valued at US\$4.3 billion.⁵³

36. The online distribution of audiovisual works has been held back until recently by the lack of bandwidth, which has prevented the relatively large data files required to transmit video to be downloaded or streamed at a speed or quality acceptable to consumers. Nevertheless, more than a million users are typically online with Morpheus, a P2P site that enables users to trade video files, and most PCs now come with CD burners that can be used to compress and store films on discs without any significant loss in quality. While the technology is still developing to facilitate accessible video-on-demand and digital pay-per-view, the film industry is yet to match the progress of the music industry, and most legitimate film sites are webcasters that distribute short made-for-online film and animation material which is largely experimental and available free of charge.⁵⁴ As in the music industry, copyright owners in the film industry are also reluctant to release their audiovisual works online while there is a lack of adequate copy protection that could protect them from rampant piracy, that today sees 400,000 to 600,000 films downloaded illegally every day.⁵⁵ For these reasons, major studio executives have forecast that film distribution via the Internet will account for only 4% of revenue by distribution channel by 2010.⁵⁶

37. In the radio and webcasting industry, Internet radio has been luring customers away from traditional media sources by providing access to thousands of global radio broadcasts in real time.⁵⁷ Since January 2001, the total audience time spent listening to monitored Web radio stations increased by 749%.⁵⁸ For some time, Internet radio was unregulated, however in the United States, the Digital Millennium Copyright Act, 1998, established that webcasters must pay royalties to record companies that hold the song rights for the copyright music they play under statutory compulsory licenses for digital performances.⁵⁹ The issue is then what royalty rates such entities can afford to pay as, as discussed above, listeners have not traditionally paid for content received online. Following a June 2002 determination of royalty rates by the United States Government (of 0.07 cents per song per listener), KPIG, the first commercial radio station to stream its broadcasts over the Internet suspended its webcasts, stating that it was not making money from its Internet services and could not afford new royalties.⁶⁰

38. In the changing digital marketplace, convergence of media, communications and information technologies have been mirrored by the convergence of multinational corporate structures, as content providers in the copyright and entertainment industries have merged with communications, cable and online service providers. One example has been the merger in 2000 of America Online (AOL) and Time Warner, to create the world's largest media conglomerate, a 'clicks and mortar' company that combined AOL's online service capacities with Time Warner and its media offspring (including cable networks CNN and HBO, Time Warner movies and Warner Music) the Time Warner cable network, linking 21 million American homes, and significant media content (32,000 television titles and magazines including Time and Sports Illustrated).⁶¹ Immediately prior to the merger, the combined market value of AOL and Time Warner was US\$290 billion, creating a post-merger company valued at US\$350 billion, which had fallen by August 2002 to a market capitalisation of about US\$45 billion.⁶² Similarly, the merger in December 2000 of the trans-Atlantic media and communication group Vivendi with Seagram created the media conglomerate Vivendi Universal, that included Universal Music Group, Vivendi Universal Entertainment and Publishing, MP3.com, American publisher Houghton Muffin, French broadcaster Canal Plus, joint-ownership (with Vodafone) of the Vizzavi Internet portal, a 44% stake in Cegetel telecom company, as well as utilities units Vivendi Environment. Vivendi Universal reported losses of 13.4 billion euros and a debt of 19 billion euros in 2001, and losses of 12.3 billion euros for the first half of 2002.⁶³ Arguably, the relative roles of the content provider and access provider, and how these two entities may successfully syndicate, remains a question for a changing marketplace in the digital economy.

39. Intellectual property has migrated to the Internet, both in substance and as a concept vital to the success of e-commerce enterprises. The 'Wired Index' of the key businesses in the global economy, published by Wired Magazine, states that these companies "have demonstrated a mastery of five essentials needed to prosper in the technology-enabled, borderless world: innovation, intelligent use of new tools, strategic vision, global reach, and, above all, networked communication."⁶⁴ It is notable that the premier criteria, innovation, also serves as the basis for the intellectual property system, such that the promotion of innovation and the protection of its products is the goal of intellectual property law, more imperative than ever in this digital age.

13. *Supra* note 11.
14. See Cyveillance Study Report "Internet Exceeds 2 Billion Pages," (July 10, 2000) at <http://www.cyveillance.com/web/newsroom/releases/2000/2000-07-10.htm>.
15. See John Perry Barlow, "Selling Wine Without Bottles: The Economy of Mind on the Global Net," in *High Noon on the Electronic Frontier: Conceptual Issues in Cyberspace*, (Peter Ludlow, ed., 1996) at pp.9-10.
16. See Lawrence Roberts, "Internet Still Growing Dramatically Says Internet Founder," (August 15, 2001) at <http://www.caspiannetworks.com/press/releases/08.15.01.shtml>
17. Nua reported approximately 580.78 million people had Internet access, representing some 10% of the world's population (see NUA Internet Surveys, "Onwards and Upwards," (August 12, 2002) at <http://www.nua.com/surveys/>). Netsizer shows more than 812,000,000 at Internet users as at August 2002, and its website allows viewers to watch this number constantly growing, at <http://www.netsizer.com>.
18. The European Union Database Protection Directive (No. 96/9/EC of March 11, 1996), according to the legislative history of Section 71, defines a database as "a collection of independent works, data or other materials arranged in a systematic or methodical way or individually accessible by electronic or other means" and requires Member States' database protection laws to protect the owners of databases from the "repeated and systematic extraction and/or reutilization of insubstantial parts of the contents of the database by implying acts which conflict with a normal exploitation of that database."
19. A 'computer program' is "[a] set of instructions capable, when incorporated in a machine readable medium, of causing a machine having information processing capabilities to indicate, perform or achieve a particular function, task or result." See WIPO Model provisions on the protection of computer software, Geneva, 1978. Refer generally to an article by Daewhan Koo, "Patent and Copyright Protection of Computer Programs," Issue 2, *Intellectual Property Quarterly*, pp.172 –211 (2002).
20. Some non-proprietary software, called 'open source', has been developed based on a certification standard set by the Open Source Initiative that requires the source code of a computer program to be made freely available to the public, relying on peer review to detect errors and encourage software development under a form of license that allows modifications and derivative works (see <http://www.opensource.org/>).
21. See Report by the Business Software Alliance, "Seventh Annual BSA Global Software Piracy Study," (June 2002), at <http://www.bsa.org/resources/2002-06-10.130.pdf>. See also D. Ian Hopper, "Group Says Software Piracy on Rise," *FindLaw Legal News*, (June 10, 2002) at <http://www.findlaw.com>.
22. Refer generally to an article by Jonathon Krim, "The Internet Gets Serious: Security, Copyright Problems Must be Resolved as Medium Matures," *Washingtonpost.com*, (June 28, 2002) at <http://www.washingtonpost.com>.
23. eBookWeb (see <http://www.ebookweb.org>) reports traffic of 500,000 page views per month, while Palm Digital Media (<http://www.palmdigitalmedia.com>) reported sales of 180,000 titles in 2001. See M.J. Rose, "Promising Chapter in E-Book Story," *Wired News*, (July 9, 2002) at <http://www.wired.com>.
24. See, for example, ScienceDirect, which provides access to over 1,500 technical journals and 40 million scientific articles on the basis of a license fee or pay-per-view (at <http://www.sciencedirect.com>).
25. See David D. Kirkpatrick, "Battle Over Access to Online Books," *The New York Times on the Web* (June 17, 2002) at <http://www.nytimes.com>.
26. See <http://www.ebrary.com/>. One controversy has arisen over the business practice of RosettaBooks, a company that offers libraries unlimited access to 100 20th century classics for an annual fee of between \$200 and \$1,000, having acquired the rights to publish digital editions of the books directly from the authors, on the basis that their existing contracts were exclusive of digital rights. The U.S. Court of Appeals upheld a restrictive view of the scope of publishing licenses under State law in *Random House Inc. v Rosetta Books LLC*, 2d Cir., No. 01-7912, 3/8/02. See Kirkpatrick (2002), *supra* note 25.
27. For example, Online Newspapers.com (at <http://www.onlinenewspapers.com/>), Paperboy (at <http://www.thepaperboy.com/welcome.html>) and the Internet Public Library (at <http://www.ipl.org/div/news/>), consolidate the sites of thousands of newspapers from around the world.
28. There are currently more than 40,000 blogs (see <http://www.blogfinder.com> and <http://www.daypop.com/top>), the most popular of which may be purchased by large media enterprises. See Andrew Sullivan, "An Honest Blogger Will Never Make a Quick Buck," *The Sunday Times*, p.4 (October 13, 2002); Jonah Goldberg, "Attack of The Blogs," *The Washington Times* (May 24, 2002) at <http://www.washingtontimes.com>; and John C. Dvorak, "The Blog Phenomenon," *PC Magazine* (February 5, 2002).
29. The Museum Computer Network (at <http://www.mcn.edu/resources/sitesonline.htm>) and Virtual Library Museums Pages (at <http://vimp.museophile.com/>) list more than 1,000 museums and museum-related sites globally that maintain digital collections online.
30. See Artnet (at <http://www.artnet.com/>).
31. See Barbara Hoffman, "Public Domain Artwork: Who Owns the Rights?," *IP Worldwide*, pp.52 –58 (2000).
32. For example, see the Digital Art Source (at <http://www.digitalartsource.com/index2.shtml>).
33. The Digital Art Museum at <http://www.dam.org/intro.htm>.
34. See Laura Rush, "Top E-Commerce Companies Analyzed," *Internet.com*, (July 30, 2002) at <http://ecommerce.internet.com>; and Robin D. Rusch "Apple Shines: 2001 Brand of the Year Results," *Brandchannel.com* (March 4, 2002) at http://www.brandchannel.com/features_effect.asp?id=82#more.
35. See Chapter 1, "Implementing Guidelines for Inventions in Specific Fields", Japanese Patent Office (April 1, 1997), at <http://www.jpo.go.jp/infoe/sisine.htm>. See Koo (2002), *supra* note 19, pp.172 –211, at p.174.
36. See Toru Takano, "Research and Study on the Trend of New Areas (Business Method)-related Inventions," *IIP Bulletin*, pp.32-42 (2001); Thomas B Koch, "Patenting e-Business Methods in Europe," *International Internet Law Review*, pp.43-46 (April 2001); Reinier B. Bakels, "How to Find and Define Proper Boundaries for Patentability," Paper for the Workshop 'Frontiers of Ownership in the Digital Economy,' Paris, (June 10-11, 2002).
37. See Arun Chandra, "Protecting Business Methods in the United States," Vol. 5(4), *The Journal of World Intellectual Property*, pp.545-563 (July 2002).
38. *State Street Bank and Trust Co. v. Signature Financial Group, Inc.* (149 F. 3d 1368, 1375) Fed. Circ. 1998.
39. U.S. Patent No. 5,790,793, issued 8/4/98 to Thomas Higley.

40. U.S. Patent No. 5, 724,424, issued 3/3/99 to Open Market, Inc.
41. U.S. Patent No. 5,855,08, issued 12/29/99 to CyberGold, Inc.
42. See FICPI International Questionnaire Report, Rodney Cruise, "A Report on Patent Protection of Software, e-Commerce and Business Methods" (2001).
43. See James Hilton, "An Introduction to Copyright and Fair Use in the United States," Regents of the University of Michigan, Fathom, (2002) at <http://www.fathom.com>.
44. The term 'hacker' is defined by Webopedia as "a slang term for a computer enthusiast, i.e., a person who enjoys learning programming languages and computer systems and can often be considered an expert on the subject(s). Among professional programmers, depending on how it used, the term can be either complimentary or derogatory, although it is developing an increasingly derogatory connotation. The pejorative sense of *hacker* is becoming more prominent largely because the popular press has co-opted the term to refer to individuals who gain unauthorized access to computer systems for the purpose of stealing and corrupting data." at <http://www.webopedia.com/TERM/h/hacker.html>.
45. Refer generally to an article by Krim (2002), *supra* note 22.
46. A survey conducted by the Online Publishers Association of the online transactions of 1.1 million consumers found that consumers spent US\$675 million for digital goods and services in 2001, nearly double the US\$350 million spent in 2000. See Matt Richtel, "A Shift Registers Willingness to Pay for Internet Content," New York Times on the Web, (August 1, 2002) at <http://www.nytimes.com>.
47. Business and news sites raised revenue of US\$214.3 million in 2001 from selling content, mainly through subscription fees. The Wall Street Journal has 650,000 subscribers, and the ABC has established an 'ABC News on Demand' fee-based subscription service. CNN has also introduced fees for access to its video material. See *ibid*.
48. As filed by the plaintiffs in an action brought by the Motion Picture Association of America (MPAA) and the Recording Industry Association of America (RIAA), against Kazaa, Musiccity.com Inc., Musiccity Networks Inc., and Grokster Ltd. in the U.S. District Court for the Central District of California, October 2, 2001. See "Kazaa Denies Copyright Infringement Claims; Developer Says P2P No Different Than HTTP," 7 (5) Electronic Commerce and Law Report, p.99 (January 2002).
49. See Chris Nelson, "Springsteen Protects His New CD's Online in an Old-Fashioned Way," The New York Times On the Web, (July 15, 2002) at <http://www.nytimes.com>.
50. See Gretchen Hyman, "The Fate of Online Music at Streaming Media," Internet.com, (April 25, 2002) at <http://www.internet.com>.
51. Universal Music Group offers content from some 1,000 albums via EMusic.com, a unit of Vivendi Universal Net USA, while MusicNet is a joint venture of AOL Time Warner, Inc., Bertelsmann AG, EMI Group and RealNetworks, Inc., Rhapsody is a service of Listen.com, and Pressplay is a joint venture of Vivendi and Sony Corporation.
52. See presentation of Richard Gooch, Senior Technology Adviser, International Federation of Phonographic Industry (IFPI), London, at WIPO Seminar on the WIPO Copyright Treaty and WIPO Performances and Phonograms Treaty: Opportunities and Challenges, Geneva, (May 16, 2002) at http://www.wipo.int/news/en/index.html?wipo_content_frame=/news/en/conferences.html.
53. See IFPI's "Music Piracy Report 2002," at <http://www.ifpi.org>.
54. Such short film sites include <http://www.atomfilms.com> and <http://www.ifilm.com>, and animation sites such as <http://www.icebox.com>, <http://www.entertainment.com> (featuring Warner Bros. cartoons) and <http://www.joecartoon.com>. See generally, Andrea D. Fessler, "The Next Frontier: Film Distribution Over the Internet," Issue 8, Entertainment Law Review, p.183 (2000).
55. Data compiled by research firm, Viant, suggests that 10 million users attempted to download illegal movies online, but only two million succeeded in obtaining complete copies, as reported by Reuters, "Internet Movie Piracy on the Increase," as reported by Nua Internet Surveys (May 30, 2002) at <http://www.nua.ie>.
56. According to an Andersen survey of major studio executives. See Report of Screen International and Andersen, by John Nedick, Rob Matthews and James Thomas, "The Big Picture: 2010: An Entertainment Odyssey," p.7 (2001).
57. Radio Locator, for example, lists over 10,000 radio stations available online (at <http://www.radio-locator.com/cgi-bin/page?page=about>).
58. Internet radio streaming audience size and demographic data provided by the MeasureCast Internet Radio Listening Index™, at <http://www.measurecast.com>.
59. In the case of *Bonneville International Corp. v Peters*, (E.D. Pa. No. 01-0408, 8/1/01), the United States District Court for the Eastern District of Pennsylvania affirmed that webcasts do not qualify for the statutory exemption available under the Copyright Act (17 USC. §114(d) (1) (A)) for transmissions of digital audio works, and are liable to record companies for royalties due on broadcasts simultaneously transmitted over the Internet. See "Webcasters of Radio Broadcasts Not Exempt From Paying Royalties to Record Companies," Vol. 6(31), Electronic Commerce and Law Report, p.839 (August 8, 2001).
60. See David Ho, "Rates Set for Royalties on Internet," June 20, 2002, Yahoo! News at <http://www.yahoo.com>, and Associated Press, "Internet Radio Pioneer Stops Webcasts," Yahoo! News (July 22, 2002).
61. See "Time Warner: An Entertainment Blue Chip," and "The First 'Clicks-and-Mortar' Company," BBC News, (October 11, 2000) at <http://www.bbc.co.uk>.
62. See "AOL Faces Shareholder Lawsuits," The Age, (August 12, 2002) at <http://www.theage.com.au>.
63. See Charles Masters, "Falling Down" and "Embattled Messier Ousted," The Hollywood Reporter, p.1 and pp.14-15 (July 2-8, 2002). See also Business Wire, "Vivendi Universal Reports First Half 2002 Results," New York Times On the Web (August 14, 2002) at <http://www.nytimes.com>.
64. The Wired Index is at http://www.wired.com/wired/archive/wired_index. See James Surowiecki, "The New Economy Was a Myth, Right? Wrong," Wired Magazine, p.90 (July 2002).

CHAPTER III



III. (A) COPYRIGHT AND RELATED RIGHTS

40. This Chapter addresses the developments that have taken place in the field of copyright and related rights, as a result of the impact of digital technologies. It begins with an introduction to 'digital copyright,' then addresses the WIPO 'Internet Treaties,' and describes emerging developments in law and technologies that relate to the protection and exploitation of copyright works online. Finally, it describes developments in licensing and collective management of rights that enable creators and rightsholders to manage and exploit their rights in the digital environment.

(i) INTRODUCTION TO DIGITAL COPYRIGHT

41. The protection of copyright and related rights covers a wide array of human creativity. Much of the creative content that fuels electronic commerce is subject to such protection. Under the most important international copyright convention, the Berne Convention,⁶⁵ copyright protection covers all "literary and artistic works." This term encompasses diverse forms of creativity, such as writings, both fiction and non-fiction, including scientific and technical texts and computer programs; databases that are original due to the selection or arrangement of their contents; musical works; audiovisual works; works of fine art, including drawings and paintings; and photographs. Related rights protect the contributions of others who add value in the presentation of literary and artistic works to the public: performing artists, such as actors, dancers, singers and musicians; the producers of phonograms, including CDs; and broadcasting organizations.

42. Digital technology enables the transmission and use of all of these protected materials in digital form over interactive networks. The process of 'digitization' allows the conversion of such materials into binary form, which can be transmitted across the Internet, and then re-distributed, copied and stored in perfect digital form. While the transmission of text, sound, images and computer programs over the Internet is already commonplace, this is also becoming true for transmission of audiovisual works such as feature films, as the technical constraints of narrow bandwidth begin to disappear.⁶⁶ Materials protected by copyright and related rights, spanning the range of information and entertainment products, constitutes much of the valuable subject matter of e-commerce.⁶⁷

43. Given the capabilities and characteristics of digital network technologies, e-commerce has had a tremendous impact on the system of copyright and related rights, and the scope of copyright and related rights in turn is affecting how e-commerce evolves. It is essential that legal rules are set and applied appropriately, to ensure that digital technology does not undermine the basic tenets of copyright and related rights. From one perspective, the Internet has been described as "the world's biggest copy machine."⁶⁸ Whereas earlier technologies such as photocopying and taping allow mechanical copying by individual consumers, they do so in limited quantities, requiring considerable time, and resulting in copies of lesser quality. Moreover, the copies are physically located in the same place as the person making the copy. On the Internet, by contrast, one can make an unlimited number of copies, virtually instantaneously, without perceptible degradation in quality.⁶⁹ And these copies can be transmitted to locations around the world in a matter of minutes. The result could be the disruption of traditional markets for the sale of copies of programs, art, books and movies.⁷⁰ In the music industry, for example, the emergence of Internet-based file swapping services such as Napster and others, described below, have enabled a large-scale exploitation of music and recordings without the authorization of the rightsholders. That exploitation was further aggravated by the simultaneous broad commercialization of CD burners and portable MP3 players, adapted to the most commonly used file format.

44. These challenges face the copyright industry at a time when the share of copyright in national economies is reaching unprecedented levels. The economic value of the copyright industry in the United States alone is estimated at US\$91.2 billion (motion pictures, music and television), according to International Intellectual Property Alliance (IIPA).⁷¹ The share of copyright industries currently represents 5.24% of the U.S. gross domestic product, growing more than twice as fast as the rest of the economy, a growth largely attributed to America's strong copyright laws and effective enforcement mechanisms. Similarly, a study of the copyright industries in the MERCOSUR countries reveals that the share of copyright-protected activities in the value added of Uruguay was 6% in 1997, and of Brazil was 6.7% in 1998, accounting in the latter for 1.3 million jobs.⁷² This significance gives weight to the copyright industries' search for technical and legislative solutions to protect copyright from digital piracy.

45. It is therefore critical to adjust the legal system to respond to the new technological developments in an effective and appropriate way, and to do so quickly and continuously, because technologies and markets evolve increasingly rapidly. This will ensure the continued furtherance of the fundamental guiding principles of copyright and related rights, which remain constant whatever may be the technology of the day: giving incentives to creators to produce and disseminate new creative materials; recognizing the importance of their contributions, by giving them reasonable control over the exploitation of those materials and allowing them to profit from them; providing appropriate balance for the public interest, particularly education, research and access to information; and thereby ultimately benefiting society, by promoting the development of culture, science, and the economy.

(ii) THE WIPO INTERNET TREATIES

46. Significant issues in the field of copyright have been examined for a number of years through various public and private processes, at WIPO and other international organizations, and at national and regional levels. Significant progress has been made, with international consensus having already emerged on some of these issues. In 1996, two treaties were adopted by consensus by more than 100 countries at WIPO: the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) (commonly referred to as the “Internet Treaties”).⁷³ The treaties, each having reached their 30th ratification or accession, both have entered into force: the WCT on March 6, 2002, and the WPPT on May 20, 2002.⁷⁴

47. The WIPO Internet Treaties are designed to update and supplement the existing international treaties on copyright and related rights, namely, the Berne Convention⁷⁵ and the Rome Convention.⁷⁶ They respond to the challenges posed by the digital technologies and, in particular, the dissemination of protected material over the global networks that make up the Internet. The contents of the Internet Treaties can be divided into three parts:

(1) incorporation of certain provisions of the TRIPS Agreement⁷⁷ not previously included explicitly in WIPO treaties (e.g., protection of computer programs and original databases as literary works under copyright law); (2) updates not specific to digital technologies (e.g., the generalized right of communication to the public); and (3) provisions that specifically address the impact of digital technologies.

48. The following paragraphs address: (a) the scope of rights protected under the Internet Treaties, highlighting new developments in response to digital technologies; (b) issues relating to enforcement and management of rights; and c) the status of implementation of the Internet Treaties internationally.

(a) *Scope of Rights*

49. The definition of rights, which determines their scope, is a key issue, as intellectual property is neither more nor less than the sum of the rights granted by law. Under existing treaties and national legislation, the owners of copyright and related rights are granted a range of different rights to control or be remunerated for various types of uses of their property. For both groups of rightsholders, these rights include rights of reproduction and of certain acts of communication to the public, such as public performance and broadcasting. The development of digital technologies, that enable transmission of works over networks, has raised questions about how these rights apply in the new environment. In particular, when multiple copies are made as works traverse the networks, is the reproduction right implicated by each copy? Is there a communication to the public when a work is not broadcast, but simply made available to individual members of the public if and when they wish to see or hear it? Does a public performance take place when a work is viewed at different times by different individuals on the monitors of their personal computers or other digital devices?

50. Perhaps the most basic right granted under both copyright and related rights is the right of reproduction, which under the Berne Convention covers reproduction “in any manner or form.”⁷⁸ This right is at the core of e-commerce, because any transmission of a work or an object of related rights presupposes the uploading of that work or object into the memory of a computer or other digital device. In addition, when the work or object is transmitted over networks, multiple copies are made in the memory of network computers at numerous points. It is therefore necessary to determine how the reproduction right applies to such copies.

51. In 1982, at a meeting of government experts co-organized by WIPO and UNESCO, a broad-based understanding was reached that uploading into a computer memory should be considered as an act of reproduction. This understanding was reconfirmed in 1996 in agreed statements to the WCT and WPPT, which state:

“The reproduction right . . . and the exceptions permitted thereunder, fully apply in the digital environment, in particular to the use of works in digital form. It is understood that the storage of a protected work in digital form in an electronic medium constitutes a reproduction within the meaning of the [relevant treaty right.]”⁷⁹

The appropriate application of the reproduction right in the case of temporary copies in computers’ random access memory (RAM) continues to be a subject of debate at the national and international levels. The key question is whether such copies always require the consent of the rightsholder in order to avoid infringement. Carefully tailored exceptions for such copies in certain circumstances have, for example, been enacted in the United States of America in the Digital Millennium Copyright Act (‘DMCA’),⁸⁰ and adopted by the European Community in its Directive on the harmonization of certain aspects of copyright and related rights in the information society (the E.U. Copyright Directive), both of which are described below.⁸¹

52. The WCT (Article 8) and the WPPT (Article 14) also clarify the extent of rightsholders' control when works, performances and phonograms are made available to the public for downloading or access on the Internet. For example, Article 14 of the WPPT provides:

"Producers of phonograms shall enjoy the exclusive right of authorizing the making available to the public of their phonograms, by wire or wireless means, in such a way that members of the public may access them from a place and at a time individually chosen by them."

This type of transmission differs from broadcasting, in that the material is not selected and delivered by an active transmitter like a broadcaster to a group of passive recipients. Rather, it is transmitted interactively, that is, on demand from individual users, at a time and place of their choosing. The treaties require that an exclusive right be granted to control such acts of "making available," while leaving it to individual countries to decide how to categorize this right under national law.

53. Issues related to moral rights are also given new importance in the digital environment, as the new technologies offer unprecedented means for users to manipulate or 'morph' copyright works, creating rights in derivative works, and possibly infringing the original authors' moral rights of integrity. The WPPT (Article 5(1)) recognizes moral rights of attribution and integrity, as follows:

"Independently of a performer's economic rights, and even after the transfer of those rights, the performer shall, as regards his live aural performances or performances fixed in phonograms, have the right to claim to be identified as the performer of his performances, except where omission is dictated by the manner of the use of the performance, and to object to any distortion, mutilation or other modification of his performances that would be prejudicial to his reputation."

(b) *Enforcement and Management of Rights*

54. Issues of enforcement and management are not new, but take on added dimensions and urgency when works are exploited on digital networks. As noted above, the technologies pose substantial practical challenges. In order for legal protection to remain meaningful, rightsholders must be able to detect and stop the dissemination of unauthorized digital copies, accomplished at levels of speed, accuracy, volume and distance that in the past were unimaginable. And for e-commerce to develop to its full potential, workable systems of online licensing must evolve, in which consumers can have confidence. The answer to these challenges to a great extent will lie in the technology itself.

55. The WCT and the WPPT also break new ground in recognizing the emerging role to be played by technological protection measures, and by online management and licensing systems. They require Member States to provide two types of technological adjuncts to the protection of copyright and related rights, in order to ensure that the Internet can become a safe place to disseminate and license protected material.

56. The first technological adjunct is generally referred to as an "anti-circumvention" provision, and is addressed in the WCT (Article 11) and the WPPT (Article 18). For example, Article 11 of the WCT provides:

"Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law."

Such provisions relate to the need of rightsholders to rely on technological measures to protect their works against infringement on the Internet. No matter how ingenious the technology used to protect works against unauthorized use, equally ingenious ways may be developed to circumvent it. The resulting level of insecurity could prevent rightsholders from disseminating their valuable works on the Internet. Given the inability to achieve total security, a realistic goal is to make the technology sophisticated enough to deter the ordinary consumer from seeking to circumvent, while granting legal redress against those who represent a greater threat – hackers and those engaged in circumvention as a business.⁸² Toward this end, the treaties require Member States to provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures used by rightsholders to restrict unlawful and unauthorized acts. The treaty language is general enough to allow significant flexibility to national governments in determining the details of appropriate implementation.⁸³

57. As a second technological adjunct, the treaties protect “rights management information,” providing legal support to rights management systems, under the WCT (Article 12) and the WPPT (Article 19). For example, Article 12 of the WCT provides:

“(1) Contracting Parties shall provide adequate and effective legal remedies against any person knowingly performing any of the following acts knowing, or with respect to civil remedies having reasonable grounds to know, that it will induce, enable, facilitate or conceal an infringement of any right covered by this Treaty or the Berne Convention:

- (i) to remove or alter any electronic rights management information without authority;
- (ii) to distribute, import for distribution, broadcast or communicate to the public, without authority, works or copies of works knowing that electronic rights management information has been removed or altered without authority.

(2) As used in this Article, ‘rights management information’ means information which identifies the work, the author of the work, the owner of any right in the work, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a work or appears in connection with the communication of a work to the public.”

Rights management systems operate on the basis of electronic data that is attached to the works and objects of related rights.⁸⁴ The data may identify the author or performer, the rightsholder, and the work or object itself, and may further describe the terms and conditions for its use. Under the treaties, Member States must provide adequate and effective legal remedies against the deliberate removal or alteration of such information, and against the dissemination of works, performances or phonograms from which such information has been removed or altered, where these acts are performed with at least reasonable grounds to know that they will induce, enable, facilitate or conceal infringement. This will enhance the ability of rightsholders to exploit their property on the Internet, and allow consumers to rely on the accuracy of the information they receive so they can feel secure transacting online.

58. National legislation, in conformity with the treaties, makes provision against the circumvention of technologies designed to protect copyright works. Both the E.U. Copyright Directive, and the United States Digital Millennium Copyright Act (DMCA),⁸⁵ require protection for digital rights management systems that protect copyright in digital form. The E.U. Copyright Directive (Article 6.2) requires Member States to provide legal protection against the “manufacture, import, distribution, sale, rental, advertisement for sale for rental, or possession for commercial purposes of devices, products or components of the provision of services” for the purposes of circumventing technological measures, including encryption, scrambling or other copy control mechanisms. The DMCA, Title I, creates civil and criminal liability for circumvention of copyright protection technologies and for the knowing provision of false copyright management information or intentional removal of the same, providing a technical adjunct to the rights established by copyright law.⁸⁶

59. Faced with the threat of piracy heightened by the use of digital technologies, rightsholders are increasingly turning to technology to provide protection for their intellectual property. This approach is supported by the legal measures against circumvention of such technologies, in the WIPO Internet Treaties, as described above. Technological systems of protection include: anti-copy devices, access control, electronic envelopes, proprietary viewer software, encryption,⁸⁷ passwords, watermarking,⁸⁸ fingerprinting (user authentication), metering and monitoring of usage, and remuneration systems. Several industry and technology initiatives to set standards in various industries have emerged over the years, although none have yet established uniform standards for technological protection measures.⁸⁹

60. The music industry, for example, has developed copyproof compact disc (CD) technology that prevents CDs being played on computer disc drives. Copyproofing employs various technologies either by including errors in the data encoded on the CD, which allows the disc to be played on a standard CD player, but not on a CD-ROM, or by masking audio files as data files so that the CD-ROM drive cannot recognize the music.⁹⁰ The fact remains that these methods can currently all be circumvented. In the United States Government, various efforts have been made to pass copy protection legislation that will prevent the sale of any consumer ‘digital media device’ (broadly defined as any hardware or software that reproduces, displays or retrieves or accesses any copyright work) that does not meet Federal Government copy-protection standards.⁹¹ At the same time, the Government is exploring initiatives to mandate the introduction of copy-protection devices for digital television broadcasts.⁹²

61. In a case brought under the DMCA, *Universal City Studios, Inc. v. Reimerdes*,⁹³ the defendant was found liable for copyright infringement for posting DeCSS, a decrypter for the Content Scramble System (CSS) used to encode motion pictures on DVDs, so as to enable them to play on Linux.⁹⁴ The Court rejected the defendant's argument that an injunction would prevent fair use of the decrypted material. Another case, *United States of America v. Elcom Ltd. a/k/a ElcomSoft Co. Ltd, and Dmitry Sklyarov*,⁹⁵ concerned criminal liability under the DMCA for circumvention of copyright protections in electronic book software sold by Adobe Systems Inc., where the circumvention program was legal under Russian law, but banned by the DMCA anti-circumvention measures. This case has been viewed as a test of the constitutionality of the DMCA, and the breadth of protection it grants over non-digital material, at a perceived risk to preservation of individual rights of free use.⁹⁶

(c) Status of the WIPO Internet Treaties

62. As mentioned above, the WCT entered into force on March 6, 2002 and the WPPT on May 20, 2002. As at October 2002, the WCT has 37 and the WPPT has 38 States party. Since their adoption in 1996, the treaties have been implemented in a number of important legislative instruments, including the E.U. Copyright Directive, and the United States Digital Millennium Copyright Act (DMCA), summarized below.

63. For most countries, particularly those already in compliance with existing treaties, the implementation of the Internet Treaties does not require major rewriting of the law on copyright and related rights, nor any fundamental change in policy or the structure of their legal systems. Typically, a country may need to clarify the scope of existing rights to add the right of "making available" on demand. Because the scope of related rights has traditionally been more limited, additional rights such as moral rights may need to be added to protect performers or record producers. Although not required by the treaties, a country may choose to make adjustments to the limitations and exceptions to rights it provides. Finally, each country must provide adequate and effective legal remedies against the circumvention of technical protection measures and the deliberate deletion or alteration of rights management information, although these provisions are drafted generally in the treaties so as to give national legislators flexibility in their implementation.

Digital Millennium Copyright Act ("DMCA")

The United States of America enacted legislation entitled the "WIPO Copyright and Performances and Phonograms Treaties Implementation Act of 1998" as Title I of the Digital Millennium Copyright Act ("DMCA").⁹⁷ Title I of the DMCA contains, among other things, provisions to implement obligations concerning technological measures and rights management information.

Title I of the DMCA also requires the United States Copyright Office to conduct two studies jointly with the National Telecommunications and Information Administration of the Department of Commerce, one dealing with encryption and the other with the effect of technological development on existing exceptions in the Copyright Act, as part of an ongoing evaluation on the relationship between technological changes and the copyright law. Accordingly, two reports have been submitted to the Congress.⁹⁸ Title II of the DMCA entitled the "Online Copyright Infringement Liability Limitation Act" deals with the issue of the liability of service providers based on a copyright-specific approach.

"E.U. Copyright Directive"

The European Parliament and the Council of the European Union adopted a Directive 2001/29/EC on the harmonization of certain aspects of copyright and related rights in the information society in May 2001. Member States are obligated to implement the provisions of the Directive by December 22, 2002. The European Community and its Member States have already signed the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT). This Directive serves, among other things, to implement a number of the new international obligations provided under the WCT and the WPPT. The European Community's instruments of ratification will be deposited with WIPO following the deadline for the Member States to transpose the Directive into their national legislation.

The Directive contains a number of important provisions to implement the Treaties, including those concerning the application of the right of reproduction in the digital environment and temporary reproduction; the right of making available applicable to interactive transmissions on networks such as the Internet; limitations and exceptions in the digital environment; technological measures for protection; and rights management information.

64. *Further promotion of the WCT and the WPPT.* Although the Internet Treaties have now entered into force, in order that they be truly effective in the digital environment, they must become widely adopted in countries around the world, and their provisions must be incorporated in national legislation. National implementation of the Internet Treaties assists in promoting the development of e-commerce, both domestically and internationally, and encourages direct foreign investment, by providing greater assurance to businesses that their property can be safely disseminated there. Therefore WIPO is devoting substantial resources to offering guidance to governments that are in the process of adhering to the Treaties and transforming them into national legislation. Such guidance includes the provision of legal advice, consultations with national governments and organization of national and regional meetings.

(iii) EMERGING COPYRIGHT ISSUES

65. Although the WCT and the WPPT now provide basic norms clarifying and safeguarding the protection of copyright and related rights in relation to the digital environment, and serve both as a guide and a model for national legislation, certain unresolved questions remain at the international level.⁹⁹ In addition, a number of important recent developments have occurred in the field of copyright and related rights that have far-reaching implications for the industry, and that are being addressed in legislatures, judiciaries and other international fora. While courts in some jurisdictions are responding to new types of infringement resulting from the use of digital technologies, new laws are also being debated and passed in some countries to ensure effective protection and enforcement of rights in the digital era. At the same time, copyright industries are also adapting their business methods and uses of technology to exploit the digital opportunities, while guarding against new risks.

66. Some of the most significant of these issues are detailed below, addressing the following:

- (a) *scope of copyright protection in the digital environment;*
- (b) *responsibility of online service providers;*
- (c) *rights of performers in the digital environment;*
- (d) *rights of digital broadcasters - webcasting and digital film and television online;*
- (e) *linking of copyright information online - deep-linking and framing;*
- (f) *protection of databases; and*
- (g) *peer-to-peer file sharing systems such as Napster.*

Three of the most important of these issues are currently under discussion at WIPO with a view to the possible development of new international instruments, namely: audiovisual performers' rights, broadcasters' rights, and *sui generis* protection for databases that do not qualify for copyright protection. The first two are already protected by multilateral treaties, but require updating and improvement; the latter would establish a new form of international protection. Additional activities in other fields are also under consideration.¹⁰⁰

(a) *Scope of Copyright Protection in the Digital Environment*

67. *Exceptions and limitations to copyright.* The copyright system has traditionally maintained a balance between protecting creators' property rights and the exclusive right to control use of copies of their work, and the public good in fair access to and use of such materials. Copyright laws permit exceptions to copyright, in order to maintain this balance. In the United States, for example, this balance has been enshrined in the principle of 'fair use'¹⁰¹ limitations on the rights of authors, while in other countries such as Australia and the United Kingdom, the concept is recognized by way of statutory exceptions to copyright infringement for 'fair dealing'.¹⁰²

68. This balance is now in question because of digital technologies, and the way in which they have changed how we access and use information.¹⁰³ In the physical world, we can access copyright materials without infringing copyright, by borrowing a book from a library, for example.¹⁰⁴ Online, each access to such material involves an act of copying, where the simple act of viewing a website requires the computer to make temporary local copies of the data in our computers' random access memory (RAM). In addition, increasingly, copyright works are not sold, in the way that a book or videocassette was sold in the past, but are licensed

under certain terms and conditions of use. Our access to copyright works is increasingly governed by contract, which may impact on the application of exceptions and limitations, the traditional checks and balances of the copyright system, aimed at preserving the rights of consumers and the public interest.

69. A number of questions are raised about exceptions and limitations to rights in the digital environment. Are existing exceptions and limitations, written in language conceived for other circumstances, too broad or too narrow? Some exceptions, if applied literally in the digital environment, could eliminate large sectors of existing markets. Others may implement valid public policy goals, but be written too restrictively to apply to network transmissions. New circumstances may also call for new exceptions. These questions must be examined in light of the international standard established for the permissibility of exceptions and limitations to certain rights, known as the 'three-step test'. Under this test, as set out in the Berne Convention and TRIPS Agreement, exceptions are permitted "in certain special cases" that "do not conflict with a normal exploitation" of the work and "do not unreasonably prejudice the [owner's] legitimate interests."¹⁰⁵

70. As to the scope of these exclusive rights, the WIPO Internet Treaties continue to provide flexibility to individual countries to develop exceptions and limitations that are appropriate to their particular circumstances. The general 'three-step' test applied to the reproduction right in the Berne Convention and to all rights in the TRIPS Agreement is extended to apply to all rights in the Berne Convention and in the WCT (Article 10) and the WPPT (Article 16). An important agreed statement in the WCT (concerning Article 10) and the WPPT (concerning Article 16) clarifies that this test permits countries to extend existing exceptions and limitations into the digital environment, or to add new ones, as appropriate. For example, the WCT provides:

"Agreed statement concerning Article 10: It is understood that the provisions of Article 10 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. Similarly, these provisions should be understood to permit Contracting Parties to devise new exceptions and limitations that are appropriate in the digital network environment.

It is also understood that Article 10(2) neither reduces nor extends the scope of applicability of the limitations and exceptions permitted by the Berne Convention."

71. As described above, the goal of policy makers is to achieve an appropriate balance in the law, providing strong and effective rights, but within reasonable limits and with fair exceptions. If this effort is successful, the result should be a positive impact from all perspectives. Trade in copyrighted works, performances, phonograms and other protected objects will become a major element of global e-commerce, which will grow and thrive along with the value of the material that is traded. If rightsholders are secure in their ability to sell and license their property over the Internet, they will exploit this market fully and make more valuable works available through this medium. Appropriate limitations and exceptions will continue to safeguard public interest uses. The result will be a benefit to consumers, a benefit to rightsholders, a benefit to service providers, and a benefit to national cultures and economies – a true 'win-win' situation.

72. *Preserving authors' rights online.* Attention has been drawn to the scope of copyright law in an online context, in a practical sense, by two significant cases in the United States of America. They raise the question to what degree authors retain the right to control and license their works, when those works are re-compiled or re-distributed electronically in the digital environment. In the case of *The New York Times, Co. v. Tasini*, the United States Supreme Court affirmed a decision in favor of the American National Writers Union against various news distributors, which had been selling freelance writers' material to electronic databases, including Lexis/Nexis, without any additional payment or negotiation of electronic rights with the authors. The Court found that the electronic re-publication of the writers' works constituted copyright infringement, and that the writers were entitled to receive royalties for the secondary use.¹⁰⁶ This reasoning was also upheld in *National Geographic v. Greenberg*, where the United States Supreme Court declined to hear an appeal from an earlier Appeals Court decision that the reproduction of freelance photographers' work in a searchable CD-ROM collection of past magazine editions involved a new use, for which the original authors were entitled to receive royalties.¹⁰⁷ Through such cases it is becoming clear, at least in some jurisdictions, that the legal characterization of uses of copyright works in an electronic context is being addressed so as to preserve and reaffirm the rights of creators in the digital environment.

73. *Open source software movement.* The 'open source' movement in the software industry has adopted a different stance towards asserting intellectual property rights in software, which are traditionally proprietary and protected by copyright law, and in some jurisdictions patent law.¹⁰⁸ Open source refers to the development of software which is publicly available in source code form, in conformity with the certification standard issued by the Open Source Initiative (OSI).¹⁰⁹ The software, although usually copyright

protected, is distributed free of licensing restrictions and thus encourages users to run, modify, copy and distribute the software freely, so long as certain conditions are met, including that the program's source code remains publicly available and the holder of the source code license does not collect royalties. The movement is designed to encourage collaborative software development, to remove programming errors or bugs and promote derivative works.

(b) *Liability of Internet Service Providers*

74. One issue of some concern in the intellectual property and Internet communities is the question of who should be liable for copyright infringement that takes place online. This issue is raised by the very nature of digital networks. When a work is transmitted from one point to another, or made available for the public to access, numerous parties are involved in the transmission. These include entities that provide Internet access or online services ('ISPs' or 'OSPs'). When such service providers participate in transmitting or making available materials provided by another which infringe copyright or related rights, are they liable for the infringement? Such liability could arise in one of two ways: if the service provider itself is found to have engaged in unauthorized acts of reproduction or communication to the public, or if it is held responsible for contributing to or making possible the act of infringement by another.

75. Such issues have arisen under Chinese copyright law, for example, in the case of *Wang Meng v. Century Interconnecting Telecom Co. Ltd*, which involved a service provider on whose website was posted works of six well-known Chinese novelists without their permission.¹¹⁰ The defendant argued that China's Copyright Law does not address the Internet, and therefore that digital works could not infringe copyright. The Court found for the plaintiffs, holding that no derivative work was created simply by the process of digitization and that Chinese copyright law gave the author the exclusive right to exploit and profit from the work both online and off. The ISP was found to be in a position to control the distribution of the works, and was therefore liable for infringement.

76. The liability issue has significant international implications. Because the Internet is a borderless medium and its markets are global, it is critical that compatible approaches to this issue be adopted around the world. It is not necessary that the approaches be identical: they may differ depending on the particular circumstances and legal traditions in any given country. But they must be interoperable if global networks and electronic commerce are to develop smoothly. This issue was the subject of a WIPO workshop in 1999, that examined national and regional legal frameworks, notice and takedown systems, and the possibilities for international harmonization.¹¹¹ WIPO continues to monitor developments regarding this issue, including legal decisions, marketplace events and emerging legislation.

77. During the Diplomatic Conference on the WIPO Internet Treaties in 1996, the issue was intensively debated. The ultimate result was that the treaties are essentially neutral on the subject, with the issue of liability left to national legislation to determine. There is, however, one reference to the issue, in an agreed statement to the WCT, which provides that: "[i]t is understood that the mere provision of physical facilities for enabling or making a communication does not in itself amount to communication within the meaning of this Treaty or the Berne Convention."¹¹² The statement clarifies that the mere provision of wires used to communicate, for example, does not constitute an act of communication. But the statement is limited in its application; it does not cover a number of activities that service providers may engage in, and it does not deal with concepts of liability for contributing to the infringement of another.

78. Since 1996, a number of legislative solutions to this issue have begun to emerge.¹¹³ These statutes differ as to whether they address copyright only, or take a 'horizontal approach'— that is, a rule governing liability of service providers regardless of the grounds for illegality of the transmitted material. In other words, the horizontal approach covers not only copyright infringement but also other laws such as libel or obscenity.¹¹⁴ There are laws now in force in Germany and Sweden, which approach the issue from a horizontal perspective. Japan also has introduced the 'Provider Liability Law',¹¹⁵ which states that a provider is liable only if it is technically possible to prevent transmission of the infringing material; and the provider knows of the existence of the material and; (i) knows that it is infringing or (ii) reasonably ought to know that it infringes (Art. 3 (1)). A person whose rights have been infringed can ask a provider to disclose information about the person transmitting the material if the information is necessary for a legal claim or other legitimate reason (Art. 4(1)).

79. The European Community has adopted a Directive on Electronic Commerce with provisions that will harmonize the treatment of liability among its Member States, again using a horizontal approach.¹¹⁶ Some commentators have argued that there are inconsistencies between the E.U. Copyright Directive and the E.U. E-Commerce Directive on the issue of online service provider liability.¹¹⁷

80. The alternative approach of implementing copyright-specific laws to determine online service provider liability, has been adopted by other countries, including Hungary, Ireland, Singapore and the United States of America. In the United States of America, Congress enacted copyright-specific legislation as part of the 1998 Digital Millennium Copyright Act (DMCA), after legislation in past years establishing different standards in other areas of the law. As part of the DMCA, the 'Online Copyright Infringement Liability Limitation Act', establishes 'safe harbors' to shelter ISPs from liability for copyright infringement in certain circumstances.¹¹⁸ The DMCA sets down guidelines with respect to copyright infringement online, although it does not define when a provider is liable for copyright infringement and, in this respect, the existing principles of U.S. copyright law apply. Instead, the DMCA defines those categories of provider activity where providers are exempt from liability for damages¹¹⁹ provided that: the provider is merely acting as a 'passive conduit' for the information, is not the producer of the information, and has responded expeditiously to remove or disable access to infringing material upon notice from the copyright holder (the so-called 'notice and takedown' provisions). To qualify for immunity, the provider must also implement a policy that terminates the subscriptions of repeat infringers, and accommodate and not interfere with technical measures put in place to protect and identify copyright works.

81. In one U.S. case testing these 'safe harbor' provisions, *ALS Scan, Inc. v. Remarq Communities, Inc.*, the issue was whether a service provider was liable for providing access to 'adult' news groups that contained unauthorized copies of the plaintiff's photographs, after having been informed that the site was infringing.¹²⁰ In this case, the provider argued that it would only remove the materials when the infringing items were identified and listed with sufficient specificity, a difficult task given the number of photographs on the site. The Court found that the plaintiff had met its notice requirement and that, once notified, the provider could not rely upon the immunity granted by the DMCA. Action was also initiated in the United States of America under the DMCA, when 13 record companies requested the Court to order four ISPs to block access to a China-based website, Listen4ever.com, that was alleged to violate U.S. copyright laws.¹²¹ The English-language site offered thousands of copyrighted songs for free download, before going offline upon initiation of the legal action.

(c) *Rights of Performers in a Digital Environment*

82. While the WPPT does protect the rights of performers, its provisions relate to the aural aspects of performances, and not to audiovisual performances. This is because diverse systems have evolved to protect audiovisual performers in different parts of the world, some based on legal rights and others on contract, and a compromise between the systems is difficult to achieve. While such performances are protected by many national laws, and also by the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, no multilateral treaty covers the rights of performers in authorized audiovisual fixations of their performances. The possible extension of international protection for performers to cover audiovisual performances might be perceived as a general question, not specific to e-commerce. It is, however, highly relevant because audiovisual performances will be used in an increasing measure on the Internet, through film and music videos for example, as available bandwidth increases.¹²² Moreover, digital technologies permit the unauthorized manipulation and distortion of performers' images and voices (e.g., morphing). A satisfactory solution of this issue is therefore an important component of an overall clarification of the rights involved in e-commerce.

83. In December 2000, WIPO organized a Diplomatic Conference on the Protection of Rights in Audiovisual Performances.¹²³ While the scope of this Conference included a number of basic questions regarding that protection, it was also an important attempt to establish appropriate rights in connection with the convergence of the digital and audiovisual worlds. The Conference resulted in a general understanding between the participating government delegations concerning most substantive provisions of a WIPO audiovisual performances treaty, except for the international recognition of transfer of rights under national law.

84. The deadlock was related to the consequences that the international recognition of statutory transfers of exclusive rights could entail. Those countries in favor of such recognition demand to have certainty and clarity on the producer's ability to exercise the exclusive rights of authorization for the effective exploitation of films in a global environment. Opposition to that recognition is founded mainly in the concern that this could imply the application of domestic rules on the legal regulation of transfer or entitlement or rights in respect of the exploitation of films all over the world.

85. The Diplomatic Conference recommended to the WIPO Assembly of Member States, at its meeting in September 2001, to reconvene the Conference with the aim of finally adopting the new treaty. However, during the Assembly, Member States considered that it was necessary to continue consultations to resolve outstanding issues over the above-mentioned provision. They therefore decided to carry the issue over to the 2002 session of the WIPO Assemblies.¹²⁴ In the absence of such contacts, at the 2002 meetings the General Assembly approved the Director General's proposal that the International Bureau should conduct informal consultations with interested parties to explore the possibilities of convening an "informal ad hoc meeting" in the first half of

2003 “for the purpose of having informal exchanges on the remaining differences and possible ways of resolving them.” Meanwhile, WIPO is maintaining a close dialogue with governments and non-government organizations to bridge the existing gaps and to find possible ways forward in the negotiations.¹²⁵

(d) *Rights of Digital Broadcasters*

86. *Webcasting and digital film and television.* The Internet offers manifold opportunities for copyright content providers and distributors to supply their material to a global audience, including via; (i) webcasting and (ii) digital film and television online.

(i) *Webcasting*

87. Webcasting, also known as ‘streaming’, is the process of digitally transmitting musical recordings, and radio and television broadcasts over the Internet.¹²⁶ The process is designed not to create permanent copies on end-listeners’ computer hard drives, although software is available that allows users to convert streamed audio files into other formats which can then be transferred via peer-to-peer (P2P) systems, described below.¹²⁷ Some legislatures have responded to this new method of distribution of copyright works.

88. The United States Digital Millennium Copyright Act (DMCA), for example, provides a statutory license for webcasters whose services are not provided on-demand, and gives copyright holders the exclusive right to authorize webcasts that are provided on-demand.¹²⁸ ‘On-demand’ transmissions are interactive broadcasts where the user chooses which songs to listen to from the website. Apart from broadcasting transmissions, the DMCA addresses four categories of webcasting: (1) sites providing original programming; (2) sites broadcasting secondary transmissions for analog radio; (3) aggregator sites facilitating access to commercial radio stations; and (4) entertainment sites that provide both audio and entertainment news.

89. The practice of retransmission of terrestrial radio stations’ over-the-air broadcasts via the Internet has also raised copyright concerns. In *National Football League et al v. iCraveTV.com*, a case brought by United States and Canadian motion picture and broadcasting companies, the Court issued a permanent injunction to prevent iCraveTV.com, a Canadian website, from converting copyrighted television material from 17 North American television stations into digital Web broadcasts and streaming them over the Internet.¹²⁹ The unauthorized re-transmission was found to be an infringement of the plaintiffs’ exclusive right to perform and display their works in the United States. Although iCraveTV’s transmissions may have been legal under Canadian copyright law, they were not in accordance with United States law, and it was then impossible to prevent United States users from gaining Internet access to the service. iCraveTV has since relaunched its online service, broadcasting network and cable television programs, this time using copyright protection systems to prevent users in the United States from gaining access.¹³⁰

(ii) *Digital film and television*

90. In the audiovisual industries, the Internet offers an unprecedented channel for global distribution of film and television works. However, until recently, major audiovisual companies have hesitated to engage wholeheartedly in the digital environment. The slow increase in bandwidth, which has restricted the speed at which large files can be transferred, had recently protected the industry from rampant piracy. However movie studios’ fears have now been raised by the availability, before their official release, of pirated versions of most mainstream movies. For example, ‘Star Wars Episode II: Attack of the Clones’ was available online over the file-swapping service, Internet Relay Chat, a week before its official premiere. Research has shown that between 400,000 and 600,000 films a day are being downloaded over such file sharing networks and pirate video-on-demand sites.¹³¹ Changes in film release-business structures, such as ‘day-and-date’ releases, that open films simultaneously in various regions, help to stem piracy but do not solve the problem. A further concern is with the so-called ‘analog hole’, referring to the gap in protection created when digital signals are transformed into analog upon entry into a television set, at which point any copy protection mechanisms that have been incorporated in the digital file are removed. The unprotected analog film can then be uploaded to the Internet and pirated without restriction. Another development closely watched by the film industry has been the proliferation of ‘fan films’, digital films that feature the characters and mise en scène of a film, a popular example being Star Wars, without the authorization of the copyright holder.¹³² In one case, an animator distributed a Superman fan film online, prompting the rightsholders, DC Comics, to send a cease-and-desist letter.¹³³

91. New developments are also taking place in the field of digital interactive television (iTV), involving the use of:

- ■ ■ personal or digital video recorders (such as TiVo, ReplayTV and UltimateTV) that allow viewers to digitally record shows by genre or actor, and pause and rewind live TV;

■■■ video-on-demand (VOD), allowing viewers to choose which program to watch either by pay-per-view or by subscription; and

■■■ two-way programming, that enables viewers to interact with other viewers.¹³⁴

These developments have, however, been delayed by the current lack of copy protection that would secure the rightsholders' property in digital broadcasts. One such technology, put forward by the motion-picture and consumer electronics industry-based Broadcast Protection Discussion Group, and approved by the Federal Communications Commission, is the 'broadcast flag', a marker embedded in digital-TV broadcasts that controls how consumer electronic devices can play and record the broadcasts, and designates those which cannot be copied.¹³⁵ Another initiative, the Hollywood-based Copy Protection Technical Working Group has been established to develop protection for digital television and video distribution.¹³⁶

92. Broadcasting organizations have traditionally enjoyed protection in many countries for their broadcasts under either copyright or related rights, and their rights are protected under both the TRIPS Agreement and the Rome Convention. However, in this field, as with performers' rights, an updating of existing international norms is needed. Existing treaties may not adequately ensure that broadcasters (and providers of valuable programming not necessarily covered by copyright and related rights, such as certain sports transmissions) are able to safeguard and exploit their efforts and investments over the Internet. A new treaty could protect against digital piracy and manipulation of broadcast signals, furthering the use of the Internet as a medium for broadcasting activities, as described above.

93. Discussions are ongoing at WIPO concerning the potential for a treaty dealing with the rights of broadcasting organizations, and treaty language proposals have been received by WIPO from the European Community and a number of Member States.¹³⁷ The WIPO Secretariat prepared a technical background paper on the protection of broadcasts aimed to illuminate the issues involved during further consideration of this matter by the Standing Committee on Copyright and Related Rights.¹³⁸

(e) *Linking of Copyright Information Online*

94. *Liability for linking and deep-linking online content.* The software that underlies the operation of the Internet allows information to be 'hyperlinked' or 'hypertext reference linked' within and between sites.¹³⁹ Such linking typically occurs when the creator of one website provides a reference to another website, usually indicated in colored text or icons, using software that allows the user to click on the reference and view the content on the linked website. While enabling users to surf fluidly from one website to another, this practice also raises copyright issues. A simple link from one website to the home page of another website does not normally raise concern, as the use of such links may be equated to the use of footnotes to refer to other sites.¹⁴⁰ Employing a simple link, the user merely views the material from the linked site, and is aware that it originates from a different website. This process does not create a copy of the linked work, other than that created in the random access memory (RAM) of the computer. Often, no permission is required to make a link to a site, either because the website owner has given an implied license to link by posting his material on the Web, or by characterizing such linking as fair use.¹⁴¹

95. However, other linking practices are more problematic. 'Deep-linking' connects a user directly to secondary material on another site, bypassing that site's home or front page, and may amount to an infringement of copyright in the secondary material. Similarly, an 'embedded link' creates a reference to content from another website such that the secondary material appears to be content originating from the first site. Such links, also called 'in-line' links, do not require a copy to be made of the linked material, but may violate the author's right to display or communicate their work to the public.¹⁴²

96. The use of deep-links to retrieve pages from the targeted site's database may, in some jurisdictions, amount to an infringement of rights in the database that contains the secondary information. In Europe, the E.U. Database Directive requires Member States to "provide for a right for the maker of a database which shows that there has been qualitatively and/or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents to prevent extraction and/or re-utilization of the whole or a substantial part, evaluated qualitatively and/or quantitatively, of the contents of the database." Further, States are required to protect database owners from "repeated and systematic extraction and/or re-utilization of insubstantial parts of the contents of the database implying acts which conflict with a normal exploitation of that database."¹⁴³ This Directive has been invoked to prevent a news aggregator's website from deep-linking to articles on commercial newspapers' sites. In a case under Danish copyright law, the Denmark Bailiff's Court issued an injunction to prevent Newsbooster.com from providing services that enabled users, for a fee, to use key words to prompt Web 'bots' (automated computer programs) to search news sites.¹⁴⁴ The defendants were prohibited from offering deep-linking search services, from reproducing and publishing headlines from the sites and from distributing e-newsletters with deep links. In Germany, Munich's Upper Court has found similarly in a case brought by the German newspaper Mainpost against the search engine, Newsclub, which was found to have violated the copyright protection in

Mainpost's news database by searching and linking directly to it.¹⁴⁵ However, a decision of the District Court of Groningen, Netherlands (under appeal), held that a newspaper's job listing section does not constitute a database under Dutch law, and cannot therefore be protected from being excerpted on a job search website.¹⁴⁶

97. In the United States, where no *sui generis* database law currently exists, copyright owners have found protection against deep-linking by relying upon laws related to copyright, trespass, breach of contract, and common law misappropriation.¹⁴⁷ In the case of *EBay Inc. v. Bidder's Edge Inc.*, it was found that use of Web bots to extract data about auctions from an auction site amounted to trespass.¹⁴⁸ In the case of *Ticketmaster Corp. v Tickets.com Inc.*, Microsoft's Seattle Sidewalk online service published a deep link into Ticketmaster's website from which users could purchase tickets, bypassing Ticketmaster's home page, and therefore its revenue-producing advertising and corporate information. In that case, however, the District Court found that the deep links were neither deceptive nor unfair competition, nor did they constitute a violation of copyright, because the Web address, or uniform resource locator (URL), itself is not protected material.¹⁴⁹

98. The issue of deep-linking was also addressed in a U.S. case, *Kelly v. Arriba Soft Corporation*, involving a 'visual search engine' that searched the Web to reproduce many miniature 'thumbnail' images with in-line links to the original photographs, that appeared in full size in a window on the defendant's site when users clicked on the miniature image.¹⁵⁰ One photographer, whose work was included among the images without authorization, sued the search company for copyright infringement. Although the Court of Appeals found in the circumstances that the compilation of the miniature images was fair use,¹⁵¹ it also found that the use of embedded links to frame the full scale photograph did infringe the photographer's copyright, violating his right to display the works publicly and diverting users from his site. In another case brought under the DMCA, *Universal City Studios, Inc. v. Reimerdes*, the Court granted a permanent injunction to prevent the defendant from linking to sites that downloaded the DeCSS copyright circumvention program, finding that this practice was equivalent to trafficking in circumvention devices in contravention of the DMCA.¹⁵²

99. *Liability for framing online content.* A related issue has arisen as a result of the practice of using browser software to 'frame' content from another online source. The legal difficulty arises because the user sees the original website content, which may be copyright protected, framed by a different website, with a different URL, and possibly with different logos and advertising. This practice may constitute copyright infringement in some jurisdictions, because a copy of the material is made in the user's computer memory. In Germany, for example, framing is considered an infringement of the transformation right provided by Articles 62.1 and 39 of the German Copyright Act. In the case of *Roche Lexicon*, a Hamburg court decided that the RAM copies created in the process of framing constituted a reproduction of the work, that must be authorized by the rightsholder.¹⁵³ It is clear that the law will continue to respond, through legislative and judicial developments, to questions raised by new practices of connecting information and users to material online. Because of the borderless operation of the Internet, it is preferable that these responses are compatible, and enable users and website owners to exploit the Web of online information with confidence.

(f) Protection of Databases

100. As described above,¹⁵⁴ the economic value and importance of databases, as repositories for digital information, have vastly increased in the digital environment. There have been calls for an extension of the scope of existing international protection for databases. Databases that are original by virtue of the selection and arrangement of their contents are already protected under copyright. But copyright does not protect databases that are not original, such as a database that contains the entire universe of relevant facts and is therefore not selective, and is arranged in a non-creative numerical or alphabetical way.

101. In addition, even those databases that do qualify for copyright protection may receive a very narrow scope of protection, allowing competitors to take and market substantial portions of the information they contain. Such databases often represent significant effort and investment for their makers, and these investments are jeopardized by the ease and inexpensiveness of copying them with today's technologies. In response to this problem, the European Community has adopted the 'E.U. Database Directive' requiring its Member States to provide a separate *sui generis* form of protection for databases.¹⁵⁵ On the other hand, concerns have been raised that, if not carefully balanced, a new form of protection might result in a monopoly position of information providers or otherwise be detrimental to the scientific, research and education sectors.¹⁵⁶

102. The issue of protection of databases is being considered within WIPO as one aspect of the WIPO Digital Agenda, concerning the principle of protection of non-original databases, as well as the form which such protection might take. Many governments have indicated that further analysis is required of this issue. Five studies were commissioned by WIPO on the economic impact of non-original database protection in developing countries and countries in transition, and are now available.¹⁵⁷ These studies were distributed in conjunction with the meeting of the Standing Committee in May 2002, and a further study has been commissioned, while the issue remains on the agenda of the Standing Committee on Copyright and Related Rights (SCCR).

(g) *Peer-to-Peer File Sharing – Napster*

103. The music industry has been at the vanguard of the intellectual property system in confronting the issues raised in the copyright field as a result of emerging digital technologies. This is largely because music is ideally suited to distribution over the Internet. Revenues from digital music are forecast to reach US\$2.1 billion by 2007, representing 17% of the music trade.¹⁵⁹ The development of compression software, such as MP3 (mpeg3),¹⁶⁰ has enabled music files to be digitized and uploaded and downloaded freely from Web or file transfer protocol (FTP) sites. In a case relating to MP3.Com, an online music service, *UMG Recordings, Inc. v. MP3.Com, Inc.*, the Court found MP3.Com liable for copyright infringement for facilitating the piracy of digital music, by making available its database of more than 80,000 musical recordings, almost all unauthorized.¹⁶¹

104. Music piracy has, however, reached unprecedented levels because of the emergence of 'peer-to-peer' (P2P) file sharing systems, that facilitate the swapping of music and video files between users.¹⁶² The original file sharing system was Napster, described below, although numerous P2P services have since emerged, including Aimster,¹⁶³ KaZaA and Grokster (using the FastTrack network), and Morpheus (using the Gnutella network). It is now estimated that 99% of all files transferred through such P2P systems are unauthorized.¹⁶⁴ This is significant, in light of estimates that 5.16 billion unlicensed audio files were shared across P2P networks in 2001, a volume predicted to increase to 7.44 billion files in 2005.¹⁶⁵

105. The most notorious file sharing service is Napster, which uses a centralized server acting as a search engine to assist users to download music from the computers of other Napster subscribers. At its height, in February 2000, Napster was logging 1.57 million simultaneous subscribers. The downloading of music by Napster users was found, in the case of *A&M Records, Inc. v. Napster, Inc.* to be a direct infringement of copyright held by the recording companies. The Court determined that, even though Napster was not charging for its service and users were downloading the music for their personal use, the downloading was not a 'fair use' under the United States Copyright Act (§107).¹⁶⁶ It was found that "repeated and exploitative copying of copyrighted works, even if the copies are not offered for sale, may constitute commercial use."¹⁶⁷ The copies were found to have been made to save the cost of purchase. This practice is cited particularly by the recording industries as a factor in the 15% drop in music sales experienced in the past two years.¹⁶⁸ In addition to finding Napster users liable for direct infringement, the Court found that Napster itself had engaged in contributory infringement, with actual and constructive knowledge of the infringing activities, and vicarious copyright infringement, because it had a direct financial interest in drawing users to its service as customers. By June 2001, the number of Napster users had fallen to 120,000.

106. However, while legal action has largely restrained Napster from making copyright music available online without authorization, it has proven more difficult to regulate other P2P systems with different network architecture that does not require a centralized server to process search requests and downloads, such that each user's computer acts as a search engine. These systems, including Gnutella, Audiogalaxy, KaZaA, MusicCity, Morpheus and Grokster, are now said to attract some 11.3 million users in Western Europe alone.¹⁶⁹ Nonetheless, such P2P systems have been targeted in anti-piracy campaigns, including legal action initiated by the Recording Industry Association of America (RIAA) and the Australian National Music Publishers Association against Audiogalaxy, which resulted in the P2P system removing most of its music files for download.¹⁷⁰

107. In Japan, in a suit brought by 19 Japanese record companies, the Tokyo District Court issued a temporary injunction against Japan MMO, to prevent it from operating a P2P service called File Rogue.¹⁷¹ In the Republic of Korea, in a suit brought by the Recording Industry Association of Korea, the Sungnam District Court closed down Soribada, the Republic of Korea's most popular P2P network.¹⁷² Similar legal action has been initiated in the United States of America by the Motion Picture Association of America against the operators of other P2P networks, including KaZaA, MusicCity and Grokster, for infringement of copyright in motion picture and sound recordings.¹⁷³ It is notable, however, that in the Netherlands, the Amsterdam Court of Justice found in favor of KaZaA against Buma Stemra, a Dutch music rights organization. The Court held that KaZaA was not liable for individuals' abuse of its file sharing software.¹⁷⁴

108. An alternative approach taken by the copyright industries is to target individual file-traders, through educational institutions or corporations where much of the piracy occurs, although this approach is limited because of sheer volume of users and privacy concerns. In one such action, an American corporation, Integrated Information Systems, reached a US\$1 million settlement with the RIAA following evidence of illegal downloading and sharing of copyrighted MP3 files over its corporate network.¹⁷⁵ In another action, RIAA has taken action to compel an online service provider to reveal the name of a customer accused of large-scale illegal file swapping.¹⁷⁶ As mentioned above, some United States record companies have also sought to bring legal action directly against the Internet service providers, in an attempt to block access to offshore music sites, rather than attempting to initiate legal action in foreign jurisdictions against the site owners themselves.¹⁷⁷

109. Controversy has also arisen as a result of efforts by the copyright industries to protect their rights against piracy by using digital technologies to monitor users of copyright material for potential violations. The film industry has employed search engines designed to scour the Web for copyright movies on P2P networks, and then to send cease-and-desist letters to users via their Internet service providers (ISPs). The providers, in turn, are locating potential infringers by monitoring high bandwidth users who are most likely to be exchanging copyright audiovisual material, because significant bandwidth is required to swap large movie files.¹⁷⁸ An alternative technique employed by the copyright industries is to distribute 'spoof' files of music or film works onto the P2P networks, that contain only limited or degraded portions of the work, and are designed to discourage piracy by making the illegitimate file services less attractive to use.¹⁷⁹

110. Draft legislation was introduced into the United States legislature by a Democrat Congressman, Howard Berman, designed to immunize copyright owners from liability for any offences they may commit while "disabling, interfering with, blocking, diverting, or otherwise impairing" the unauthorized use of their works on publicly accessible peer-to-peer file-sharing networks.¹⁸⁰ The legislation would provide copyright owners with a safe harbor from liability under American law for using tools including decoys or file blocking to prevent piracy of their copyright works on P2P networks, such as Napster. However, the proposal has provoked criticism from domestic and international sources. One issue is raised by the fact that immunity would only extend to American law, but could expose industry executives to liability in other jurisdictions for unauthorized access to computer systems, or violation of national privacy laws.¹⁸¹

(iv) LICENSING AND RIGHTS MANAGEMENT IN THE DIGITAL ARENA

(a) *Licensing and Collective Management of Rights*

111. As a reward for their creativity and investment, the copyright system grants creators exclusive rights in their works. Third parties are prohibited from using works in a manner that is covered by the exclusive rights, without obtaining permissions from the rightsowners. Rightsowners will usually grant such permissions in exchange for compensation (a "royalty") and on the basis of certain terms and conditions of use. These conditions are typically recorded in contractual arrangements concluded between rightsowners (or their representatives) and users ("licenses"). The exclusive rights conferred by the copyright system thus facilitate the commercial exploitation of creators' works.

112. Users of works can be either consumers (for example, a person purchasing a license for a computer operating system to be installed on his home computer) or intermediaries (for example, a book publisher who licenses the right to incorporate certain photographs in an encyclopedia). Often, intermediaries are also creators, but at a different stage of the production process, using the works of others as building blocks to which they add value for their own productions. The end product reaches the consumer either by way of a sale (the usual practice in the case of books, for example), implying a transfer of ownership in the physical object rather than in the rights themselves, or through a license (the usual practice in the case of software, for example), often depending on industry practices. In the case of a transfer of ownership, the rights and obligations of the parties with respect to the intellectual property incorporated in the physical object tend to be governed by law, whereas, in the case of licenses, they are mostly regulated by contract.

113. Licensing implies at least a minimum level of bargaining between the rightsowner and the person who wishes to use the work in a manner covered by the exclusive rights. Even assuming that the terms of use and the royalty are totally standardized, at the very least there is a need to conclude an agreement between the user and the rightsowner or its representative. In certain sectors, such licenses are concluded on a one-to-one basis directly between the rightsowners and the users. This is the usual practice in, for instance, the software industry. In certain circumstances, however, the need to conclude agreements on a one-to-one basis, and *a fortiori*, the individualized negotiation of their terms, can be too cumbersome. This is well illustrated by considering the situation of radio stations, which typically wish to broadcast a wide selection of the worldwide music repertoire. Radio stations would be forced to identify, and negotiate with, the rightsowner of each song or other musical composition that they seek to broadcast, with a view to concluding agreements with all of them. Given that the popular music repertoire is constantly evolving, this negotiation process would be constant. Clearly, the costs and efforts to secure the rights in the musical works concerned would be such an enormous burden for most radio stations that many of them would not be able to operate in a commercially viable manner. Ultimately, this would result in reduced consumer choice.

114. The inefficiencies described above associated with the individual exercise of rights are addressed by an intellectual property practice known as the "collective management of rights."¹⁸² While the collective management of rights takes many forms and the practice is more prevalent in certain industries than in others,¹⁸³ one common feature shared by such systems is that they offer centralized access to a plurality of works for the benefit of users. In certain cases, the services of collective management organizations may be more elaborate.

115. For example, in the field of musical works where there is a long tradition of collective rights management, the system typically extends beyond the mere offering of centralized access and includes, in addition to documentation, also licensing and distribution, as the three pillars on which the collective management of the rights of public performance and broadcasting is based. The collective management organization negotiates with users (such as radio stations, broadcasters, discotheques, cinemas, restaurants and the like), or groups of users, and authorizes their use of copyrighted works from its repertoire against payment and on certain conditions. On the basis of its documentation (information on members and their works) and the programs submitted by users (for example, logs of music played on the radio), the collective management organization distributes copyright royalties to its members according to established distribution rules. A fee to cover administrative costs, and in certain countries also socio-cultural promotion activities, is generally deducted from the copyright royalties.

116. Collective management organizations tend to be organized on a territorial basis and, in order to better represent the interests of their members, national collecting societies have associated themselves at the regional or international level. Examples of such associations are the International Confederation of Societies of Authors and Composers (CISAC)¹⁸⁴ and the International Federation of Reprographic Reproduction Organisations (IFRRO).¹⁸⁵ Typically, in the field of musical works, contracts of mutual representation are concluded between the various national societies on the basis of which a particular national society is entitled to manage not only its own national repertoire, but also the foreign repertoire of the other society. In return, its own repertoire will be managed and protected in each foreign country by the national society with which the contract of mutual representation has been concluded. As a result of this network of agreements between the various national societies, each of them is in a position to license the entire music repertoire of the world, which, from the point of view of the user, is highly desirable.

(b) *Digital Rights Management*

117. The digitization of content, together with the increased reliance by rightsholders and intermediaries (including collecting societies) on information technology, and the Internet, is influencing the traditional means of licensing intellectual property rights, as described above. The application of information technology to facilitate the exploitation of rights is commonly referred to as “digital rights management” (DRM). DRM systems are aimed at enforcing certain business rules in respect of the use of content protected by intellectual property. Typically, these business rules concern questions of who is entitled to access a work, at what price and on which terms. These terms address questions such as whether a user is entitled to make any copies of the work (and, if so, how many), for how long a user is entitled to access a work; whether a user can excerpt the work or make changes to it; whether a user can access the work on one or on multiple devices, etc. In effect, DRM systems aim to automate the process of licensing works and of ensuring that license terms are complied with. The following elements are often associated with DRM systems: (1) identifiers, i.e., numbers or codes permitting the unique identification of a piece of content (comparable to, for example, the ISBN number for books);¹⁸⁶ (2) metadata, i.e., information about the piece of content which may include, for example, the identity of the rightsholder, the price for using the work, and any other terms of use; and (3) technological protection measures, i.e., systems designed to ensure that certain usage rules are complied with, in particular those concerning access and copy control.¹⁸⁷

118. Legal support for DRM systems is to be found in the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), described above, in particular in their provisions on Obligations concerning Technological Measures (Article 11 of the WCT and Article 18 of the WPPT) and Rights Management Information (Article 12 of the WCT and Article 19 of the WPPT).¹⁸⁸ Because the technology holds the promise of curbing rampant piracy of copyright works, rightsowners have placed a great deal of faith in DRM, and technological protection measures in particular, as a means of enforcing their rights in the digital environment. Substantial investments have been made in recent years with a view to the development and deployment of the systems in question. This work is predominantly private-sector driven and many systems are already available, although not yet widely adopted by the market. One of the important issues that needs to be addressed is the need for interoperability, as many different proprietary systems would need to be able to function seamlessly together for them to become truly attractive to users. While there are many efforts aimed at establishing interoperable standards, the degree of consensus that is required among a broad range of industry sectors, as well as users, is a considerable challenge.¹⁸⁹ Nonetheless, mass market deployment of DRM systems is widely anticipated, as it is generally recognized that this likely would enhance legitimate access to copyright works on the Internet, to the benefit of users, intermediaries and content providers alike.

(c) *Trends in Licensing and Rights Management*

119. The interplay between information technology, the digitization of content, the Internet and the exploitation of intellectual property rights is dynamic and it is particularly difficult to predict what the future will hold precisely. Notwithstanding, the following remarks can be made with respect to the future of licensing and management of rights in the digital environment, based on experience gained and lessons learnt in recent years.

(i) Approaches to managing intellectual property rights in the digital environment, as well as the type of licenses reflecting these approaches, will need to take account of the malleable and vaporous nature of digitized content. Typical and by now well known features of such content include the ease with which it can be transmitted from one device to another, its global accessibility once it is made available on the Internet, and the ease with which it can be reproduced, in the absence of any technical protection measures. Because of the characteristics of digitized content and the Internet, users have certain expectations with respect to the manner in which they wish to consume such content. To the extent such expectations are reasonably legitimate, rightsowners' market offerings (including the structures and terms of licenses), will be perceived as more attractive if they are consistent with them.

(ii) Increased reliance on licensing and contracts as a means of managing intellectual property is a likely future trend. As content has become more fluid and its means of delivery to users more variable, market offerings can now conveniently be tailored to suit the particular needs of individual users, or groups of users, sharing common requirements. A more diversified and adaptable range of products is reflected in a corresponding need for greater flexibility in the structure of legal relationships between content providers, intermediaries and consumers. Content providers, and, to an increasing extent, institutional users are of the view that contracts, licensing in particular, offer much needed flexibility in this regard. Accordingly, certain sectors of the intellectual property industry in recent years have increased their reliance on licensing as a means of making available content to users. An example of a sector in which this trend can be discerned is the scientific, technical and medical publishing industry.

(iii) Some have argued that information technology and the Internet are a threat to collective rights management organizations, because they would enable rightsowners to control and measure themselves directly the use of works. For a variety of reasons, however, the more informed view probably is that these phenomena will, in most cases, require collecting societies to re-engineer their business models and operating procedures, rather than jeopardize their very existence. In part, the difficulty results from the fact that collective rights management organizations, like much of the intellectual property system, are organized on the basis of territoriality. The entities in questions are often organized on a national basis, each of them having competence to grant licenses for their territory. However, if a person residing in a particular territory makes a work available on the Internet, it immediately becomes globally accessible (much more so than, for example, a broadcast originating from within a particular country). In an effort to resolve this problem, certain collective management organizations have been working towards enabling their system of mutual representation to make available to users global Internet licenses.¹⁹⁰

(iv) A topic of increasing interest concerns the future of exceptions and limitations in the digital arena. While the WIPO Internet Treaties state that "contracting Parties [are permitted] 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," the question has been raised whether the broad use of licensing as a means of providing access to works, as well as the widespread deployment of technological protection measures, will not result in a situation where exceptions and limitations are rendered practically meaningless. The interface between technological protection measures, licensing, and limitations and exceptions is a complex and, as yet, poorly understood issue that is likely to engage industry, users, as well as policy makers, for quite some time.

(v) One, rather radical, method of dealing with loss of revenue for rightsowners resulting from digital piracy is the imposition of levies to compensate for the losses incurred. Levies can apply to any number of items, including, for instance, the hardware and devices purchased by users to access the pirated works. Resort to such levies, as a means of dealing with widespread infringing content in the digital age, recently has been observed in a number of countries.¹⁹¹ Invariably, the imposition of levies is a highly controversial measure. Those who oppose them argue that they reflect a misguided attempt to find a "quick fix" to a complex problem, introducing market distortions and, ultimately, hurting consumers who suffer subsequent price increases. Others maintain that they are one of a few realistic and effective means of safeguarding the interests of rightsowners in the face of rampant digital and Internet piracy.

III. (B) TRADEMARKS AND OTHER RIGHTS IN DISTINCTIVE SIGNS

120. This Chapter addresses issues that have arisen in the field of trademark law, describing the changing importance of trademarks when used to identify enterprises online, before proceeding to some issues that have developed as a result of use of trademarks on the digital networks, such as meta tags and linking practices. It then focuses on the principle of territoriality that underlies the trademark system, before introducing WIPO's programs in this area, in particular the Joint Recommendation Concerning Provisions on the Protection of Marks, and Other Industrial Property Rights in Signs, on the Internet, and Joint Recommendation Concerning Provisions on The Protection of Well-Known Marks, and concluding with a description of the concept of unfair competition as it applies in the digital environment.

(i) IMPORTANCE OF TRADEMARKS ONLINE

121. Trademarks are an important tool in commerce, enabling consumers to identify the source of a product, and to link the product with its manufacturer in widely distributed markets. The exclusive right to the use of the mark, which may be of indefinite duration, enables the owner to build goodwill and reputation in its enterprise and to prevent others from misleading consumers by false association with an enterprise with which they are not connected.

122. Trademarks are of essential importance in e-commerce. It is clear that trademarks carry at least as much significance on the Internet as in the off-line world. Particularly following the downturn of the .com economy, online enterprises are focusing on building recognition and goodwill, so as to inspire confidence in themselves and in their brands, and to remain competitive. Consumers, operating in virtual markets where face-to-face interactions are infrequent and there is little or no opportunity to inspect goods or services before purchase, are willing to reward trusted sources offering competitive products.¹⁹² In fact, a survey of e-commerce consumers reported that 80% of their decision whether to purchase is affected by issues beyond their online experience, and that most importance was placed on brand performance.¹⁹³

123. There is a general international consensus that trademark protection under law should extend to the Internet, and that its scope should be neither less nor more extensive than the protection granted in the physical world.¹⁹⁴ While existing national or regional trademark law systems apply, together with the relevant international treaties,¹⁹⁵ these provisions are of a general nature, applying on a territorial basis, and are not tailored for the borderless world of the Internet. The challenges of this new medium of commerce are not limited to trademarks; they exist with regard to all kinds of distinctive signs online, including trade names and geographical indications.

(ii) DEVELOPMENTS IN USE OF TRADEMARKS ONLINE

124. Trademark owners also face new challenges with respect to use of their marks in the digital environment. In the current marketplace, it is estimated that a typical large business owns between 200 and 500 corporate, product and service identities, that need to be registered, maintained and defended.¹⁹⁶ A corporate presence on the Internet requires trademark owners to defend their rights against new forms of trademark abuse and across millions of discrete sites, in multiple languages and domains. For example, trademarks and logos may be used in a site or domain name in connection with pornographic or other objectionable sites, or by trade competitors to divert search engine traffic, or dilute or tarnish a brand.

125. One provider of digital brand management services, VeriSign, estimates that 70% of domain names associated with top brands are not registered by the true brand owner, prompting rightsholders to defensively register their marks as domain names, and take action to protect their mark through domain name dispute resolution procedures, as described in Chapter III(c). In addition to cybersquatting, trademark owners are facing new types of infringement, including user-traffic diversion through keywords and meta tags, or unauthorized linking and framing, as described below. Added to this, the Internet has vastly increased consumer choice by making available a global spread of online enterprises which, together with a new diversity of media channels and increased consumer control, has contributed to an erosion of brand loyalty.¹⁹⁷ In this environment, trademark owners may employ services of online brand management and 'cybersurveillance' companies, that assist in the protection and enforcement of their trademark rights in a digital environment.

126. The means by which users locate businesses on the Internet has also changed. From the early development of the Internet, the domain name system has served to facilitate users' online navigation, using domain names and corresponding Internet Protocol (IP) numbers to identify computers connected to the network. Domain names, because they are easy to remember and

tend to mirror the entity's trademark or business name, have functioned both on and offline (in advertising and marketing practices) as business identifiers, in a manner similar to trademarks. However, users also have alternative mechanisms to locate sites on the Web, mainly through search engines such as Google, Excite, AltaVista or Yahoo!, as well as Internet keywords. The table below illustrates the relative accuracy of such search methods:

Website Reachability by Category of Request and by Search Method

Category of request	% success via direct domain name system access	% success via Google search	% success via RealNames*	Sample size
Top brand names	95%	96%	61%	100
Randomly-selected brand names	5%	21%	1%	100
Randomly-selected Boston Yellow Pages results	14%	46%	7%	100
Most selective colleges and universities in the United States of America	50%	99%	69%	100
Randomly-selected colleges and universities in the United States of America	31%	96%	61%	100
<i>Overall (Average / Total)</i>	<i>39%</i>	<i>72%</i>	<i>40%</i>	<i>500</i>

*Note: RealNames ceased business operations in June 2002, but is included as one example of a keyword system (see <http://www.realnames.com>).

Source: <http://cyber.law.harvard.edu/people/edelman/dns-as-search/>

127. Some Internet practices that may raise trademark issues, such as 'hyperlinking' and 'meta tagging', are important to facilitate users' navigation of the Web. Nevertheless, they raise concerns for trademark owners since they create associations and links, thereby increasing the risk of confusion, dilution or other forms of unfair exploitation of trademarks. A growing body of jurisprudence is developing in some countries, as courts and legislatures determine the limits of legal activity in this field.¹⁹⁹ While there are divergences of approach between countries based on their distinct national laws relating to trademarks, trade practices and unfair competition, it is difficult for enterprises to formulate a coherent marketing strategy for their activities in e-commerce. A number of these emerging practices are described below, namely: (i) use of trademarks as meta tags; (ii) sale of trademarks as keywords; (iii) pop-up advertisements; (iv) mousetrapping; and (v) linking and framing.

(a) *Use of Trademarks as Meta Tags*

128. A 'meta tag' or 'meta data' is a keyword or phrase embedded in a website's HTML (hypertext markup language) code as a means for Internet search engines to identify and categorize the contents of the website.²⁰⁰ Meta tags are not visible to normal users on the website itself (although they can be made visible together with the source code of the page), however, a search engine seeking particular keywords will find and list that particular site. The more often a keyword appears in the hidden code, the higher a search engine will rank the site in its search results. In various jurisdictions, trademark owners have challenged the unauthorized use of their trademark as a meta tag.²⁰¹

129. However, a trademark employed as a meta tag, because it is used in a way that is invisible to the average viewer, is not used primarily to distinguish particular goods or services, a finding that is generally necessary to establish trademark infringement. In some jurisdictions, the courts have nevertheless found that companies' use of competitors' names as meta tags constitutes unfair competition,²⁰² including the Indian case of *Tata Sons Limited v. Bodacious Tatas*,²⁰³ and the Italian case of *Genertel SpA v. Crowe Italia Srl*.²⁰⁴ In the United States of America, in the case of *Brookfield Communications Inc. v. West Coast Entertainment Corp*,²⁰⁵ the Court regarded the practice of meta tagging as potential trademark infringement, stating that such use might suggest sponsorship or authorization by the trademark owner, or that consumers looking for the products of the trademark owner might be misdirected and diverted to a competitor's website and be at least initially confused in their search for the trademarked goods.²⁰⁶

130. However, while as a general rule the unauthorized use of a trademark as a meta tag is considered unlawful, this approach is not universal. A number of cases brought by Playboy Magazine illustrate the complexity of the law in this area, and the diversity of outcomes even within one legal jurisdiction. In the American cases of *Playboy Enterprises Inc. v. Calvin Designer Label*,²⁰⁷ and *Playboy Enterprises, Inc. v. AsiaFocus International, Inc.*,²⁰⁸ the Courts prevented the defendants from using the marks 'Playboy' and 'Playmate' as meta tags on their websites, as well as in related domain names. In the case of *Playboy Enterprises Inc. v. Welles*, it was held that use as a meta tag of the Playmate trademark by a former Playmate of the year, to enable consumers to locate her website, was a fair use.²⁰⁹ Similarly, in *Playboy Enterprises v. Netscape Communications*,²¹⁰ the Court found that the use of trademarks as meta tags by the defendant's search engines, which linked adult entertainment advertisements to the trademarked terms, was in fair use.

131. It is becoming clear that the courts may allow the use of trademarks as meta tags where such use is not misleading or unfair. In the case of *Numtec Interstahl*, the Austrian Supreme Court held that it was legitimate for the defendant to use the plaintiff's trademark as a meta tag on its website, because such use enabled the public to be informed about products the plaintiff produced under patent, and because the average user would not be confused as to the ownership of the trademark.²¹¹ Similarly, the Regional Trial Court in the *Philippines, in Philippine Long Distance Telephone Company, Inc. v. Philippine League for Democratic Telecommunications, Inc. and Gerardo B. Kaimo*, found that the defendant's use of meta tags on a parody site clearly used to criticize the plaintiff's business schemes and raise public awareness of political issues, was not likely to confuse or mislead users and therefore did not amount to trademark infringement.²¹² In the American case of *Bihari v. Gross*, the use of a meta tag was found to be in fair use when the two parties are not competitors, and the tag was used by the defendant on a site critical of the plaintiff's business and therefore unlikely to cause confusion.²¹³ Similarly, in the case of *Promatek Industries Ltd. v. Equitrac Corp.*, the U.S. Court of Appeals modified an earlier opinion to clarify that use of another's trademark as a meta tag may be permissible if it is not deceptive, stating: "It is not the case that trademarks can *never* appear in meta tags, but that they may only do so where a legitimate use of a trademark is being made."²¹⁴

(b) *Sale of Trademarks as Keywords*

132. As noted above, Internet users are increasingly resorting to search engines to locate information online, as an alternative to relying on domain names to navigate the Web.²¹⁵ Users request a search of specified terms and the search engine then uses a mixture of manual and automated methods to locate those keywords on the Web, either in meta tags, URLs, keyword listing or based on a history of visits. Based upon this data, the search engine attempts to rank the information so that more relevant information is provided first. Most site owners seek to maximize their chance of being highly ranked in search results, because the higher the volume of users to a site, the higher the potential advertising revenue. Some of these search engines 'sell' keywords to advertisers who want to target their marketing, such that, whenever the keyword is entered into the search engine, an advertisement appears along with any search results. Retailers, for example, have purchased keywords so that their banner advertisements are displayed whenever certain trademarked products are the object of a search.²¹⁶

133. This practice has been challenged by trademark owners as a diversion of customers from their own website, or from the websites of their preferred or authorized web retailers. However the legal treatment of such cases is still developing. In the abovementioned case of *Playboy Enterprises Inc. v. Netscape Communications Corporation*, the Court denied preliminary relief stating that the 'Playboy' and 'Playmate' keywords sold by the defendant were used by searchers as common or generic words, not the marks.²¹⁷ In the pending case of *Mark Nutritionals Inc. v. FindWhat Services Inc.*, the plaintiff has filed suit against a number of Internet service providers, alleging that the search engines' sale of keywords containing its trademark altered the search results related to their product in a manner that amounted to trademark infringement and dilution.²¹⁸

(c) *Pop-Up Advertisements*

134. The pop-up ad is a window, not initiated by the user that appears on top of the content page when a site is loaded. A user who clicks on the pop-up graphic will be redirected to the advertiser's website, otherwise, and unless closed by the user, the pop-up window will close automatically after a short period of time.²¹⁹ Pop-up ads are used as marketing tools designed to capture consumers' attention, and are based on software designed to track users' online activity and then deliver targeted advertising based on their preferences.

135. In the American case of *Washingtonpost.Newsweek Interactive Co. v. Gator Corp.*, the Court issued a preliminary injunction that prohibited the defendant from enabling third-party advertising to appear on a user's computer screen while the user was viewing websites owned or affiliated with the plaintiffs, who were 16 online news companies.²²⁰ The Court found that the software violated the plaintiffs' trademarks by causing pop-up advertising to appear in proximity to them.

(d) *Mousetrapping*

136. 'Mousetrapping' is an aggressive marketing technique that forces users to remain on a specific website, sometimes while disabling their browser functions or flooding them with pop-up ads. Whenever the user tries to leave the site by using the 'back', 'forward' or 'close' buttons, a new window is automatically opened that prevents the browser from leaving the site. To exit the loop, the user is forced to end the task or reboot his computer.²²¹ A recent court decision at the suit of the United States Federal Trade Commission permanently barred the defendant from diverting or obstructing consumers on the Internet and from launching websites or webpages that belonged to unrelated third parties. In that case, the defendant was registering Internet domain names that were misspellings or versions of legitimate domain names and, once consumers arrived on the defendant's sites, they were unable to exit.²²²

(e) *Linking and framing*

137. As described above in relation to copyright,²²³ linking technologies enable Internet users to access content stored in the files of millions of individual computers and enable users to use links to retrieve information from files on the same or other websites.²²⁴ However, linking can also raise concerns of trademark infringement if it explicitly or implicitly suggests an unwarranted association between the linking and linked sites, and leads a user to believe that an unassociated web page is affiliated, approved, or sponsored by the trademark owner. In the United States case of *Ticketmaster Corp. v. Microsoft Corp.*,²²⁵ the plaintiff alleged that a deep link from the defendant's <seattlesidewalk.com> site to events pages within its site implied a false association that constituted unfair and deceptive trade practices and a dilution of its trademarks, in addition to copyright infringement, trespass and false advertising. The deep links, which bypassed the plaintiff's home page and its associated advertising, potentially diminishing its revenue, also conflicted with the plaintiff's contractual agreements with other companies that had paid to link to its site or advertise on its home page. However, the District Court did not address the issues as the case was settled.²²⁶ In the case of *Ford Motor Company v. 2600 Enterprises*,²²⁷ however, the Court denied the claims for alleged unfair competition and trademark dilution as a result of linking, because the defendants had not used the plaintiff's mark in commerce, nor in connection with the sale, or advertising for sale, of any goods or services.

138. The related practice of framing, also described above in relation to copyright,²²⁸ equally raises concerns of trademark infringement because of its potential to mislead or confuse viewers as to the origin of the site and the goods and services it displays. In contrast to linking, users viewing framed material usually remain on the original site and view content from both sites, possibly without being aware that the material has been called up from another site, raising the potential for trademark liability.

139. In the American case of *The Washington Post v. Total News, Inc.*,²²⁹ six major news organizations whose content had been framed by the defendant alleged misappropriation, trademark dilution and infringement, false and deceptive advertising, unfair trade practices, copyright infringement, and tortious interference with their advertising contracts. The defendant in this case had framed news content from the plaintiff's sites with advertisements that it had itself sold, thereby diverting advertising revenue and, by maintaining its own site address for the material, made it appear that the news originated from its site. A settlement was reached that permitted the defendant to maintain its links to the news sites, upon agreement to cease framing the plaintiff's material in association with any third party advertising or its URL.

(iii) **PRINCIPLE OF TERRITORIALITY AND USE OF TRADEMARKS ONLINE**

140. The developments described above share a number of common legal principles, arising from use of a trademark as a sign on the Internet, for example as meta tags or domain names. To a large extent, these relate to the territorial nature of trademark law in the context of trademarks used on a global medium such as the Internet. When a trademark is used on the Internet it is immediately visible to a global audience and may be considered to have global effect. This particular feature of the Internet makes it difficult for businesses to foresee in which countries their business activities might become legally relevant. Due to the particularities of Internet technology, it is often difficult to fit the 'use' of a trademark on the Internet into traditional legal concepts of use in the physical world. The issues described below are addressed further in part (iv) of this Chapter, in the context of the WIPO Joint Recommendation Concerning Provisions on the Protection of Marks, and Other Industrial Property Rights in Signs, on the Internet, described below.²³⁰

(a) *Acquisition of Trademark Rights Through Use of a Sign on the Internet*

141. In some countries, where trademark protection depends on prior use of the mark in that country, the question arises whether use on the Internet can satisfy such a use requirement and, if so, what kind of use would qualify as 'genuine use.' This is important because, in most countries, a trademark registration is subject to cancellation if the trademark has not been used within a certain period of time.²³¹ It seems that use of a trademark on the Internet may qualify as 'genuine use' for the purposes of use requirements.²³² The trademark owner will have to show that its trademark was actually present in that market, for example by proving actual sales or other commercially motivated relationships with customers in a country.²³³ This can be difficult if the trademark owner delivers goods or services exclusively over the Internet, or, in particular, if the goods or services are provided for free as in the case of Internet search engines, which have little or no physical presence outside the Internet.

(b) *Infringement of Trademark Rights Through Use of a Sign on the Internet*

142. The use of a sign on the Internet can infringe a trademark only if such use is deemed to have taken place in the country where the trademark enjoys protection. The question arises under what conditions the appearance of a mark on the Internet might constitute use in a particular forum and give rise to infringement. The notion of infringement can either be extensive or restrictive. Under an extensive concept of infringement, it would suffice that a sign is visible on a computer screen in the country where a conflicting right exists.²³⁴ The exclusive right in a trademark would then have an almost worldwide effect. It could even be used to block use that was neither aimed at a country, nor had an effect in that country over and above the visibility of the sign on a computer screen. Under this view, use of a sign on the Internet could provoke infringement claims in potentially every country in the world.²³⁵

143. Under a more restrictive concept, the finding of an infringement would require a connection between the use of the sign on the Internet and the country in which the trademark enjoys protection. While factors for establishing such a link with a particular country need to be considered, different countries may adopt different standards. If it were possible to agree on a set of criteria at the international level, it would be easier for businesses to foresee in which countries their activities on the Internet might become legally relevant. Under such an approach two further questions might be usefully addressed: First, would the finding of a connection with particular countries require that the user intended to produce an effect in those countries, or that such an effect was at least foreseeable? Secondly, would it be necessary to distinguish between various degrees of interactivity of the website on which the sign is used?²³⁶ Moreover, use in the context of advertising might have to be treated differently from use on websites for the purchase of goods or services.²³⁷

144. Related to these questions is the question of whether users of a sign on the Internet should be able to avoid a link with a particular country by the placement of a disclaimer on their website.²³⁸ Such statements may provide a flexible tool for enterprises to territorialize their use of a sign on the Internet, and to avoid infringement claims in particular territories where conflicting rights might exist. They pose, however, a number of problems: first, the user of a sign might have to search for conflicting rights all over the world in order to determine whether to disclaim particular countries ("This product is not available in countries X, Y and Z") or other individual rightholders ("We have no relationship with A, B, and C"). The practical difficulties of doing so would be increased by the fact that such statements would probably have to appear in the languages used in each of these countries. Second, such statements would always bear a residual risk of confusion.

(c) *Acceptable Unauthorized Use*

145. Legal systems may provide exceptions for the 'fair use' of a sign that is protected as a trademark.²³⁹ Such exceptions often apply when a sign is used fairly and in good faith in a purely descriptive or informative manner. It is also often stipulated that such use should not extend beyond that which is necessary to identify the person, entity or the goods or services, and that nothing is done in connection with the sign which might suggest endorsement or sponsorship by the trademark holder. Such exceptions may be equally applicable when a sign is used on the Internet.²⁴⁰ Other examples of acceptable unauthorized trademark use include use in a non-commercial context or use that is protected by the right of free speech, such as consumer criticism expressed in relation to a particular trademark.²⁴¹

146. Since approaches differ from country to country, international harmonized criteria could increase predictability in this context, for the benefit of participants in electronic commerce. It would not be realistic, or for that matter desirable, for such a harmonized approach to attempt to regulate every new means of using a distinctive sign on the Internet. In order to be technologically neutral, any attempt might only seek to identify general standards for distinguishing acceptable from unacceptable practices. In this respect, two different approaches might be useful: an attempt could be made to develop criteria concerning unacceptable use, or alternatively, definition could, in a general way, be given to forms of 'fair use' that each country would treat as acceptable in its territory.²⁴²

(d) *Global Effect of Injunctions*

147. The scope of a trademark right is determined not only by defining when such right is infringed, but also by specifying the remedies available to the rightholder when an infringement has taken place. If a trademark right has been infringed by the use of a sign on the Internet, the question arises whether its owner should be able to demand, with the help of the courts, that the defendant cease every use of the sign throughout the Internet?²⁴³ Such an injunction would have an effect that is as global as the Internet itself. If traditional trademark law is to be translated into cyberspace, a national (and thus territorially limited) trademark right should not give rise to an exclusive right throughout the worldwide expanse of this medium. It would, therefore, be appropriate if

available remedies were, as far as possible, limited to the territory for which the owner holds an exclusive right.²⁴⁴ Courts might have to take a creative approach in framing equitable relief, such as obliging the user of a sign on the Internet to take reasonable measures for avoiding contacts with the territory in which the trademark owner holds an exclusive right. This could be effected, for example, by placing adequate statements on the website (e.g., disclaimers, as above), by using technical mechanisms to block access by Internet users located in a particular country, or by refusing to deliver goods or services to customers located in a particular territory. Concurrent users could also be encouraged to share a common gateway page or portal, or to mutually provide links to their respective websites.²⁴⁵

148. Internet-wide injunctions, however, should not be completely excluded as a possible remedy. Especially in cases where the use of a sign on the Internet has intentionally and in bad faith targeted a trademark right,²⁴⁶ it may be appropriate to prohibit every form of use of the conflicting sign on the Internet in order to remove its effect on the territory (or territories) in which the trademark enjoys protection, and to prevent such use from violating the legitimate interest of the trademark holder.

(e) *Enabling Co-existence of Rights on the Internet*

149. Because of the territoriality of trademark rights, identical or confusingly similar trademarks can be held in different countries by different owners who are completely unrelated to one another.²⁴⁷ This coexistence can be more difficult on the Internet where a sign may be visible on computer screens (or other digital devices) across the world. The user of a trademark on the Internet might become involved in a dispute in a foreign jurisdiction, under a law that does not recognize the user's right to the disputed trademark, but which accords rights in it to another person. What had been coexistence of rights in the physical world becomes a conflict between rights on the Internet.

150. Such conflicts can lead to a situation where conflicting rightsholders may attempt to block each other from using their sign on the Internet, with the help of their national courts, for example, where one trademark holder has secured an injunction in its jurisdiction against the competing user, who, in turn, has done the same in its jurisdiction. It would seem, therefore, that this problem has to be addressed at its roots, that is, in trademark law, in order to give legitimate right owners some certainty that they can use their trademarks on the Internet without having to fear claims raised against them by rightsholders in other jurisdictions.

151. One approach might be the adoption of a general principle according to which every holder of a right in a distinctive sign may use that sign on the Internet concurrently with any other rightholder, subject to certain limitations. Such a principle might be regarded as an expression of the independence of national trademark rights provided for by Article 6(3) of the Paris Convention. In court, the fact that a defendant holds an exclusive right in the sign in another country could form a defense or a rebuttable presumption of legitimate use, the factual preconditions for which might have to be proved by the defendant.

152. Such a principle for the coexistence of legitimate rights could have to be limited in two respects in order to safeguard the interests of trademark owners. First, the risk of confusion should be reduced to a minimum. To this effect, it could be required that the user of the sign clearly indicate where the trademark is protected, and that other users of the sign have no relationship with it. The disclaimer statements described above could be used. A risk of confusion, however, could not be avoided completely, since Internet users searching for a particular trademark owner might call up the website of a concurrent user and only then, after reading a clarifying statement on that website, realize that they did not find what they were looking for. This residual risk of confusion, however, may be outweighed by the fact that, in cases of conflicts between legitimate (national or regional) rights, the principle enables each rightholder to use its right on the Internet.

153. Second, coexistence would not be appropriate if one of the users had registered or used its trademark in bad faith. Only good faith use should profit from the limitation of infringement claims. In court, bad faith could serve as a means to rebut the presumption of legitimate use. The facts constituting bad faith registration or use might then need to be proven by the plaintiff. In determining bad faith, it might be possible to draw on Article 4(5)(c) of the WIPO Joint Recommendation Concerning Provisions on the Protection of Well-Known Marks, according to which knowledge or reason to know of the conflicting mark is to be taken into account.²⁴⁸ A finding of bad faith could encompass situations where one rightsholder has acquired or uses a sign with a view to profit from the goodwill associated with the other trademark. Additional criteria would have to be determined in order to render the application of the bad faith exception predictable.

(iv) WIPO JOINT RECOMMENDATION ON PROTECTION OF MARKS ON THE INTERNET

154. Based on preparatory work by the Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications (SCT),²⁴⁹ the Assembly of the Paris Union for the Protection of Industrial Property and the General Assembly of WIPO adopted, on the occasion of the thirty-sixth session of the Assemblies of the Member States of WIPO, in September 2001, the WIPO Joint Recommendation Concerning the Protection of Marks, and Other Industrial Property Rights in Signs on the Internet (the “Joint Recommendation”).²⁵⁰ The Joint Recommendation addresses the complex questions raised above, resulting from the tension between the global nature of the Internet and the territorial rights of marks.

155. The Preamble to the Joint Recommendation makes clear that it does not purport to be a trademark law for the Internet, but is intended to guide the application of existing national or regional laws with respect to legal problems resulting from the use of a sign on the Internet. Emphasizing the “global nature” of the Internet, the Joint Recommendation aims at providing the clearest possible legal framework for trademark owners who wish to use their marks on the Internet and to participate in the development of e-commerce upon it. Its purpose is, therefore, to help competent authorities²⁵¹ to determine whether, under the applicable law, the use of a sign on the Internet has contributed to the acquisition, maintenance or infringement of a mark or other industrial property right in the sign, or whether such use constitutes an act of unfair competition, and thereafter to apply appropriate remedies.

156. The determination of the applicable law itself is not addressed by the Joint Recommendation, but is left to the principles of private international law, as they are applied in each Member State. The provisions address three main questions:

- (1) When can use of a sign on the Internet be considered to have taken place in a particular country?
- (2) How can those who own conflicting rights in identical or similar signs be enabled to use these signs concurrently on the Internet?
- (3) How can courts take account of the territorial basis of industrial property rights in signs when determining remedies?

157. The first question is relevant for determining whether use on the Internet has contributed to establishing, maintaining or infringing an industrial property right in a sign in a particular country. The provisions are based on the assumption that not each and every use of a sign on the Internet should be treated as taking place in the Member State concerned, even though it might be accessible to Internet users based in that country. This fact is expressed in the term “commercial effect.”²⁵² The Joint Recommendation provides that only use that has commercial repercussions in a given Member State, or, in other words, use that has a “commercial effect” in a Member State, shall be treated as having taken place in that Member State (Article 2). The provisions introduce the words “use of a sign on the Internet in a Member State” as a shorthand expression for use of a sign on the Internet, which is deemed to have taken place in a Member State as a result of its commercial effect.

158. The determination of whether use of a sign on the Internet has produced a commercial effect in a particular Member State, and whether such use can be deemed to have taken place in that Member State, is to be made on the basis of all relevant circumstances. A competent authority is therefore free to determine which factors are relevant in a given case. The provisions, however, provide a detailed but non-exhaustive list of factors, which can be relevant for determining commercial effect, as follows:

- doing or planning to do business in a Member State;
- character and level of commercial activity carried out in a Member State;
- location of customers;
- use of a “territorial disclaimer” stating that the goods or services offered are not available or only available in particular Member States;
- actual delivery of goods or services to customers located in a Member State;
- specific language use on the Internet site;
- prices indicated in the currency of a Member State;
- address or contact information in a Member state;
- interactivity of the website; and
- registration of the website under a country code top level domain.

The provision states that the list of factors is neither cumulative nor exhaustive, but functions as a checklist of factors which might be relevant in a given case, without obliging the competent authority to express an opinion about every listed factor. It follows the model of the Joint Recommendation Concerning Provisions on the Protection of Well-Known Marks, which also sets out a list of guiding factors for the determination of a well-known mark.²⁵³

159. The provisions are only applicable to rights that are protected in a commercial context. In so far as Member States also protect certain rights in signs, such as personality rights, in a purely non-commercial context, they are free to either grant such protection in relation to use of a sign on the Internet independently of whether such use has a commercial effect, or to apply the present provisions.

160. The second question is a direct consequence of the tension between territorial rights and a global medium. Because of that territoriality, different owners can hold industrial property rights in identical or similar signs in different countries. This can create problems if a sign is used on the Internet. Because of the necessarily global nature of the Internet, such use might be considered as infringing a right under the law of a Member State in which the right of the user is not recognized. As mentioned above, what was coexistence of rights in the real world turns into potential “conflict of rights” on the Internet. In the discussions taking place in the SCT, it was emphasized that such conflicts should be resolved on the basis of a fair balance of interest, providing effective protection for rightholders without unreasonably burdening commercial activities on the Internet.

161. The provisions first restate the principle according to which, except where otherwise provided for, there shall be liability in a Member State under the applicable law when a right is infringed, or an act of unfair competition is committed, through use of a sign on the Internet in that Member State. The provisions then introduce a two-step procedure, called a “notice and avoidance of conflict” procedure (Part V). Rightholders who use their sign in good faith are exempt from liability up to the point when they are notified of a conflicting right (Article 9). As a consequence, they would not be subjected to any injunction, or held liable for any damages occurring, before notification. Users would, therefore, not be forced to undertake a worldwide search for conflicting registered or unregistered rights before using their sign on the Internet. This would have been almost impossible to achieve, and very costly, and certainly detrimental to the development of commerce over digital networks.

162. Notifications, when sent by the rightholder or her representative, by mail, e-mail or facsimile, in the language or one of the languages used in connection with the sign on the Internet, are effective, pursuant to Article 11, if they include the following:

- (i) the right alleged to be infringed;
- (ii) the identity of the rightsowner and information reasonably sufficient to contact him or his representative by mail, e-mail or facsimile;
- (iii) the Member State in which that right is protected;
- (iv) relevant details of such protection, allowing the user to assess the existence, nature and scope of that right; and
- (v) the use that is claimed to infringe the right.

As a second step of the procedure, users who have received a notification relating to a “conflicting” right, have to take reasonable measures for avoiding or ending the conflict (Article 10). If they fail to do so, they may be subject to liability.

163. In order to provide rightholders with a sufficient degree of legal certainty as to how to avoid liability for the infringement of conflicting rights which they are already aware of, Member States would have to accept a “qualified disclaimer” as a sufficient measure to avoid liability (Article 12). Such disclaimers are statements designed to avoid a commercial effect in a particular country, and to avoid confusion with the other rightholder. The user would also have to abide by his statement by asking customers where they are located, and refusing delivery to those who have indicated that they are based in the country disclaimed. Users would, however, not be required to verify the statements made by their customers because this is almost impossible in cases where the whole transaction takes place over the Internet.

164. The third question also addresses a problem resulting from the tension between territorial rights and a global medium. An injunction to cease every use of a sign on the Internet would go far beyond the territory in which a conflicting industrial property right in that sign exists. It would have an effect, which is as global as the Internet. A decision as to remedies should therefore take the territorial limitation of industrial property rights in marks or other signs into account. Remedies should be limited, as far as

possible, to the territory in which the industrial property right is recognized, and they should only be available if the allegedly infringing use of the sign can be deemed to have taken place in that territory. This is determined with regard to the “commercial effect” of such use in the Member State in question. Thus, the “commercial effect” of Internet use should serve as a yardstick for determining a “proportionate” remedy. Use of a sign on the Internet that infringes an industrial property right in a Member State should not be prohibited any more than is proportionate to the commercial effect that such use has produced in that Member State (Article 13). Injunctions should generally be limited to what is necessary to prevent or remove the commercial effect in the Member State (or the Member States) in which the infringed right is protected, and damages should be granted only for the commercial effect of the use in that Member State.

165. The provisions require courts to be creative in considering limitations of use designed, on the one hand, to avoid a commercial effect in the Member State, or in the Member States, in which the infringed right is protected, and to avoid any confusion with the owner of that right on the other hand, such as “qualified disclaimers”, gateway web pages and the like (Article 14). Prohibitions to cease every use of a sign on the Internet might still be necessary in certain cases. However, the provisions exempt such users from such “global injunctions” if they hold a right in the sign they use on the Internet and do not act in bad faith (Article 15).

166. The Joint Recommendation also requires Member States to protect industrial property rights against new and emerging infringing uses, as they occur on the Internet. Article 6 requires that “[a]ny use of a sign on the Internet, including forms of use that are made possible by technological advances, shall be taken into consideration for determining whether a right under the applicable law of a Member State has been infringed, or whether that use amounts to an act of unfair competition”. It is envisaged that this will provide for use of marks and signs in banner advertisements, when sold or purchased as keywords and in meta tags, as well as future uses as they become evident.

(v) WIPO JOINT RECOMMENDATION ON WELL-KNOWN MARKS

167. Because of the heightened attention that fame attracts, well-known marks have for a long time been considered to warrant special protection, over and above that accorded to other, ordinary marks under intellectual property law.²⁵⁴ That special protection is well established in the Paris Convention as well as in other regional or international agreements.²⁵⁵ While there is an international obligation to accord protection to well-known marks, there exists no established treaty definition of what constitutes such a mark. It is left to the appreciation of the competent authority in the country where protection is asserted.²⁵⁶

168. Well-known marks have been the special target of a variety of abusive practices on the Internet. WIPO, through the SCT, has been working to develop provisions in this area, which were adopted as a Joint Recommendation Concerning Provisions on the Protection of Well-Known Marks by the WIPO General Assembly and the Paris Union Assembly in September 1999.²⁵⁷ The provisions intend to clarify, consolidate and supplement the existing international protection of well-known marks, as established by Article 6*bis* of the Paris Convention and Articles 16.2 and 16.3 of the TRIPS Agreement. In particular, the Joint Recommendation in Article 2 contains a list of factors that may be used by a competent authority to determine whether a mark is well-known in its territory.²⁵⁸ While the Joint Recommendation does not have the force and effect of a treaty, Member States may consider the use of any of these provisions as guidelines for the protection of well-known marks.

169. The Joint Recommendation (Article 6) expressly addresses conflicts between well-known marks and domain names. According to this provision, a domain name shall be deemed to be in conflict with a well-known mark at least where that domain name, or an essential part thereof, constitutes a reproduction, an imitation, a translation or a transliteration of the well-known mark, and the domain name has been used or registered in “bad faith.” It is understood that “bad faith” will include the cases that are currently known as “cybersquatting.” In this regard, WIPO, in the recommendations in the Report of the first WIPO Internet Domain Name Process, developed a definition of the abusive, bad faith registration of a domain name, that was subsequently incorporated into the Uniform Domain Name Dispute Resolution Policy (UDRP), by the Internet Corporation for Assigned Names and Numbers (ICANN).²⁵⁹

(vi) UNFAIR COMPETITION

170. Commerce means competition, and where there is competition, acts of unfair competition are liable to occur. E-commerce is no exception. This new channel of commerce has, for some time, been regarded as a ‘wild west’, where almost anything can and does happen. E-commerce will realize its potential, however, only if some scope of protection and recourse against acts of unfair competition is provided. Protection against unfair competition supplements the protection of intellectual property rights. Without such protection, companies are likely to gauge the risks of damage to their reputations, loss of customers and liability from engaging in e-commerce, with the threatened consequence that innovation and freedom of competition is stifled.

171. Whereas issues concerning trademarks and the Internet have been at the forefront of discussions, questions relating to acts of unfair competition have attracted much less attention. Protection against unfair competition, however, covers an even broader scope of issues relevant for electronic commerce. It provides a legal framework for all forms of marketing, and it supplements the protection of intellectual property through statutory rights. So far, e-commerce has not been subject to specific regulations dealing with matters of unfair competition. National or regional laws apply together with international provisions contained in the Paris Convention²⁶⁰ and the TRIPS Agreement.²⁶¹ The application of these rules to e-commerce, however, poses a number of problems.

172. Because marketing activities on the Internet may be subjected to a variety of often contradicting legal systems, the development of marketing strategies in e-commerce becomes more difficult. What is allowed in one country may be forbidden or strictly regulated in another. Even though Article 10*bis* of the Paris Convention and Article 39 of the TRIPS Agreement give some guidance as to the internationally applicable rules for the protection against unfair competition, there remain many areas which are regulated differently in various national legal systems. For example, comparative advertising and bonus or discount schemes are forbidden in some countries, generally allowed in others, and more or less strictly regulated in still other countries. Such regulatory differences affect the free circulation of goods or services in the digital environment.

173. Experience has already shown that enterprises cannot simply continue their habitual marketing efforts online. They have to adapt to and use the particular technical features of the Internet, such as its interactivity and support of multimedia applications. As the most flexible part of industrial property law, unfair competition law may offer solutions to the new problems that have arisen in e-commerce.²⁶² Nevertheless, problems may arise with regard to the following issues:

(a) *Interactive Marketing Practices*

174. Because e-commerce relies on interactive contacts with prospective customers, attracting their attention is a core issue. Online marketing often uses strong incentives such as lotteries, free gifts or rebates, and tends towards more aggressive practices, such as comparative advertising or unsolicited e-mails (spamming). With the broadband technologies that will become available in the next few years, new forms of 'immersive' marketing may also become prevalent.²⁶³ Under a number of legal systems, such inducements may be considered contrary to honest trade practices. Should the standard for establishing unfair practices in e-commerce take the specific nature of the medium into account? Given the medium's compelling interactivity, should more stringent standards be considered?

(b) *Transparency and Privacy Concerns*

175. In an interactive medium like the Internet, the safeguarding of transparency and privacy is of particular importance. Unfair competition law may have to include rules requiring a clear distinction between informative text and advertising, and protecting consumers against the unauthorized collection of data for commercial purposes. Another related problem that may have to be addressed, noted above, is the flooding of users with unsolicited advertising and spam mail.

(c) *National Versus International Standards of "Unfair" Marketing Practices*

176. Whether a particular statement is misleading will usually be determined with regard to the public to which it is addressed. But marketing practices in e-commerce are often directed at a public in more than one country. What can be misunderstood in one country might be perfectly clear in another. Should marketing online be required to take into account the level of knowledge or the understanding of the audience in every country where the message can be received, or at least in every country foreseeably affected by it? Or should it be enough for an advertiser to show that a statement was not liable to be misunderstood in a 'home country'?

(d) *Trade Secrets*

177. The protection of trade secrets is in many countries covered by unfair competition law. The protection of trade secrets on the digital networks relies heavily on technological measures for information security, especially because after a trade secret has been stolen and posted on the Internet, courts sometimes experience difficulty finding the 'secrecy' element of a trade secret. Secrecy issues are therefore of particular importance in the digital environment.

III. (C) DOMAIN NAMES

178. This Chapter introduces the topic of domain names, as they relate to intellectual property issues connected with the Internet domain name system (DNS). Although not currently classified as a form of intellectual property, domain names as identifiers function in a manner similar to trademarks, and recent developments in the DNS and in connection with the Internet Corporation for Assigned Names and Numbers (ICANN), established to coordinate the DNS, raise significant issues for the intellectual property system. The Chapter concludes by addressing WIPO's programs in the field of domain names, and the work of the WIPO Arbitration and Mediation Center in the area of domain name dispute resolution resolving domain name disputes.

(i) INTRODUCTION TO DOMAIN NAMES

179. Domain names are Internet addresses in simplified form, designed to enable users to locate sites more easily.²⁶⁴ They can be registered in the "generic top-level domains" (gTLDs), such as .com, .org, .net, .biz or .info, or any of some 243 "country code top-level domains" (ccTLDs), such as .ch (Switzerland), .fr (France) or .za (South Africa).

180. In addition to their function as locators of Internet sites, domain names have a function as identifiers of businesses and their goods or services on the Internet, which gives them an economic value comparable to that of other identifiers. This characteristic of domain names has given rise to a great many ownership disputes with other signs that existed prior to the advent of the Internet and were protected by intellectual property rights, such as trademarks. As noted in the WIPO Primer on Electronic Commerce and Intellectual Property Issues (WIPO Primer),²⁶⁵ published in May 2000, the tension between domain names and other identifiers is largely a result of the incongruous nature of the systems to which each type of identifier belongs; the DNS is to a large extent managed by the private sector, and gives rise to registrations that result in a global presence, accessible from anywhere in the world - while the intellectual property system is managed by public authorities according to the principle of territoriality, giving rise to rights that can only be exercised in a specific territory. The tension has been heightened by certain practices that involve persons abusively registering as domain names distinctive signs, especially trademarks, with a view to subsequently selling the domain names to the owners of the identifiers, or simply taking unfair advantage of the goodwill associated with them.

181. Among the solutions found to the question of the interface between domain names and intellectual property rights, one of the most significant has been the entry into force of the Uniform Domain Name Dispute Resolution Policy (UDRP).²⁶⁶ The UDRP was adopted by the Internet Corporation for Assigned Names and Numbers (ICANN)²⁶⁷ on August 24, 1999. The procedure introduced by the Policy allows trademark owners to settle cases of abusive domain name registration (cybersquatting) without resorting to national courts. Upon accreditation by ICANN, the WIPO Arbitration and Mediation Center began to provide its services for the settlement of disputes concerning gTLDs and certain ccTLDs that had voluntarily adopted the UDRP.

182. At the same time, on the basis of the final Report of the first WIPO Internet Domain Name Process,²⁶⁸ certain issues called for further reflection. Those issues had to do with the wrongful registration of domain names that infringed designations other than trademarks, such as International Nonproprietary Names (INNs) for Pharmaceutical Substances, names of intergovernmental organizations, names of persons, trade names and geographical indications like geographical names and indications of source. In addition, the Report emphasized the concern of the owners of intellectual property rights regarding the introduction of new gTLDs, fearing as they did the spread to the new domains of the abusive registration practices suffered in existing gTLDs.²⁶⁹

183. The past two years have seen significant developments in the context of intellectual property and domain names. Those developments are considered in detail in Section II of this Chapter. The Internet landscape has itself recently undergone considerable change with respect to both the identifiers that are used upon it (including multilingual domain names and keywords), as well as issues related to the organization, management and coordination of the DNS (including the introduction of new gTLDs, emergence of multiple roots, and ICANN reform). These developments, described below, have a bearing on intellectual property concerns.

(ii) RECENT DEVELOPMENTS CONCERNING DOMAIN NAMES AND INTELLECTUAL PROPERTY

(a) *New gTLDs*

184. The introduction of new generic top-level domains (gTLDs) to complement those already existing (.com, .org, .net, .edu, .gov, .mil and .int) has been the subject of intense debate for a number of years. ICANN undertook a long process that included: the publication of criteria for the evaluation of proposed new TLDs, a request for proposals, publication of the non-confidential parts

of the 47 proposals received, a period set aside for comments from the public and the publication of the report on the evaluation of the proposals received. Finally, on November 16, 2000,²⁷⁰ ICANN authorized the inclusion of seven new gTLDs in the DNS. The new gTLDs are: .aero (for the aeronautical industry),²⁷¹ .biz (for business activities),²⁷² .coop (for accredited cooperatives),²⁷³ .info (for various activities),²⁷⁴ .museum (for museums),²⁷⁵ .name (for personal names)²⁷⁶ and .pro (for professional entities).²⁷⁷

185. The new gTLDs fall into two categories: (i) the “unsponsored” gTLDs (.biz, .info, .name and .pro), which operate under policies established by “the global Internet community directly through the ICANN process,”²⁷⁸; and (ii) the “sponsored” gTLDs (.aero, .coop and .museum), each being “a specialized TLD that has a sponsoring organization representing the narrower community that is most affected by the TLD.”²⁷⁹ The seven new gTLDs are managed under contracts concluded with ICANN.

186. All the new gTLDs are operational with the exception of .pro. Domain names can be registered under the six new gTLDs that are operational by approaching any ICANN-accredited registrar.²⁸⁰ Each of the registrars for new gTLDs has taken measures to protect intellectual property rights, either preventively by introducing procedures whereby the owners of intellectual property rights can assert those rights before the registrations are made available to the wider public, or *ex post facto* by adopting the UDRP, or both. In addition, some registrars that administer domains reserved for certain categories of users, such as .biz or .name, have introduced special procedures for settling disputes that relate to the restrictions on registration, whereby third parties can contest a registration that is alleged to have been made in breach of such restrictions. These measures are explained in paragraphs 213-218 of this Chapter.

187. More than a year after the decision to introduce the seven new gTLDs, the ICANN Board of Directors resolved²⁸¹ to launch an evaluation process²⁸² addressing the performance of the new gTLDs and their impact on the DNS. The evaluation relates to a number of technical, business or legal issues. Provision is made for the examination of: (i) the efficacy of the various preliminary registration and other measures taken to limit the risks of violation of trademark rights in the start-up phase of new gTLDs; (ii) the greater diversification of the DNS, and its effect on the interface between domain names and intellectual property rights: (will it allow greater coexistence between trademarks and other distinctive signs in the DNS, or will it on the contrary cause an increase in problems of intellectual property rights being infringed by the registration of domain names?); (iii) the reaction of Internet users, search engines and directory services to this greater diversification of the DNS; and (iv) the design and coordination of Whois services in an extended DNS. ICANN proposes to publish its first evaluation report in 2003.

(b) *Multilingual Domain Names*

188. Until recently, it was only possible to register domain names in Roman script (those that make up the English alphabet) or ASCII characters.²⁸³ However, there are developments in the Internet community to allow the registration of domain names written in other non-ASCII characters such as Arabic, Chinese, Cyrillic, Japanese or Korean.

189. In January 2000, the Internet Engineering Task Force (IETF) formed a Working Group on the Internationalization of Domain Names to “specify the requirements for internationalized access to domain names and to specify access and a standards track protocol based on the requirements.”²⁸⁴ Since that time, a number of commercial testbeds using various technologies have been established and began to register multilingual domain names.²⁸⁵ In view of the fact that the IETF has not yet set definite standards on the subject, no multilingual domain name has yet been added to an official DNS area file, and none is yet operational.

190. The discussion of the multilingual domain names issue is ongoing in various fora, including ICANN, which set up a working group in March 2000 “to identify the various internationalization efforts and the issues they raise, to engage in dialogue with technical experts and other participants in these efforts, and to make appropriate recommendations to the Board.”²⁸⁶ On the recommendations of that working group²⁸⁷ an Internationalized Domain Names Committee was established “to serve as a general coordination body for the work on policy issues identified in the IDN Working Group report and such other policy issues that the IDN Committee shall identify.”

191. Numerous issues remain to be addressed, as it is important that the introduction of multilingual domain names to the DNS does not affect its stability. Most importantly, the IETF will conclude its process of developing standards by which non-ASCII characters may be used in DNS protocols. At the same time, procedures for the adoption of the TLDs themselves in non-ASCII characters are being considered, as well as domain name registration services that function in non-ASCII characters.

192. The final report of the Internationalized Domain Names Committee, dated June 27, 2002,²⁸⁸ notes that these matters could to a large extent be settled on the basis of experience acquired in the ccTLDs, the new gTLDs and more recently through the process of re-allocating the .org domain. The Committee explains that, if the internationalization of domain names calls for

necessary adaptations, a certain number of principles applicable to existing TLDs, including the adoption of a new TLD or the selection of a registrar, could be transposed to domain names in non-ASCII characters. For instance, in the same way as .info was created on the basis of the semantic link between the word-form “info” and the concept of “information,” the Committee suggests that a new TLD in non-ASCII characters could also be selected on the basis of a semantic association between a particular geographical entity (such as China), or a language (such as Greek), or equally a cultural entity (such as Thai museums).

193. The internationalization of domain names was also discussed in the framework of the International Telecommunication Union (ITU) and WIPO at a symposium organized jointly in Geneva by the international organizations on December 6 and 7, 2001.²⁸⁹ Each organization published a briefing paper to explain the impact of the internationalization of domain names from, respectively, the technical and intellectual property standpoints. The ITU working document, entitled “Technology and Policy Aspects,”²⁹⁰ deals among other things with the technological challenges to the development of internationalized domain names, such as the need to standardize the underlying technologies so that such names may be incorporated in the DNS without difficulty. It also mentions a number of policy and coordination issues raised by internationalized domain names, such as the determination of the authority with respect to each language. The effect of the internationalization of domain names on intellectual property is discussed in the WIPO briefing paper entitled “Internationalized Domain Names — Intellectual Property Considerations.”²⁹¹

194. As noted in the final Report of the Second WIPO Internet Domain Name Process (“Second WIPO Process”),²⁹² the internationalization of domain names will have repercussions for intellectual property. The conflicts that ensue from the use, in a designation system such as the DNS, of the various languages and alphabets used throughout the world is well known in the trademark field. However, the internationalization of domain names may be expected to raise a number of new considerations with respect to such disputes, including: the importance of phonetic similarity in what is essentially a visual or textual communication medium, the speed and modest cost at which a domain name registration can be obtained as compared with a trademark registration, and the automatic nature of domain name registrations as opposed to the examination procedure that precedes the registration of trademarks. As described in greater detail in paragraph 220 below, the WIPO Arbitration and Mediation Center has already administered a number of disputes relating to internationalized domain names.²⁹³

(c) *Keywords*

195. The Internet keyword system makes it possible to locate websites using ordinary words, without resorting to technical prefixes such as http:// or www., or top-level suffixes such as .com, .net, .org or .info. Usually it is sufficient to type the keywords into the window of the navigation software to be led directly to the website — and indeed, in some cases, to the Uniform Resource Locator (URL) — that is sought. The effect of this, however, is that the keywords can themselves be regarded as virtual identifiers and consequently have intellectual property implications, as described in the context of trademark infringement in Chapter III(b) above. Keywords do not constitute an alternate routing system to the DNS, but rather form a layer super-imposed upon it. A number of companies offer keyword services, among them CommonName Ltd.,²⁹⁴ and Netscape.²⁹⁵ There are also keywords in non-ASCII characters.

196. Some providers of keywords (in ASCII characters) currently offer dispute-resolution services to address bad faith use of trademarks involving keywords.²⁹⁶ These procedures correspond to a large extent to those under the UDRP. They are only adopted voluntarily, however, as the providers are under no obligation to join the ICANN system or adopt any of its policies.

197. The use of keywords in navigation software and search engines holds some potential for relieving the growing pressure on the DNS, by providing alternatives to domain names to navigate the Internet. However, the increase in their use is likely to be accompanied by a growing risk of intellectual property violations, exacerbated by the internationalization of the DNS. It remains to be seen whether the market will adopt these keyword systems and how efficiently their dispute-resolution procedures will work.

(d) *Multiple Roots*

198. The structure of the DNS is traditionally based on a single central root, so as to permit reliable universal communication on the Internet. As stated by the Internet Architecture Board (IAB):

“To remain a global network, the Internet requires the existence of a globally public name space. The DNS name space is a hierarchical name space derived from a single, globally unique root. This is a technical constraint inherent in the design of the DNS. Therefore it is not technically feasible for there to be more than one root in the public DNS. That one root must be supported by a set of coordinated root servers administered by a unique naming authority.”²⁹⁷

199. A number of attempts have been made to multiply the number of roots used on the Internet. Some are either purely private and therefore totally outside the public DNS, or experimental and designed in such a way as not to have an adverse effect on its operation. Others, on the other hand, have a commercial purpose, and seek to establish top-level structures to rival that managed by ICANN. Some fear that such developments may jeopardize the stability and reliability of the DNS. Preservation of the universal character of the network is an essential concern for the Internet community, and ICANN has reaffirmed its "commitment to a single, authoritative public root for the Internet Domain Name System (DNS) and to the management of that unique root in the public interest according to policies developed through community processes."²⁹⁸

200. The adoption of multiple roots also carries a risk in terms of the protection of intellectual property rights in the DNS. That protection is derived from a contractual system based on the UDRP. It is implemented through contracts between ICANN and registrars and, in turn, contracts under which domain name applicants agree to abide by the UDRP. Because multiple roots are outside the contractual system established by ICANN, there is nothing to ensure that their operators will apply or even adopt the UDRP, and thereby protect intellectual property rights. To address this issue, some operators have opted for systems comparable to the UDRP; for instance, the company New.net²⁹⁹ has introduced a Model Domain Name Dispute Resolution Policy.

(e) *Creation of the Generic Top-Level Domain .EU*

201. The creation of the generic top-level domain .eu was one of the objectives stated in the eEurope initiative approved by the European Council in March 2000. At the end of the public consultation process on the creation of the generic top-level domain .eu initiated by the European Commission,³⁰⁰ the European Parliament and Council adopted on April 22, 2002, a Regulation on the implementation of the top-level domain .eu.³⁰¹ The Regulation sets out the conditions for the implementation of .eu (for instance the designation of a registrar) and lays down the general policy framework within which the registrar will operate.

202. A number of provisions on the operation of .eu relate to intellectual property protection. It is provided, for example, that the owners of prior rights or rights established by national and/or community law, as well as public entities, will benefit from a specific "sunrise period" during which they can register domain names corresponding to their rights. In addition, the Regulation provides for the introduction of a Whois service providing information on the owners of domain names under .eu. Such a service is essential in any domain name registration system that seeks to ensure protection for intellectual property rights.³⁰² Finally, it provides for implementation of a policy of alternative dispute settlement for conflicts involving .eu domain names and intellectual property rights. The European Commission also conducted an online consultation on cybersquatting,³⁰³ so as to develop the best possible framework to prevent speculative and fraudulent registrations of domain names in the .eu domain. The .eu domain is proposed to be managed by a non-profit organization, and registration of domain names is expected to begin in 2003.

(f) *ICANN Reform*

203. The Internet Corporation for Assigned Names and Numbers (ICANN) is the entity responsible for coordinating certain DNS functions.³⁰⁴ ICANN is a non-profit organization incorporated under the laws of the State of California in the United States of America. Its creation is the result of the United States Government's goal, since 1997, to privatize the DNS and thereby increase its competitiveness,³⁰⁵ and represents the completion of a process that began with the publication in June 1998 of the White Paper of the National Telecommunications and Information Administration (NTIA) of the United States Department of Commerce, entitled "Statement of Policy on the Management of Internet Names and Addresses."³⁰⁶

204. The Department of Commerce entered into a Memorandum of Understanding³⁰⁷ with ICANN under which ICANN was entrusted with the following functions: "(i) set policy for and direct allocation of IP number blocks to regional Internet number registries; (ii) oversee operation of the authoritative Internet root server system; (iii) oversee policy for determining the circumstances under which new TLDs are added to the root system; and (iv) coordinate the assignment of other Internet technical parameters as needed to maintain universal connectivity on the Internet." The Memorandum of Understanding between the Department of Commerce and ICANN, which has been amended and renewed a number of times, has recently been renewed until September 2003.

205. While ICANN's functions and authority are primarily of a technical nature, the organization's performance of these functions sometimes raises public policy issues, including a number relating to intellectual property. As ICANN is a private sector organization subject to the laws of one particular country, the question has been raised whether it can legitimately address those public policy issues without the additional involvement of public authorities, including intergovernmental organizations. Recently, ICANN has undergone a reform process³⁰⁸ in an attempt to address, *inter alia*, this question. It seems unlikely, however, that the results of the ICANN reform will succeed in resolving this question satisfactorily and definitely.³⁰⁹

(g) *World Implementation of the Enum Protocol*

206. The Enum Protocol³¹⁰ is the result of work conducted by the Internet Engineering Task Force (IETF) Working Party responsible for the conversion of international public telephone numbers with a view to their use in the DNS. This Protocol, put forward by the IETF in September 2000, makes it possible to convert telephone numbers into domain names and to relate them to communication services through what is known as Uniform Resource Identifiers (URIs).³¹¹ The best known forms of URI are the Uniform Resource Locators (URLs), which are used to locate resources on the World Wide Web.³¹² Enum enables anyone to simply use a telephone number to reach any subscriber who has included his particulars (mobile telephone number, e-mail address, Internet address, text message address, etc.) in the Enum database.³¹³ Given that the Protocol allows telephone numbers to be converted into domain names, it has been suggested that those domain names should be registered under the top level domain .arpa, originally introduced during the initial development of the DNS and managed by the Internet Architecture Board (IAB).³¹⁴

207. The implementation of the Enum Protocol is under consideration by the International Telecommunication Union (ITU).³¹⁵ Its potential implementation raises concerns, particularly of a regulatory and political nature. It is suggested that the management of numbering resources in the DNS be considered a matter of national competence, for each ITU Member State to which the country code is given (for example, in France, which has telephone numbers predicated by the 33 country code). It is proposed that ITU retain administrative control over the Enum database. A number of questions remain as to its implementation: What body should one approach to have data published? Will there be registration services and registries? And if so, how will they be selected? Will they be public bodies, designated by States? Will implementation of the Protocol be possible only in ITU Member States? Will there be a coordinating body? These questions need to be addressed before it is decided whether, and if so to what extent, the global introduction of the Enum Protocol is likely to affect the DNS.

(iii) **WIPO PROGRAMS**

208. WIPO's activities in connection with domain names have intensified in recent years, and concentrate on three areas: (i) the domain name dispute resolution services of the WIPO Arbitration and Mediation Center; (ii) the Second WIPO Internet Domain Name Process; and (iii) the WIPO Cooperation Program for ccTLD Administrators.

(a) *WIPO Arbitration and Mediation Center*

209. The WIPO Arbitration and Mediation Center (the WIPO Center) is an institution based in Geneva (Switzerland) to provide Alternative Dispute Resolution (ADR) services. It was established in 1994 to offer arbitration and mediation services for the resolution of international commercial disputes between private parties. More recently, in addition to the traditional disputes, it has concentrated on the administration of Internet domain name disputes.

(i) *Resolution of Disputes in the Generic
Top-Level Domains (gTLDs): .com, .org and .net*

210. Following the adoption on August 24, 1999, of the Uniform Domain Name Dispute Resolution Policy (UDRP), ICANN has accredited a number of institutions to administer complaints filed under the Policy,³¹⁶ among which the WIPO Center is today the leading provider.

211. The procedure laid down in the UDRP allows a complainant to request the transfer or cancellation of a domain name on the grounds that: (i) it is identical or confusingly similar to a trademark in which he or she holds rights; (ii) the owner of the domain name has no rights or legitimate interests in it; and (iii) the domain name has been registered and is being used in bad faith. The UDRP is a mandatory procedure that applies to every domain name by virtue of a clause in the domain name registration contract. The registrars accredited by ICANN to register domain names in the gTLDs are obliged to abide by the decisions rendered under the UDRP.

212. To date, 4,254 complaints have been brought before the WIPO Center, including about 85% in the .com domain, 18% in .net and 10% in .org.³¹⁷ Some 90% of these cases are settled within an average period of 50 days and at a cost of US\$1,500 each.³¹⁸ Most complainants make use of the model complaint made available by the WIPO Center on its site.³¹⁹ The parties to these disputes originate from 105 countries. The cases are decided by independent intellectual property and Internet specialists on the WIPO list of panelists,³²⁰ which today comprises over 300 experts from some 50 countries in many regions of the world.

(ii) *Resolution of Disputes Concerning the New gTLDs*

213. The UDRP also applies to the resolution of intellectual property disputes that arise in the new generic top-level domains (gTLDs), .aero, .biz, .coop, .info, .museum, .name and .pro. The WIPO Center has itself administered 84 UDRP complaints concerning the .info domain and 38 concerning the .biz domain. In addition, most registrars have implemented dispute-settlement procedures specifically suited to conflicts arising in the initial registration phase, or are in the process of doing so. The purpose of these procedures is to provide trademark owners with additional means to ensure the protection of their rights at the introduction of the new domains.³²¹ The WIPO Center has been designated by the registry operators of certain new gTLDs to administer their disputes in accordance with their specific procedures, as described below.

214. *.info dispute resolution policy.* The .info domain implemented a Sunrise Registration Period (from July 25 to August 31, 2001), during which only trademark owners could register a domain name that was identical to the textual elements of their trademark, provided the trademark registration had national effect and was issued prior to October 2, 2000. That period was followed by a Sunrise Challenge Period (from August 28 to December 26, 2001), during which such sunrise registrations could be challenged under a Sunrise Challenge Policy (SCP),³²² exclusively administered by the WIPO Center. The Policy enabled any third party to apply for the cancellation or transfer of a domain name that had been registered in violation of the conditions of .info sunrise registration. The WIPO Center received 1,579 challenges to .info registered domain names under the SCP, all of which have been resolved. The SCP intellectual property protection measure had one serious shortcoming, however, in the absence of any verification of intellectual property rights upon application for domain name registration. This allowed speculators to register .info names, by providing false trademark registration information. As a result, the operator of the .info registry, Afilias, decided to file SCP challenges to any sunrise registrations not independently challenged, in order to clear its database of potentially improper sunrise registrations. The WIPO Center resolved 13,592 of such “challenges of last-resort,” since December 26, 2001, completing this procedure in mid 2002. The .info domain has been open to the general public for registrations since September 12, 2001, and the UDRP applies to all such registrations.

215. *.biz dispute resolution policy.* The .biz domain implemented a period (from May 21 to August 6, 2001), during which trademark owners could file one or more “intellectual property claims” relating to an alphanumeric string, or name, identical to their marks, thereby enabling the registry to advise them if the same string was registered as a domain name during the start-up period. Upon notification by the .biz registry, trademark owners who had filed such a claim were given the opportunity to commence opposition proceedings under the Start-Up Trademark Opposition Policy (STOP) with any accredited dispute resolution service provider, requesting the transfer of the contested domain name.³²³ To date, the WIPO Center has received 338 oppositions under the Policy, of which 334 have been resolved. The .biz domain has been open to the general public for registrations since June 25, 2001 and, as above, the UDRP applies to all such registrations.

216. *.name dispute resolution policy.* The .name domain devised yet another mechanism to handle abusive registration practices in the initial stages of its operation.³²⁴ This mechanism enabled trademark owners to apply for a defensive registration in the preliminary phase (from August 15 to December 14, 2001), by reserving a given alphanumeric string or name in order to prevent the registration of domain names that included the string at the second or third, or both, levels. The registry also offers trademark owners a NameWatch service that advises them of any .name registration that matches their trademarked name.

217. *.pro dispute resolution policy.* The .pro registry is not yet operational, but proposes to implement a “sunrise period” during which owners of trademarks registered prior to December 31, 2001, can register a name that corresponds to their mark, provided they meet the registration eligibility restrictions for .pro. During the “sunrise challenge period” any person will be able to submit a challenge against a sunrise domain name for non-compliance with these registration conditions. As above, when registrations open to the general public, the UDRP will apply to all .pro domain name registrations.

218. In addition, the registries that administer domains restricted to certain categories of users, such as .biz, .name, .coop, .museum and .aero, have established special dispute resolution procedures that relate to registrants’ eligibility for registration. The WIPO Center has been designated to handle complaints filed in relation to these special procedures. The .biz domain, for example, which is intended solely for names used or intended to be used for “bona fide business or commercial purposes,” has introduced a procedure to resolve disputes between domain name holders and third parties who allege that the domain name at issue has been registered in violation of the .biz registration restrictions.³²⁵ This procedure operates parallel to any UDRP proceedings. In the .name domain, which is reserved for the registration of names of persons or fictional characters, registrations are subject to an Eligibility Requirements Dispute Resolution Policy (ERDRP). The WIPO Center received its first case under this Policy on May 8, 2002. In the domains .coop, .museum and .aero, the Charter Eligibility Dispute Resolution Policy (CEDRP) applies,³²⁶ and enables any third party to request the cancellation of a registration allegedly made in violation of the applicable registration conditions.

(iii) *Resolution of Disputes in ccTLDs*

219. To date, 28 ccTLD administrators have designated the WIPO Center for the resolution of domain name disputes arising in their domains as follows: .AC (Ascension Island), .AE (United Arab Emirates), .AG (Antigua and Barbuda), .AS (American Samoa), .AU (Australia), .BS (Bahamas), .BZ (Belize), .CC (Cocos Islands), .CY (Cyprus), .EC (Ecuador), .FJ (Fiji), .GT (Guatemala), .LA (Lao People's Democratic Republic), .MD (Republic of Moldova), .MX (Mexico), .NA (Namibia), .NU (Niue), .PA (Panama), .PH (Philippines), .PN (Pitcairn Island), .RO (Romania), .SC (Seychelles), .SH (Saint Helena), .TT (Trinidad and Tobago), .TV (Tuvalu), .UG (Uganda), .VE (Venezuela) and .WS (Western Samoa). Most of these ccTLDs have adopted the UDRP or a variant of it. Of the 94 ccTLD domain name disputes that have been submitted to the WIPO Center to date, 88 have been resolved.³²⁷

(iv) *Resolution of Disputes Concerning Internationalized Domain Names*

220. Although the internationalization of domain names is not yet fully operational in the DNS, the preliminary registration phases and the testbeds of the various providers of internationalized domain name registration services have already given rise to a number of disputes. The UDRP applies to disputes concerning internationalized domain names registered with ICANN-accredited gTLD registrars. The WIPO Center has to date received 32 complaints that relate to registrations of internationalized domain names registered through the VeriSign GRS testbed, and 30 of those cases have been resolved.³²⁸ The internationalized domain name cases submitted to the WIPO Center relate to names in Chinese script (e.g., D2000-0915 <香港上海匯豐銀行.com>), Japanese script (e.g., D2000-1791 <三共.com>), Korean script (e.g., D2001-1155 <홍콩은행.com>), or characters peculiar to Norwegian (æ), German (ö), French (é) and Swedish (å).

(v) *Resolution of Keyword Disputes*

221. The WIPO Center has also been designated to resolve disputes concerning Internet keywords.³²⁹

(vi) *Online Search Index of Decisions Handed Down Under the UDRP*

222. The Center has launched an online search index comprising more than 2,500 WIPO domain name case decisions under the UDRP. The index, which is regularly updated, affords access to all legal or other information contained in decisions handed down in the UDRP context, and is available on the WIPO site, at <http://www.arbiter.wipo.int/domains/search/index.html>.

(b) *Second WIPO Internet Domain Name Process*

223. While the first WIPO Internet Domain Name Process focused on the protection of trademarks and service marks in the DNS, it became apparent that designations other than trademarks were also subject to abuse in the DNS. The Report issued at the conclusion of the first WIPO Process made particular note of abusive practices with respect to trade names, geographical indications and the names of persons in that connection.³³⁰

224. On June 28, 2000, WIPO received a request from 19 of its Member States,³³¹ subsequently ratified by the WIPO General Assembly,³³² to undertake a second consultation process to address the intellectual property issues relating to domain names that were outside the scope of the first WIPO Process. In response, in July 2000, WIPO initiated the Second WIPO Internet Domain Name Process. This Process addressed the bad faith, abusive, misleading or unfair registration as domain names of the following identifiers:

- (i) International Non-proprietary Names (INNs) for pharmaceutical substances;
- (ii) names of intergovernmental organizations;
- (iii) personal names;
- (iv) trade names; and
- (v) geographical indications, geographical names and indications of source.

225. The final Report of the Second WIPO Process, entitled “The Recognition of Rights and the Use of Names in the Internet Domain Name System,” was published on September 3, 2001,³³³ and submitted to the Member States of WIPO at the General Assembly held from September 24 to October 3, 2001, and also to the Board of ICANN.

226. At the 2001 General Assembly, WIPO’s Member States resolved to subject the Report to comprehensive analysis by the WIPO Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications (SCT), which would convene in two special sessions for this purpose. The Standing Committee was established in March 1998 to facilitate the international development of the law of trademarks, industrial designs and geographical indications, and is composed of WIPO Member States and also, as observers, non-Member States, and intergovernmental organizations. The SCT met in special session from November 29 to December 4, 2001, and from May 21 to 24, 2002, in order to analyze the Report on the Second WIPO Process. The SCT formulated a number of recommendations³³⁴ on which WIPO Member States took a decision at their General Assembly from September 23 to October 1, 2002. The questions addressed in the Report of the Second WIPO Process, the recommendations of the special sessions of the SCT and the decision of WIPO General Assembly are discussed below.

227. *International Nonproprietary Names (INNs) for pharmaceutical substances.*³³⁵ The INN system is a naming system introduced in accordance with a resolution of the World Health Organization (WHO), in order to allocate a generic name to all approved new pharmaceutical substances. That generic name cannot be subject to any exclusive rights and is freely available for use by all. In the INN system, health authorities, intellectual property offices and the private sector have agreed that the names involved cannot be registered or used as trademarks. In the DNS, however, INNs are not protected against appropriation by private parties, and their registration as domain names creates a situation that appears to be incompatible with the underlying principles of the INN system. At the special sessions of the SCT, numerous States and entities, in particular the World Health Organization (WHO), declared themselves in favor of protection of INNs from registration by private entities in the DNS. However it was also argued that the scale of improper registration of INNs as domain names, and the lack of evidence of adverse effects of that practice, did not warrant the introduction of protection measures. The participants decided that no particular form of INN protection would be recommended in the DNS at the present stage, but that WIPO together with WHO would continue to monitor the situation and that, where necessary, it would bring any important developments in this area to the notice of Member States. At its meeting from September 23 to October 1, 2002, the General Assembly of WIPO approved this recommendation.

228. *Names and acronyms of intergovernmental organizations.*³³⁶ The names and acronyms of intergovernmental organizations are protected by Article 6*ter* of the Paris Convention and by the TRIPS Agreement, as well as by the provisions of other international treaties that afford protection to certain names of intergovernmental organizations or names used at the international level: such as the 1949 Geneva Conventions which prohibit the use of the name “Red Cross.”³³⁷ Article 6*ter* of the Paris Convention does not confer automatic protection on the names and acronyms of intergovernmental organizations, but requires each organization to notify WIPO of the names for which it seeks protection, and WIPO then communicates these to the Member States. The protection provided by the Paris Convention extends to any registration or use of the name or acronym of an intergovernmental organization as a trademark, while it is understood that a Member State can impose a condition that the registration or use should only be restricted if it is liable to mislead the public or create a false association between the trademark in question and the name or acronym of the organization.

229. In light of the fact that international law provides intergovernmental organizations with immunity from national jurisdiction, the provisions of Article 6*ter* of the Paris Convention are applied principally through the national industrial property offices, to which notifications under Article 6*ter* are sent and which then ensure that the protected names and acronyms are not registered or improperly used as trademarks. At the SCT special sessions, the legal advisers of the United Nations system, representing more than 20 United Nations bodies and programs and a number of other intergovernmental organizations, spoke on the adverse implications, for both users and organizations, of the registration of names and acronyms of intergovernmental organizations as domain names. The meeting recommended that the UDRP be amended to allow complaints to be filed by international organizations under certain circumstances, while taking into account the privileges and immunities of intergovernmental organizations under international law. At its meeting from September 23 to October 1, 2002, the General Assembly of WIPO adopted the recommendation of the SCT with respect to the names and acronyms of intergovernmental organizations and instructed the WIPO secretariat to transmit the said recommendation to the Internet Corporation for Assigned Names and Numbers (ICANN).³³⁸

230. *Personal names.*³³⁹ Cases decided under the UDRP demonstrate that the protection it confers to trademarks and service marks has been broadly interpreted as applying not only to registered marks, but also to unregistered and ‘common law’ marks. As a result, numerous persons have filed complaints under the UDRP against the improper registration of their personal names as domain names. There are, however, two limitations on the application of the UDRP to personal names. The first limitation relates to the fact that certain countries do not recognize rights in common law or unregistered marks. In those countries, the UDRP can only

be invoked to protect the names of persons against improper registration as domain names where the notoriety or commercial reputation of the persons in question extends to another country in which such marks are recognized and granted trademark protection. The second limitation relates to the fact that names of persons are protected only in so far as they are used in business, based on the fundamental principle of trademark law. The UDRP thus does not afford protection to personal names that enjoy notoriety independently of their use in commerce; for example, the names of political or historical figures. Some participants in the SCT special sessions, especially those representing countries that do not recognize unregistered marks, considered that the protection of personal names in the DNS related to the question of the extension of the UDRP to trade names. However, the meeting recommended that no action be taken in this area. At its meeting from September 23 to October 1, 2002, the General Assembly of WIPO adopted this recommendation.

231. *Geographical indications, geographical names or indications of source.*³⁴⁰ Geographical indications are protected by certain provisions in international treaties, in particular the Paris Convention and the TRIPS Agreement.³⁴¹ Nevertheless, in the absence of an international framework for the recognition of geographical indications, and the fact that the applicable laws at present relate to trade and goods, whereas domain name registrations are wider in scope, it is problematic to amend the UDRP to cover the improper use of geographical indications as domain names. Following the discussions of the SCT special sessions, it was recommended that the General Assembly of WIPO should entrust the SCT with determining the best means of addressing the question of the protection of geographical indications in the DNS. At its meeting from September 23 to October 1, 2002, the General Assembly of WIPO adopted the recommendation of the SCT with respect to geographical indications, it being understood that the SCT is to continue the discussions on this topic.

232. With respect to the protection of country names, it was generally accepted that there currently exists no standard for the legal protection of such names at the international level. It was evident that many country names have been registered as domain names by persons or entities having their residence or registered office outside the country in question, and that in most cases the registrant was an individual or entity with no link to the government of the country concerned.³⁴² Most participants at the special sessions favored some form of protection for country names against registration by persons who had no connection with the constitutional authorities of the countries themselves, and some proposals were made as to the manner in which such protection could be provided. At its meeting from September 23 to October 1, 2002, the General Assembly of WIPO noted that all Delegations supported the recommendation of the SCT with respect to country names, except those of Australia, Canada and the United States of America. It noted, however, that a number of issues regarding the modalities of protection of country names in the DNS warrant further discussion.³⁴³ The General Assembly decided that these discussions should be continued in the SCT with a view to reaching a final position.

233. *Trade names.*³⁴⁴ Trade names enjoy protection at the international level by virtue of Articles 8, 9 and 10 of the Paris Convention. The extension of the UDRP to trade names has proven difficult for a number of reasons in particular: the diversity of national mechanisms of trade name protection, the lack of evidence of abusive registration of trade names as domain names, the fact that multiple owners of a trade name may have a legitimate interest in a single name (as the existence of a trade name is relatively easy to prove in many countries), and the fact that the main users of trade names, namely smaller businesses operating at the local level, are liable to have difficulty in qualifying for protection at a global level under the UDRP. Participants in the special sessions recommended that Member States should keep the matter under review and raise it for further discussion if the situation so demanded. At its meeting from September 23 to October 1, 2002, the General Assembly of WIPO adopted this recommendation.

(c) *WIPO Cooperation Program for ccTLDs*

234. Concurrently with their request that the Organization undertake the Second WIPO Internet Domain Name Process, the 19 Member States concerned requested the launch of a program for the benefit of the administrators of ccTLDs.³⁴⁵ The request was duly ratified by the General Assembly of WIPO,³⁴⁶ and the program commenced in August 2000. The goal was to improve the protection of the intellectual property in ccTLDs in a collaborative exercise with their administrators.

235. Under the program, WIPO: (i) developed the ccTLD Best Practices for the Prevention and Resolution of Intellectual Property Disputes; (ii) regularly advises ccTLD administrators upon request on intellectual property issues and the design of suitable procedures for the settlement of disputes, and provides the services of the WIPO Arbitration and Mediation Center; (iii) advises ccTLD administrators who have initiated national consultation processes along the lines of the WIPO Internet Domain Name Processes; and (iv) published a ccTLD database and a trademark database portal.

236. The ccTLD Best Practices for the Prevention and Resolution of Intellectual Property Disputes were presented in draft form at the conclusion of the WIPO Conference on Intellectual Property Questions Relating to the ccTLDs, organized on February 20, 2001.³⁴⁷ The draft was published online for public comment,³⁴⁸ and the final version was published on June 20, 2001.³⁴⁹ The Best Practices provide a guide on intellectual property issues for use by ccTLD administrators. They emphasize the importance of domain name registration practices designed to prevent conflict between domain names and intellectual property rights, ADR procedures and, finally, describe the dispute resolution services of the WIPO Arbitration and Mediation Center, which are available to any ccTLD administrator who may have designated the Center for this purpose. Since the launch of the WIPO ccTLD program, WIPO has provided advice on the management of intellectual property issues to 50 ccTLD administrators, and 28 ccTLDs have retained the WIPO Center as their dispute-resolution service provider.

237. In addition, WIPO collaborates closely with certain ccTLDs in the course of their national consultations, which are the national equivalent of the WIPO Internet Domain Name Processes. The administrators of the domains .nl (Netherlands) and .ie (Ireland), have embarked on such processes with a view to developing dispute-resolution procedures for disputes arising in their domains. The administrators of the .nl and .ie domains have requested WIPO's participation in their national processes, in so far as they relate to intellectual property concerns. The consultation process concerning .nl was completed in November 2001 with the publication of a report that recommended the adoption of an arbitral procedure for the resolution of domain name disputes, based on alleged infringements of trademarks and trade names.³⁵⁰ Following a public tender, the .nl administrators designated the WIPO Arbitration and Mediation Center to administer disputes under the new .nl dispute-resolution procedure, due to come into effect early 2003. The national consultation process in .ie is ongoing, with WIPO's involvement.

238. WIPO also published a ccTLD database in January 2002.³⁵¹ This database, which is regularly updated, has links to the websites of almost all of the 243 ccTLDs, and provides information on each ccTLD as to whether the administrator has implemented a registration contract, a Whois service, or alternative dispute-resolution mechanism. Analysis of the data shows that, of the 243 ccTLDs included in the database, 114 (or 46.9%) have introduced a registration contract, 119 (or 48.9%) provide a Whois service, and 56 (or 23%) have adopted a dispute-resolution mechanism. It also reveals that 49 ccTLDs (almost 20.1%), are not visible on the Web, with their sites being either non-existent or inaccessible.

239. WIPO has also published a trademark database portal to facilitate preliminary trademark searches for persons wishing to register a domain name in a gTLD or ccTLD and satisfy themselves that the name does not infringe third-party trademark rights.³⁵² At present, the portal is screening the trademark databases compiled by 56 national, regional and international industrial property offices or agencies.

III. (D) PATENTS

240. This Chapter describes the patent system, as it has adapted to the evolution of digital technologies, focusing on issues that have arisen with respect to: the scope of patentable subject matter, including business method patents and software protection; prior art effect; and enforcement of patent rights. It then examines WIPO's response and related programs in the field of patent law.

(i) PATENTS IN THE DIGITAL ENVIRONMENT

241. Inventions are characteristically protected by patents. Virtually every country that accords legal protection to inventions – and there are more than 160 such countries – grants such protection through the patent system. In addition, inventions may also be protected by other types of rights, such as utility models or trade secrets. The protection of inventions through patents is recognized, in particular, in two multilateral treaties, the Paris Convention and the TRIPS Agreement. The patent system provides a framework for innovation and technological development by, on the one hand, granting an exclusive right to the owner of a patent to prevent others from commercially exploiting the patented invention for a limited period³⁵³ and, on the other hand, balancing this right with a corresponding duty to disclose the information concerning the patented invention to the public. This information, which is classified and stored in the patent documentation, is available to anyone and, increasingly, is accessible online through Internet-based systems.³⁵⁴ The mandatory disclosure of the invention thus enriches the available pool of technological knowledge, facilitates technology transfer, and enhances the opportunities for creativity and innovation by others.³⁵⁵

242. The patent system has played a vital role in promoting the development of the underlying technical infrastructure for the Internet and e-commerce that takes place across its networks. E-commerce relies in a critical way on various computer and

network technologies, both hardware and software. The market exclusivity established through effective patent protection has provided a reward for investment and has justified the expenditures on research and development to achieve further technological progress. However, the new technologies pose challenges to the conventional legal scheme for the patent system. The following addresses several of the current issues associated with digital media and e-commerce in the context of patent protection.

(a) *Business Method Patents*

243. In order to be eligible for patent protection, an invention must fall within the scope of patentable subject matter. Article 27.1 of the TRIPS Agreement provides that, subject to certain exceptions and conditions under that Agreement, patents shall be available "for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application." While it is possible to provide limited exceptions, which are allowed under the TRIPS Agreement, under national and regional laws, the general rule is that patent protection for an invention will not be refused simply because it falls in a particular field of technology.

244. Patents have recently been granted to certain inventions concerning financial services, electronic sales and advertising methods and business methods, including business methods consisting of processes to be performed on the Internet, and telephone exchange and billing methods.³⁵⁶ A significant decision in the United States of America, for example, found a business model for managing an investment portfolio to be patentable subject matter, in *State Street Bank & Trust v. Signature Financial Group*.³⁵⁷ In Europe, the Boards of Appeal of the European Patent Office (EPO), in the *SOHEI* case,³⁵⁸ has decided that a computer system involving a number of independent management tasks, including financial and inventory management and a system operation method was patentable as such. The case required the EPO Boards of Appeal to decide whether the addition of finance-related expressions for data would classify the apparatus and method as principally performing a "method of doing business as such".³⁵⁹ It is expected that the number of these e-commerce-type patents may increase significantly, bearing in mind its potential for individuals, companies and national economies, as well as the global economy. Such patents are viewed by some as important for creating incentives and spurring investment in new digital technologies.

245. On the other hand, this trend has been criticized by those who stress that a number of such patents concerning business practices and methods reflect familiar ways of doing business that are not new or novel - the only aspect that is different is that they occur in cyberspace. In Europe there is the view that the subject matter of a patentable 'invention' must have a 'technical character' or involve 'technical teaching,' i.e., an instruction addressed to a person skilled in the art as to how to solve a particular technical problem using particular technical means.³⁶⁰ In Japan, a business method itself which is a man-made arrangement, or a method using only such an arrangement, is not patentable subject matter.³⁶¹ In the United States of America, issues were raised as to 'patent quality' due to the granting of some business method patents for inventions that did not meet the requirements of novelty and non-obviousness. In response, the United States Patent and Trademark Office (USPTO) issued a "White Paper on Automated Financial or Management Data Processing Methods (Business Methods),"³⁶² and has taken a number of measures.³⁶³ In addition, the Japan Patent Office (JPO), the EPO and the USPTO conducted a trilateral comparative study on computer implemented business methods, that was designed to facilitate consistent search and examination practices across the offices, in light of ever-increasing numbers of filings related to business method inventions. The Trilateral Report produced the following consensus summary:³⁶⁴

■■■ "A technical aspect is necessary for a computer-implemented business method to be eligible for patenting. (In the United States of America, the 'in the technological arts' feature may be implicitly recited in the claim. The EPO and the JPO require that the technical aspect be expressed in the claim.)

■■■ To merely automate a known human transaction process using well known automation techniques is not patentable."

246. Because the phenomena of digital networks and e-commerce are so new and still emerging, some claim that gauging the novelty of a business model in this area and whether it meets the requirements of patentability is a tenuous task. It is also contended that competition may be harmed in the digital market place if companies are able to obtain patents for basic business methods that already exist in non-cyberspace. On the other hand, other commentators argue that patent protection is merited given the technological innovation reflected in such new business models and that this protection is needed in order to provide incentives for further investment in new on-line businesses. A lawsuit filed in October 1999, in which Amazon.com, the Internet bookseller, sued its rival, Barnesandnoble.com, illustrates the stakes involved. Amazon.com, in September 1997, started using a 'one-click' technology to enable its online customers to make repeated purchases from its website without having to repeatedly fill out credit card and billing address information. It received a patent for its one-click technology in September 1999 (United States Patent No. 5,960,411), and alleged that Barnesandnoble.com's one-click checkout system, known as "Express Lane," infringed its

patent. The decision of the District Court awarding preliminary injunctive relief to Amazon was taken on appeal to the Court of Appeals for the Federal Circuit. In March 2002, the case was settled between the two parties.³⁶⁵

(b) *Software Patents*

247. A similar discussion concerning patentable subject matter has occurred in respect of software patents, as the significance of software itself extends well beyond the software industry. As mentioned above, the TRIPS Agreement (Article 27.1) does not allow the exclusion of software in general from patentability.³⁶⁶ In addition to the question as to whether computer programs *as such* should be regarded as "inventions" under the patent law, this broad scope of patentability has prompted a discussion on the subject of where to draw the line between copyright and patent law protection for computer programs. A *Fédération Internationale des Conseils en Propriété Industrielle* (FICPI) review of international patent protection of software, e-commerce and business methods,³⁶⁷ for example, found that generally countries in Europe as well as South Africa explicitly exclude computer programs *as such* from protection under their patent laws, while Australia, Canada, Chile, Israel, Japan,³⁶⁸ the Republic of Korea and the United States of America do not exclude such protection. The same countries, with the exclusion of Chile, also do not exclude granting patent protection to business method *as such*. Although some patent offices have established examination guidelines for computer related inventions, including software related inventions, very little international harmonization has been achieved in this area.³⁶⁹

248. In the field of information technology, the value of intellectual assets often resides in the 'content' of the information. In the past, software has often been sold as an integral part of the computer system, while, today, software products are often marketed in the form of computer readable media, for example, diskettes and CD-ROMs or directly over the Internet. Software-related inventions are thus stored in such media, and commercialized separately from the computer hardware. It is necessary, therefore, to claim such software-related inventions as a computer readable medium storing the software that performs the claimed functions. This type of claim is commonly called "Beauregard-type claim."³⁷⁰ Other types of claims, such as "Lowry-type claim" (a computer readable medium storing a data structure, which data structure is interrelated to the medium structurally and functionally)³⁷¹ or a "propagated signal claim" (a claim to a computer data signal that is embodied in a carrier wave)³⁷² have also been advanced by practitioners. As this topic is relatively new, there is not as yet international harmonization concerning an acceptable claim format with respect to software-related inventions.

249. In Europe, the European Commission issued a proposal for a Directive on the protection by patents of computer-implemented inventions in February 2002.³⁷³ While inventions using software can already be patented through the European Patent Office (EPO), or national patent offices, implementation of the conditions for patentability vary, and so the Directive is designed to harmonize the way in which national patent laws deal with software inventions. In particular, the proposal provides that, in order to meet the requirement of inventive step, as is the case with inventions in general, a computer-implemented invention must make a technical contribution to the state of the art. European cases in which a "technical contribution" has been found include an invention to increase computer processing speeds, and an invention by which an X-ray machine was controlled by a data processing unit. Further, the proposal does not follow the practice of the EPO in permitting claims to computer program products either on their own or on a carrier, as this could be seen as allowing patents for computer programs "as such".³⁷⁴

(c) *Prior Art Effect*

250. As noted, patents are granted only to inventions that are novel, involve an inventive step and are useful or industrially applicable. To determine if the requirements of novelty and inventive step are met, the claimed invention is compared with the existing state of the art. The existing state of the art is sometimes referred to as the 'prior art.' Prior art in electronic form, which exists in cyberspace only ('cyber art'), raises questions as to its availability as 'prior art' and, thus, whether it can be applied against an invention for which a patent is sought in determining novelty or inventive step. The questions include whether that kind of information has become 'prior art' even if it was disclosed on the Internet for only a limited period.

251. Although similar questions have been addressed with respect to prior art published on paper, publication on the Internet may have different implications. Authenticity, veracity and integrity are the critical issues for prior art in cyberspace, since cyber art is considered to be more vulnerable to alteration and modification. The determination of the timing of the disclosure and the accessibility of the cyber art to the public, given the network's capacity for instantaneous dissemination on the international scale, are other concerns. Furthermore, national laws may extend the concept of the prior art to include prior uses. Under such national laws, the concept of 'use' may be revisited in a computer environment. In addition, the above-mentioned questions are applicable in the context of a grace period for public disclosure of an invention before filing a patent application.³⁷⁵ WIPO conducted a survey of its Member States concerning, among other issues, disclosure of information on the Internet, focusing on current national approaches and the need for harmonization at an international level, and the summary of its results is available online.³⁷⁶

(d) *Enforcement of Rights*

252. As in other fields of intellectual property, jurisdictional questions and enforcement of rights are also relevant to patent protection. The Internet raises complex issues in this regard, as patent protection is provided on a country-by-country basis, and the patent law of each country has application only within its borders, in accordance with the traditional principles of territoriality. For example, where patented software is sold and delivered over the Internet internationally, any infringement action would require a consideration of the jurisdictional and choice of law issues. Private international law issues in the field of patents are discussed in Chapter IV below. Moreover, the first practical issue may be that of detection, since the unauthorized importation of such software by means of the Internet, unlike the importation of tangible goods, cannot be detected and stopped by customs authorities.

253. One of the questions particular to patent protection may be the case where a patented product invention consists of elements that are physically located in different territories. Or, for example, in the case of process patents for a method to process and transfer certain data using computerized networks (for example, the Internet), distinct elements in the claimed process could be performed in different territories. If an alleged infringer operates a system containing all of the claimed elements within the territory in which the invention is protected, there would be a straightforward claim for infringement. However, the questions of infringement and jurisdiction would be more difficult where a patented invention involves activities in several countries by several individuals. In particular, Article 28 of the TRIPS Agreement requires that a patent confer on its owner the right to prevent others from 'using' the patented product or process. What constitutes 'using' a patented product or process is increasingly complicated in the case of Internet-related e-commerce patents.

254. This question may be examined in the context of the abovementioned case, *State Street Bank & Trust v. Signature Financial Group*,³⁷⁷ where the Court of Appeals held that the patent involved patentable subject matter. The patent Claim 1 in that case provides as follows:

"A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:

- ■ ■ computer processor means for processing data;
- ■ ■ storage means for storing data on a storage medium;
 - (i) means for initializing the storage medium;
 - (ii) second means for processing data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds, assets and for allocating the percentage share that each fund holds in the portfolio;
 - (iii) means for processing data regarding daily incremental income, expenses, and net realized gain or loss for the portfolio and for allocating such data among each fund;
 - (iv) means for processing data regarding daily net unrealized gain or loss for the portfolio and for allocating such data among each fund; and
 - (v) means for processing data regarding aggregate year-end income, expenses, and capital gain or loss for the portfolio and each of the funds."

Each of the recited "means" in Claim 1 of the patent corresponds to a physical structure that could be located at sites remote from the other "means." Indeed, the various "means" could be located in different countries. Given this situation, it may not be clear in which jurisdiction the accused infringer is actually "using" the patented invention. Although such questions remain largely hypothetical for the moment, real cases can be anticipated to follow. Thus, increasing consideration must be given to these questions in future to ensure that rightsholders and tribunals are well prepared.

(ii) WIPO PROGRAMS

255. WIPO has been addressing a number of issues in this area. Firstly, the Standing Committee on the Law of Patents (SCP) studied the desirability and feasibility of harmonizing rules concerning the patent law implications of the disclosure of technical information on the Internet, such as its impact on patentability.³⁷⁸ The discussion revealed that most of the countries recognize the prior art effect of information disclosed on the Internet under the general rules and practices applicable to the determination of prior art.³⁷⁹ Without any international harmonization with respect to the definition of prior art, it is apparent that the practices concerning the determination of the contents and timing of disclosures on the Internet vary from one Office to the other. Against this backdrop, the SCP agreed that in the first instance, it was necessary to establish general principles concerning prior art that would also cover the disclosure of information on the Internet under the Substantive Patent Law Treaty (SPLT). The Committee would, at a later stage, consider the need to establish special provisions specific to Internet disclosures in the Practice Guidelines under the SPLT.³⁸⁰

256. Secondly, the Patent Law Treaty (PLT) and the accompanying Regulations, which were adopted in June 2000, contain provisions for harmonization of the formal requirements concerning patent applications and patents which are applied by the industrial property offices of States and regional industrial property organizations.³⁸¹ In relation to new methods for electronic administration, Article 8 and Rules 8 and 9 of the PLT and its Regulations, in particular, provide general rules relating to the filing of communications in electronic form or by electronic means using digital signatures, incorporating the requirements with respect to electronic filing under the Patent Cooperation Treaty (PCT).³⁸²

257. Thirdly, following the adoption of the PLT, the SCP initiated work on harmonization of substantive patent law in November 2000, namely, negotiations of the draft SPLT. The draft SPLT focuses, in principle, on issues of relevance for the grant of patents and validity of patents, such as the definitions of prior art, novelty, inventive step/non-obviousness and industrial applicability/utility, the drafting and interpretation of claims, the requirement of sufficient disclosure and patentable subject matter.³⁸³ Although still at an early stage of the negotiation, the SCP expressed its will to achieve deep harmonization, i.e., harmonization of legislation as well as of practices regarding the core issues of patentability and validity of patents.

65. The Paris Act of the Berne Convention for the Protection of Literary and Artistic Works (1971), at <http://www.wipo.int/treaties/ip/berne/index.html>.
66. For a discussion of digital distribution of films online, see presentation of A. Khanna, Chairman, Reliance Entertainment, Ltd., and presentation of T. Dow, Vice President and Counsel, Technology and New Media, Motion Picture Association of America (MPAA), Second WIPO International Conference on Electronic Commerce and Intellectual Property ("Second WIPO E-commerce Conference", September 2001), at <http://ecommerce.wipo.int/meetings/2001/conference/program/index.html>. See also presentations of G. Whitson, Senior VP, Business and Legal Affairs, Warner Bros. Online, and L. Safir, Chairman, AFMA Europe, WIPO International Conference on Electronic Commerce and Intellectual Property ("First WIPO E-commerce Conference", September 1999), at <http://ecommerce.wipo.int/meetings/1999/speakers/index.html>.
67. For a discussion of online publishing of literary works, see presentation of H. Spruijt, Member, Executive Committee, International Publishers Association, and J. Bourgois, Chief Executive Officer, Vuibert Publishers, Second WIPO E-Commerce Conference (September 2001). For a discussion of the current state of online delivery of music, see presentation by J. Vacher and presentation of A. Vanttinen, New Media Adviser, International Federation of Musicians (FIM), Founder, Musicfinland.com, and presentation of S. Perlmutter, at the Second WIPO E-Commerce Conference (September 2001).
68. See "It's the World's Biggest Copy Machine," PC Week (January 27, 1997).
69. Indeed, in the earliest discussions concerning the Internet and its implications for copyright, some commentators argued that content subject to such rights could not be controlled on the Internet, and authors would have to find new ways to make money in cyberspace. See L. Lessig, "The Law of the Horse: What Cyberlaw Might Teach," *Harvard Law Review* (1999); C. Mann, "Who Will Own Your Next Good Idea," *The Atlantic Monthly* (September 1998); see also "Digital Rights and Wrongs," *Economist*, p.95 (July 17, 1999). As the WIPO Internet Treaties of 1996 demonstrate, however, copyright continues to play an essential role in this new environment.
70. Even without the effects that can result from copyright infringement, these markets will face considerable pressures generated by new business models and disintermediation in the networked environment. See "The Economic and Social Impacts of Electronic Commerce: Preliminary Findings and Research Agenda," OECD, at Ch.4 (1999) at <http://www.oecd.org/pdf/M00032000/M00032941.pdf> (in particular, the OECD highlights the effects of disintermediation).
71. See IIPA Report by Stephen Siwek, Economists Incorporated, "Copyright Industries in the U.S. Economy: The 2002 Report," at http://www.iipa.com/pdf/2002_SIWEK_FULL.pdf. See Tamara Conniff and Craig Linder, "U.S. Intellectual Prosperity," *Hollywood Reporter*, p.1 (April 23-29, 2002).
72. See further the "Study on the Economic Importance of Industries and Activities Protected by Copyright and Related Rights in the MERCOSUR Countries and Chile," WIPO and State University of Campinas (2002), available at <http://www.wipo.int/sme/en/index.html>.
73. The WIPO Copyright Treaty (WCT) (1996), at <http://www.wipo.int/clea/docs/en/wo/wo033en.htm>, and the WIPO Performances and Phonograms Treaty (WPPT) (1996) at <http://www.wipo.int/clea/docs/en/wo/wo034en.htm>.
74. A collection of information resources on WIPO's work as relates to the WCT and WPPT is at <http://www.wipo.int/copyright/en/index.html>. See generally M. Ficsor, "Law of Copyright and the Internet," (Oxford, 2001); and Silke von Lewinski and Jörg Reinbothe, "WIPO Treaties (1996)," (Butterworths Law, 2001).
75. The Berne Convention for the Protection of Literary and Artistic Works, available at <http://www.wipo.int/treaties/ip/berne/index.html>.
76. The Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (1961), available at <http://www.wipo.int/treaties/ip/rome/index.html>.
77. The World Trade Organization (WTO)'s TRIPS Agreement (the Agreement on Trade-Related Aspects of Intellectual Property Rights) came into effect on January 1, 1995, and is the most comprehensive multilateral agreement on intellectual property, covering: copyright and related rights, trademarks including service marks, geographical indications including appellations of origin, industrial designs, patents including the protection of new plant varieties, layout-designs of integrated circuits and undisclosed information including trade secrets and test data. The TRIPS Agreement sets minimum standards of protection to be provided by Members, specifies domestic procedures and remedies for enforcement of intellectual property rights, and makes disputes about TRIPS obligations subject to WTO dispute settlement mechanisms (further information and texts are available on the WTO website at http://www.wto.org/english/tratop_e/trips_e/trips_e.htm).
78. Berne Convention Art. 9(1). See also Rome Convention Art. 10 and TRIPS Agreement, Art. 14 (providing to phonogram producers the right to authorize or prohibit the "direct or indirect" reproduction of their phonograms). The WPPT also provides to both phonogram performers and producers a broad right of reproduction, whether "direct or indirect," and "in any manner or form" (WPPT Articles 7 and 11). For a detailed discussion of the reproduction, communication and distribution rights, see presentation of C. Clark, General Counsel, International Publishers Copyright Council, First WIPO E-Commerce Conference (September 1999).
79. WCT, agreed statement concerning Article 1(4); WPPT, agreed statement concerning Articles 7, 11 and 16.
80. See Digital Millennium Copyright Act, Title II, Pub. L. No. 105-304, 112 Stat. 2860 (1998).
81. See Art. 5(1) of the Directive 2001/29/EC of the European Parliament and of the Council of May 22, 2001, on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society ("E.U. Copyright Directive"), at http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=32001L0029&model=guichett. Refer to para.63.
82. There has been some debate about whether the widespread deployment of these 'trusted systems' (consisting of software and hardware to manage digital rights) may upset the traditional balance in copyright, expressed through the relevant limitations and exceptions. See "Digital Rights and Wrongs," *Economist*, p.95 (July 17, 1999). "Trusted systems," a term first used by Mark Stefik, principal scientist of Xerox's Palo Alto Research Faculty, refers to software and hardware that can be programmed to provide digital rights management (control access to and copying of material). See M. Stefik, "Trusted Systems," *Scientific American*, p.78 (March 1997).

83. Certain commentators have raised questions of whether certain legislation concerning technological measures of protection may have a counter-productive impact on encryption and security research. The United States Digital Millennium Copyright Act (DMCA) contains exceptions for encryption research and security testing that are intended to address this concern. See presentation of S. A. Baker, "Cryptography and Electronic Rights Management: Technology & Policy," at the First WIPO E-commerce Conference (September 1999). See also Patricia Akester, "Survey of Technological Measures for Protection of Copyright," Issue 1, *Entertainment Law Review*, pp.36-38 (2001).
84. See discussion of digital rights management in paras.117-118.
85. Digital Millennium Copyright Act, Public Law No. 105-304, 112 Stat. 2860 (October 28, 1998). See the Congressional Research Service Report for Congress, "Digital Millennium Copyright Act, P.L. 105-304: Summary and Analysis," (November 10, 1998); and U.S. Copyright Office Summary, "The Digital Millennium Copyright Act of 1998," (December 1998). See also Victoria McEvedy, "The DMCA and the E-Commerce Directive," Issue 2, *European Intellectual Property Review*, pp.65 – 73 (2001).
86. See Congressional Research Service Report for Congress, "Digital Millennium Copyright Act, P.L. 105-304: Summary and Analysis," (November 10, 1998).
87. Encryption, or cryptography, refers to the process of using software to encode plain text information into cipher text, which can only be decoded by the intended recipients using a key or password. The two main types are public-key encryption (asymmetric) and symmetric encryption. Refer generally to *Cryptography A-Z* at <http://www.ssh.fi/tech/crypto/>.
88. A watermark is a "pattern of bits inserted into a digital image, audio or video file that identifies the file's copyright information (author, rights, etc.). The name comes from the faintly visible watermarks imprinted on stationery that identify the manufacturer of the stationery. The purpose of digital watermarks is to provide copyright protection for intellectual property that's in digital format." See Webopedia at http://www.webopedia.com/TERM/d/digital_watermark.html.
89. In 1998, the Secure Digital Music Initiative (SDMI) was established by record and technology companies to agree on a standard for music copy protection. In September 2000, SDMI issued a public challenge to hack SDMI-encoded and watermarked audio content. The copy protection was hacked in three weeks, and the RIAA initiated legal action to prevent the hacking method from being published. This initiative to reach a common copy-protection standard has been overtaken by various discrete digital rights management schemes. See Ron Harris, "Whatever Happened to SDMI?," *Salon.com*, (April 29, 2002) at <http://www.salon.com>. See also the discussion of MP3, Napster and the SDMI, by Jessica Litman, "Digital Copyright," (Prometheus Books, 2001), at pp.154 –163.
90. See "How a Copyproof CD Works," *Wired Magazine*, p.45 (February 2002). See also, Damien Cave, "Chained Melodies," *Salon.com*, (March 13, 2002) at <http://www.salon.com>; Christophe Guillemin, "Un site publie une liste des CD musicaux protégés contre la copie," *ZDNet France*, (2001) at <http://news.zdnet.fr>.
91. The United States Senator Fritz Hollings, in March 2002, introduced the draft 'Consumer Broadband and Digital Television Promotion Act' (S. 2048). See BNA Inc., "Copyright Owners Think Through Ways of Fighting Piracy, Collecting Royalties," Vol. 7(42), *Electronic Commerce and Law Report* (October 30, 2002). See also Declan McCullagh, "Anti-Copy Bill Hits D.C.," *Wired News*, (March 22, 2002) at <http://www.wired.com>.
92. See "FCC Seeks Comment on Numerous Issues Relating to Digital Television 'Broadcast Flag'," Vol. 7(32), *Electronic Commerce and Law Report*, pp.813-814 (August 14, 2002).
93. *Universal City Studios, Inc. et al v. Reimerdes, et al*, (S.D.N.Y., January 14, 2000), 82 F. Supp. 2d 211; 2000 U.S. Dist. LEXIS 906; 53 U.S.P.Q.2D (BNA) 1780 (No. 00-CV-0277).
94. Linux is an example of open source software, being a freely distributed version of the UNIX operating system that runs on various hardware platforms. See the *Linux Journal* at <http://www.linuxjournal.com/>. For a discussion of the DeCSS litigation, see Litman *supra* note 90 pp.152-153.
95. Preliminary denial of defendant's motion to dismiss, 203 F. Supp. 2d 1111; (CR) 01-20138RMW).
96. See Reuters, Ltd. , "Lawyers Say Digital Copyright Law Unconstitutional," *FindLaw*, (April 2, 2002) at <http://news.findlaw.com>. For a discussion of the history and drafting of the Digital Millennium Copyright Act, see Litman (2001) pp.122-150.
97. Pub. L. No. 105-304, 112 Stat. 2860 (1998).
98. The Studies are available from the U.S. Copyright Office, at <http://www.copyright.gov/new.html>: the Joint Study on Encryption Research is at <http://www.loc.gov/copyright/reports/studies/> and the Digital Millennium Copyright Act, s.104 Study is at <http://www.copyright.gov/reports/studies/dmca/sec-104-report-vol-1.pdf>. In addition, a Study of the Digital Millennium Copyright Act is at http://www.loc.gov/copyright/reports/studies/dmca/dmca_study.html.
99. For a discussion of the importance of the WPPT and the need for other protection for the recording industry interests, see presentation of J. Vacher and presentation of S. Perlmutter, both at the Second WIPO E-Commerce Conference (September 2001). See also presentation of H. Rosen, President and CEO, Recording Industry Association of America, First WIPO E-Commerce Conference (September 1999).
100. See WIPO document SCCR/8/2, "Short Description of Possible Subjects for Future Review by the Standing Committee", at <http://www.wipo.int/copyright/en/index.html>.
101. Draft legislation (H.R. 5544, the 'Digital Media Consumers' Rights Act') was introduced in the United States legislature on October 3, 2002, by Representatives Frederick C. Boucher (D-Va) and John T. Doolittle (R-Calif), designed to establish principles that would reaffirm the fair use doctrine, allowing consumers to make copies of copyright materials for their personal use, and aimed at maintaining the balance in copyright law. See "Boucher Draws Battle Lines for Future War Over Digital Copying," Vol 7(39), *Electronic Commerce and Law Report*, p.1001 (October 9, 2002).
102. Under United Kingdom law, the Copyright Designs and Patents Act (1988) provides fair dealing exceptions to copyright infringement, including for: research or private study (s. 29), reporting current events (s. 30(2)-(3)) and criticism or review (s.30(1)).
103. See Jim Lahore, "Fair Dealing and the Digital Agenda: Will the Copyright Balance Survive?," Vol.18(1), *Copyright Reporter*, pp.23-34 (July 2000). See also Litman (2001), *supra* note 90, at pp.171-191.
104. See Hilton (2002), *supra* note 43.

105. Berne Conventions, Article 9(2); TRIPS Agreement, Article 13.
106. *The New York Times, Co. v. Tasini*, (00-201) 206 F.3d 161; affirmed, United States District Court S.D.N.Y. 93 Civ. 8678 (SS), decided August 13, 1997. See Supreme Court decision at <http://supct.law.cornell.edu/supct/html/00-201.ZS.html>.
107. *Jerry Greenberg and Ida Z. Greenberg v. National Geographic Society*, U.S. Court of Appeals for the 11th Circuit Atlanta, No. 00-10510, D. C. Docket No. 97-03924-CV-JAL; see <http://www.adlawbyrequest.com/inthecourts/GreenbergCase1.shtml#decision>; petition for writ of certiorari was denied. *National Geographic Society, et al. v. Jerry Greenberg, et al.*, 01-186, Supreme Court of The United States, 122 S. Ct. 347; 151 L. Ed. 2d 262; 2001 U.S. LEXIS 9493; 70 U.S.L.W. 3267, October 9, 2001, decided.
108. Refer to discussion of protection of software under patent law at paras.247-49.
109. The Open Source Initiative, including a full definition of 'open source', is at <http://www.opensource.org/>. See also Richard Stephens, "Copyleft – All Rights Reversed," *Copyright World*, pp.28-31 (June/July 2000). See also the separate 'free software' movement represented by the Gnu Project of the Free Software Foundation, at <http://www.gnu.org>.
110. Civil Judgment of Beijing Haidian District People's Court (1999) Hai Zhi Chu Zi, No.57. See Zhou Lin, ed., "China Court Cases on Intellectual Property Rights," The Chinese People's Public Security University Press (January 2002).
111. WIPO Workshop on Service Provider Liability (December 9-10, 1999). Three papers commissioned for the Workshop are available online: Kamiel Koelman and Bernt Hugenholz, "Online Service Provider Liability for Copyright Infringement," OSP/LIA/1; Batur Oktay and Greg Wrenn, "A Look Back at the Notice-Takedown Provisions of the U.S. Digital Millennium Copyright Act One Year After Enactment," OSP/LIA/2; and Nils Bortloff and Janet Henderson, "Notice and Take-Down Agreements in Practice in Europe – Views from the Internet Service Provider and Telecommunications Industries and the Recording Industry," OSP/LIA/3; all papers are available at http://www.wipo.int/news/en/index.html?wipo_content_frame=/news/en/conferences.html.
112. See Agreed Statement Concerning Article 8, WCT.
113. Various countries' copyright laws contain concepts of liability for contributing to the infringing activities of another. Generally, the determination of liability will turn on the degree of participation and knowledge of the party that is contributing to the infringement. For discussion of various approaches to this issue, including the United States Digital Millennium Copyright Act and European Union E-commerce Directive, see presentations of T. Casey, Senior VP Technology Law Group, MCI Worldcom; M. Fröhlinger, Head of Unit, Media, Commercial Communications and Unfair Competition, DG XV, European Commission; and S. Perlmutter, Consultant, WIPO; all at the First WIPO E-Commerce Conference (September 1999).
114. The Global Business Dialogue on Electronic Commerce issued a position paper on the issue, in which it recognized both the DMCA and the draft European Directive as appropriate models for internationally compatible approaches. See "Liability," Issue Group Policy Paper: Final Draft, GBDe (August 3, 1999).
115. Law No. 137 of November 30, 2001. See legislative texts (in Japanese) at http://www.soumu.go.jp/joho_tsusin/top/pdf/jyoubun.pdf.
116. Article 12 of the Directive 2000/31/EC of the European Parliament and the Council of June 8, 2000, on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market.
117. The European Union Directive, 2000/31/EC, (June 8, 2000) on Certain Legal Aspects of Electronic Commerce in the Internal Market (the 'E.U. E-Commerce Directive') at http://europa.eu.int/ISPO/ecommerce/legal/documents/2000_31ec/2000_31ec_en.pdf. See Miriam Jakobson, "Copyright Liability of Online Service Providers After the Adoption of the E.C. Electronic Commerce Directive: A Comparison to U.S. Law," Issue 7 (2000), *Entertainment Law Review*, pp.144-152. For a description of the differences between the two Directives vis-à-vis ISP liability, see Mark Owen and Richard Penfold, "Copyright Infringement in the On-line World," *Managing Intellectual Property*, pp.44-46 (December 1999/January 2000).
118. Pub. L. No. 105-304, 112 Stat. 2860 (1998). Title II of the DMCA adds section 512 to the U.S. Copyright Act. See generally, McEvedy (2002), *supra* note 85, at pp.65-73.
119. The four categories of activities are: (1) transitory digital network communications; (2) system caching; (3) storing information on systems or networks at direction of users; and (4) information location tools. (Section 512 (a) – (c)).
120. *ALS Scan, Inc. v. Remarq Communities, Inc.*, 239 F.3d 619 (4th Cir. 2001). See William T. McGrath, "U.S. Copyright Case Law Developments in the New Millennium," *Copyright World*, pp.16-19 (May 2001).
121. *Arista Records Inc. v. AT&T Broadband Corp.*, S.D.N.Y., complaint filed 8/16/02. See Amy Harmon, "Record Labels Want 4 Internet Providers to Block Music Site," *The New York Times*, (August 17, 2002) at <http://www.nytimes.com>.
122. See presentation of J. Vincent, General Secretary of the International Federation of Musicians (FIM), "Opportunities and Challenges: Performers in the Digital Environment," Seminar on the WIPO Copyright Treaty (WCT) and WIPO Performances and Phonograms Treaty (WPPT): Opportunities and Challenges, (May 16, 2002) at http://www.wipo.int/news/en/index.html?wipo_content_frame=/news/en/conferences.html.
123. See http://www.wipo.int/news/en/index.html?wipo_content_frame=/news/en/conferences.html.
124. See WIPO document A/36/9 Rev. and "General Report of Assemblies of the Member States of WIPO," Thirty Series of Meetings, A/36/15 (October 3, 2001).
125. A collection of information resources on WIPO's work as relates to protection of audiovisual performances is at <http://www.wipo.int/copyright/en/index.html>.
126. See the Recording Industry Association of America (RIAA)'s Webcasting FAQ, at <http://www.riaa.com/licensing-licen-3a.cfm>.
127. See paras.103-110.
128. A statutory license is provided by law, instead of being granted by each copyright owner upon request. See 17 U.S.C. §114 (d) (1994) & Supp.V. 1999 (enacted under Pub.L. No. 105-3-4, §405, 112 Stat. at 2890-94). Refer to a survey of webcasting in Richard D. Rose, "Connecting the Dots: Navigating the Laws and Licensing Requirements of the Internet Music Revolution" Vol.42(3), *IDEA – The Journal of Law and Technology*, p.332 (2002). See also Mark W. Ishman and Julie D. Cromer, "Trends in US Copyright Law: Adapting to the Cyber-revolution," *Copyright World*, pp.20-23 (April 2000).

129. *Twentieth Century Fox Film Corporation v. ICraveTV; National Football League, v. TVRadioNow Corp., d/b/a ICraveTv.com, d/b/a TVRadioNow.com* (Civil Action No. 00-121 Consolidated with Civil Action No. 00-120) United States District Court for the Western District of Pennsylvania, February 8, 2000, Decided 2000 U.S. Dist. LEXIS 11670; 53 U.S.P.Q.2D (BNA) 1831; Copy. L. Rep. (CCH) P28,030.
130. See Joanna Glasner, "Broadcasters Don't Crave This TV," *Wired News*, (March 26, 2002) at <http://www.wired.com>.
131. Research by Viant, at <http://www.viant.com>. The Motion Picture Association of America (MPAA) shut down a pirated video-on-demand site, Film 88, based in Tehran, which showed full length movie for US\$1 without authorization of the movie studios. A similar operation, Movie88.com was earlier shut down in Taiwan, Province of the People's Republic of China. See Stefanie Olsen, "\$1 Movie Site Finds Shelter in Iran," *ZDNet News*, (June 5, 2002) at <http://www.zdnet.com>.
132. The creators of Star Wars, Lucasfilm, sponsored a contest for fan-made films but, in an attempt to protect its copyright, limited the competition to spoofs and documentaries, excluding fan films. See Amy Harmon, "Star Wars' Fan Films Come Tumbling Back to Earth," *The New York Times*, (April 28, 2002) at <http://www.nytimes.com>.
133. See Nick Hanbridge, "Protecting Rights Holders' Interests in the Information Society: Anti-circumvention; Threats Post-Napster; and DRM," Issue 8, *Entertainment Law Review*, Opinion (2001).
134. See Paul Bond, "Weapon of Choice," *The Hollywood Reporter*, pp.8-11 (March 19-25, 2002).
135. The Broadcast Protection Discussion Group (BPDG) was formed in November 2001 to agree on a technological standard that consumer electronics and computer makers could incorporate in their products to protect digital broadcasts, however no agreement has been reached. See the BPDG's Final Report to the Copy Protection Technical Working Group, (June 3, 2002) at <http://www.cptwg.org/Assets/BPDG/home%20page.htm>. See also Declan McCullagh, "FCC Wades into Digital TV, Piracy Debate," *CNET News.com*, (August 7, 2002), at <http://www.cnet.com>.
136. The Copy Protection Technical Working Group is at <http://www.cptwg.org>.
137. A collection of information resources on WIPO's work as relates to protection of broadcasting organizations is at <http://www.wipo.int/copyright/en/index.html>.
138. The Technical Background Paper "Protection of Broadcasting Organizations," SCCR/7/8 is available at http://www.wipo.int/eng/meetings/2002/sccr/doc/sccr7_8.doc.
139. See generally, Ignacio Javier Garrote, "Linking and Framing: A Comparative Law Approach," Issue 4, *European Intellectual Property Review*, pp.184-198 (2002).
140. In some jurisdictions, such as the United States of America, copyright infringement has been found as a result of the simple act of linking, if such links facilitate copyright infringement or piracy; see *Intellectual Reserve Inc. v. Utah Lighthouse Ministry Inc.*, United States District Court (C.D. Utah) 75 F. Supp. 2d 1290. A similar reasoning was followed by the Belgian court in *IFPI v. Beckers* (Antwerp Court of First Instance, at http://www.jura.uni-tuebingen.de/~s-bes1/text/itpi_v_beckers.PDF). However, in Germany, this practice would seem not to give rise to legal liability, in accordance with §5(3) of the *Teledienste-Gesetz*, following court decisions in *Pfälzer-Links* (LG Frankenhalt, Urt. vom 11.28.2000) and *Swabedoo* (OLG Schleswig-Holstein Urt. vom 12.19.2000). See the discussion by Garrote (2002), *supra* note 140, at p.184, p.188 and pp.190-191.
141. See Garrote (2002), *supra* note 140, at p.184 and pp.187-188. See also Maureen A. O'Rourke, "Fencing Cyberspace: Drawing Borders in a Virtual World," 82 *Minnesota Law Review*, p. 609 (1998).
142. See Garrote (2002), *supra* note 140, at p.184 and p.194.
143. Article 7(1) and (5). European Union Directive 96/9/EC of March 11, 1996, on the Legal Protection of Databases (at <http://europa.eu.int/eur-lex/en/index.html>).
144. In *Danish Newspaper Publishers' Association v. Newsbooster.com ApS*, Denmark Bailiff's Court, July 5, 2002. The Court found a violation of the Danish Copyright Act, §§ 71(1) and 71(2), enacted in June 1998 pursuant to the European Union's Database Directive. A similar case was brought in the United States of America by the Dallas Morning News against a news site aggregator, BarkingDogs.org. See Farhad Majoo, "Sites Barks About Deep Link," *Wired News* (May 1, 2002) at <http://www.wired.com>.
145. Similarly, in the case of *Stepstone v. Ofir*, the German Court ordered a Danish company to cease deep-linking the website of its competitor, LG Köln, Urt. vom 28.2.2001. See Michelle Delio, "Deep Linking takes Another Blow," *Wired News*, (July 25, 2002) at <http://www.wired.com>. See also Garrote (2002), *supra* note 140, p.184 at p.192.
146. See Patrick Tracey, "Dutch Court Rules That Print Newspaper Is Not Covered by Database Protection Law," Vol.7(33), *Electronic Commerce and Law Report*, pp.843-844 (2002).
147. See Ishman *et al* (2000), *supra* note 128, at pp.20-23. See "Database Protection: EU Database Directive Invoked to Support Order Barring Deep Linking to News Sites," Vol 7 (28) *Electronic Commerce and Law Report*, p.714 (July 17, 2002).
148. *EBay Inc. v. Bidder's Edge Inc.*, 100 F. Supp.2d 1058 (N.D. Cal, 2000), relied upon in *Oyster Software Inc. v. Forms Processing Inc.*, Case No. C-00-0724 JCS (N.D. Cal. 2001); see 7 *Electronic Commerce and Law Report*, p.121, (February 6, 2002).
149. *Ticketmaster Corp. v. Tickets.com Inc.*, 54 U.S.P.Q. 2d 1344 (C.D. Cal., 2000).
150. *Leslie A. Kelly v. Arriba Soft Corporation*, No. 00-55521, 280 F.3d 934 (9th Cir., February 6, 2002).
151. The concept of 'fair use' is developed in 17 U.S.C. §107, which lays down four factors to be considered by the courts in determining fair use of a copyrighted work: (i) the nature of the use of the work; (ii) the nature of the copyrighted work itself; (iii) the amount and substantiality of the portion used; and (iv) the effect of the use upon the potential market for the copyrighted work.
152. 111 F. Supp. 2d 294 (S.D.N.Y. 2000), involving §1201(a)(2) of the DMCA. The DeCSS program was designed to decrypt copy-protected DVDs, so as to enable them to be played on Linux-based operating systems.
153. Decision of the Hanseatic Oberlandesgericht of Hamburg, Oberlandesgericht Hamburg, Urteil vom, February 22, 2001, 3 U 247/00 - *Online-Lexikon* (available at http://www.netlaw.de/urteile/olghh_06.htm). See Garrote (2002), *supra* note 140, at p.196.

154. See paras.96-97.
155. European Union Directive 96/9/EC of March 11, 1996, on the Legal Protection of Databases, available at <http://europa.eu.int/eur-lex/en/index.html>. For a discussion of the Directive, see WIPO "Summary on Existing Legislation Concerning Intellectual Property in Non-Original Databases," WIPO Document SCCR /8/3 (September 13, 2002), available at <http://www.wipo.int/copyright/en/index.html>. See also presentation of C. Clark, First WIPO E-Commerce Conference (September 1999).
156. For a detailed discussion of databases, as well as various means for their protection, see presentation of M. Glazier, Chief Counsel, Subcommittee on Courts and Intellectual Property Committee on Judiciary, U.S. House of Representatives; presentation of J. Reinbothe, DGXV, European Commission; and presentation of A. Millé, Partner, Estudio Millé, First WIPO E-Commerce Conference (September 1999).
157. The studies are available online: "Economic Impact of the Protection of Unoriginal Databases in Developing Countries and Countries in Transition", Study by Thomas Riis, SCCR/7/4 (at http://www.wipo.int/eng/meetings/2002/sccr/pdf/sccr7_4.pdf); Study by Yale M. Braunstein, SCCR/7/2 (at http://www.wipo.int/eng/meetings/2002/sccr/pdf/sccr7_2.pdf); Study by Phiroz Vandrevala, SCCR/7/5 (at http://www.wipo.int/eng/meetings/2002/sccr/pdf/sccr7_5.pdf); Study by Sherif El-Kassas (at http://www.wipo.int/eng/meetings/2002/sccr/pdf/sccr7_3.pdf); Study by Zheng Shengli (at http://www.wipo.int/eng/meetings/2002/sccr/pdf/sccr7_6.pdf). See also presentation by A. Millé, Partner, Estudio Millé, "Protection of Databases Workshop," First WIPO E-Commerce Conference (September 1999).
158. See WIPO "Summary on Existing Legislation Concerning Intellectual Property in Non-Original Databases," WIPO Document SCCR /8/3 (September 13, 2002), available at <http://www.wipo.int/copyright/en/index.html>. A collection of information resources on WIPO's work as relates to the protection of non-original databases is at <http://www.wipo.int/copyright/en/index.html>.
159. See Forrester Research Report, "Downloads Did Not Cause The Music Slump, But They Can Cure It," Forrester Research, (August 13, 2002) at <http://www.forrester.com/ER/Press/Release/0,1769,741,FF.html>.
160. See <http://www.mp3.com>.
161. *UMG Recordings, Inc. v. MP3.Com, Inc.*, 92 F. Supp. 2d 349 (S.D.N.Y., 2000). A later case determined how statutory damages for such infringements could be calculated: see *UMG Recordings, Inc. v. MP3.Com, Inc.*, 109 F. Supp. 2d. 223 (S.D.N.Y., 2000).
162. See generally, Rose *supra* note 129 (2002) at pp.313-360. See also, Giovanna Fessenden, "Peer-to-Peer Technology: Analysis of Contributory Infringement and Fair Use," Vol.42(3), IDEA – The Journal of Law and Technology, pp.391-416 (2002); and John Borland, "Échange de fichiers P2P: les internautes prochaines cibles des majors?," ZDNET, (July 2002) at <http://news.zdnet.fr>.
163. The United States District Court for the Northern District of Illinois granted a preliminary injunction to the plaintiffs in *Re: Aimster Copyright*, 1:01-cv-08933 Docket Date: 09/05/02 MINUTE ORDER of 9/4/02 by Hon. Marvin E. Aspen, see <http://www.ind.uscourts.gov/MinOrds/minords.htm>.
164. See presentation of R. Gooch, Senior Technology Adviser, International Federation of Phonographic Industry (IFPI), London, at WIPO Seminar on the WIPO Copyright Treaty and WIPO Performances and Phonograms Treaty: Opportunities and Challenges, Geneva (May 16, 2002) at http://www.wipo.int/news/en/index.html?wipo_content_frame=/news/en/conferences.html.
165. See Larry Dignan, "Study: Kazaa, Morpheus Rave On," CNNET News, (August 14, 2002) at <http://news.com.com/2100-1023-949724.html>.
166. *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004 (9th Cir., 2001).
167. 239 F.3d at 1015. See McGrath (2001), *supra* note 120, at pp.16-18. See also Hanbidge (2001), *supra* note 133.
168. Source; International Federation of the Phonographic Industry (IFPI), May 2002. But see also Forrester Research (2002).
169. See Steven Bonisteel, "'Legitimate' Music Losing Ground Online in Europe – Report," Newsbytes, (April 19, 2002) at <http://www.newsbytes.com>.
170. See The Associated Press, "Music Labels Settle with Audiogalaxy," Australian IT, (June 18, 2002) at <http://www.australianit.com.au>.
171. Tokyo District Court, H14 (Yo) 22010, Case of civil provisional disposition on copyright, April 11, 2002. Original Tokyo District Court decision in Japanese at <http://courtdomino2.courts.go.jp/chizai.nsf/Listview01/B6B12203DE064C3749256BF8002017C1/?OpenDocument>, and English summary at <http://www.jasrac.or.jp/ejhp/news/2002/0411.htm>.
172. Soribada was the largest of between 700 and 800 Korean P2P sites and registered about 12 million users. See Martyn Williams, "Users scramble as 'Korea's Napster' is shut down," IDG News Service, (August 9, 2002) at <http://www.idg.com>.
173. In an action brought by the Motion Picture Association of America against KaZaA, Musiccity.com Inc., Musiccity Networks Inc., and Grokster Ltd., alleging that the digital file-sharing network operators were liable for contributory and vicarious infringement of copyrights. See *Metro-Goldwyn-Mayer Studios Inc. v. Grokster Ltd.*, C.D. Cal., No. 2:01cv08541). See "Kazaa Denies Copyright Infringement Claims; Developer Says P2P No Different Than HTTP," Vol 7(5), Electronic Commerce and Law Report, p.99 (January 30, 2002).
174. *KaZaA v. Buma-Stemra*, Gerechtshof Amsterdam, March 28, 2002, rolnr. 1370/01; see reference (in Dutch) at <http://www.javisite.nl/Artikel1/0201-028JU.pdf>. See also Reuters, "KaZaA Gets the Green Light," Wired News, (March 28, 2002) at <http://www.wired.com>.
175. See Steptoe & Johnson, E-Commerce Law Week, Issue 213, (August 10, 2002) at <http://www.steptoelaw.com/WebDoc.nsf/LawNet-Main/Main>.
176. See Declan McCullagh, "Music Body Presses Anti-Piracy Case," CNET News.com, (August 21, 2002) at <http://www.news.com.com/2100-1023-954658.html>.
177. See Harmon (2002), *supra* note 121.
178. See Associated Press, "MPAA Snooping for Spies," Wired News, (July 22, 2002) at <http://www.wired.com>.
179. See David Segal, "A New Tactic in the Download War: Online 'Spoofing' Turns the Tables on Music Pirates," Washington Post, (August 21, 2002) at <http://www.washingtonpost.com>.
180. See "Berman Introduces Bill Immunizing Copyright Owners from Liability for Self-Help Hacking," Vol 7(30), Electronic Commerce and Law Report, p.769 (July 31, 2002).

181. Critics of the U.S. legislation have raised the hypothesis that Americans who rely upon the domestic legislation to pursue pirates by accessing their computer systems could become liable to refused entry or criminal prosecution in Australia, under applicable Australian legislation. See Nathan Cochrane, "Copyright Bill Will Create Vigilantes: Critics," *The Age*, (August 6, 2002) at <http://www.theage.com.au>.
182. For a general survey of the subject of collective management of rights, see M. Ficsor, "Collective Management of Copyright and Related Rights," WIPO Document No.855(E) (October 2002).
183. The practice is commonly used in relation to the licensing of the right of public performance (music played or performed in halls, discotheques, restaurants and other public places), the broadcasting right (live and recorded performances on radio and television), the mechanical reproduction right in musical works (the reproduction of works in compact discs, tapes, vinyl records, cassettes, mini-discs or other forms of recordings), the performing rights in dramatic works (theater plays), the right of reprographic reproduction of literary and musical works (photocopying) and related rights or the rights of performers and producers of phonograms to obtain remuneration for broadcasting or the communication to the public of phonograms. Other rights have traditionally not been managed through such collective systems, such as, for instance, rights in software and films.
184. See <http://www.cisac.org>.
185. See <http://www.iffro.org>.
186. For an important initiative in the area of identifiers, see the work of the International DOI (Digital Object Identifier) Foundation at <http://www.doi.org>.
187. For a discussion of digital rights management, see presentations of R. Kahn, President, Corporation for National Research Initiatives; N. Garnett, Senior Vice President, MetaTrust Utility, InterTrust Technology Corporation; T. Koskinen-Olsson, Chief Executive Officer, Kopiosto; and N. Paskin, Director, The International DOI Foundation, WIPO Second International Conference on Electronic Commerce and Intellectual Property (September 2001), at <http://ecommerce.wipo.int/meetings/2001/conference/program/index.html>, and presentations of L. Chiariglione, Division Head, Multimedia Technologies and Services, Centro Studi e Laboratori Telecomunicazioni; D. Gervais, Vice President, International Copyright Clearance Center & Partner, Brouillette, Charpentier, Fortin; T. Koskinen-Olsson, Chair, International Federation of Reproduction Rights Organizations; N. Paskin, Director, The International DOI Foundation; and H. Rosen, President and Chief Executive Officer, Recording Industry Association of America, First WIPO E-Commerce Conference (September 1999), at <http://ecommerce.wipo.int/meetings/1999/program/wednesday.html>. See also D. Marks, Senior Counsel Intellectual Property, Time Warner Inc. and B. Turnbull, Partner, Weil, Gotshal & Manges LLP, Technical Protection Measures: The Intersection of Technology, Law and Commercial Licenses, WIPO Document No. WCT-WPPT/IMP/3 (December 3, 1999) and T. Koskinen-Olsson, Chief Executive Officer, Kopiosto and D. Gervais, Acting Director, Rightsholder Relations, Copyright Clearance Center, Electronic Commerce and Copyright: A Key Role for WIPO, WIPO Document No. APMC/2/1 (November 17, 1999) at <http://www.wipo.int/eng/meetings/1999/acmc/index.htm>.
188. For a discussion of these provisions, see paras.56-57.
189. For certain developments in the United States of America in the area of standards for DRM systems, see the discussion at <http://www.ala.org/washoff/digrights.html#bband>.
190. See the discussion of the so-called "Santiago Agreements" in Ficsor (2002), *supra* note 183, at pp.111-120. See also the VERDI (Very Extensive Rights Data Information) Project, at <http://www.verdi-project.com>.
191. See, for instance, the introduction of a new levy in France on the purchase of digital electronic devices equipped with memory-capable hard drives, Decision No. 3 of July 4, 2002, of the Commission established under Article L. 311-5 of the French intellectual property code concerning compensation for private copies, *Journal Officiel* No. 174, July 27, 2002, p.12877, as reported in *World Internet Law Report*, p.4 (August 2002).
192. It may be noted that certain informational goods, such as software and data, are almost inherently non-transparent, meaning the consumer cannot detect the quality of the goods up-front. Consumers will be relying in large part on the reputation of the seller, and place value in the relationship with that company and its ability to provide service (including future product upgrades). See comments of Prof. B. De Long, Dept. of Economics, University of California at Berkeley, "Analytical Summary and Report," *The Digital Economy in International Perspective: Common Construction on Regional Rivalry*, Conference of the University of California E-conomy Project (May 1999), at <http://e-conomy.berkeley.edu>.
193. See Laura Rush, "Top E-Commerce Companies Analyzed, Insights-Trends," Wells Fargo eStore (July 25, 2002).
194. See WIPO document "Use of Trademarks on the Internet: Issues Paper" (SCT/3/4), para.6 (1999), available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/development_iplaw/index.htm; see also, Report of first WIPO Internet Domain Name Process ("first WIPO Process", 1999), at para.34, available at <http://wipo2.wipo.int/process1/report/index.html>.
195. The Paris Convention for the Protection of Industrial Property (the Paris Convention), to which 163 States are party, is available at <http://www.wipo.int/treaties/ip/paris/index.html> and the TRIPS Agreement. See Chapter III(c).
196. Data from Gartner, at <http://www3.gartner.com/lnit>. See "VeriSign Study Finds American Express, Mercedes, BMW, Ford and Toyota Excel at Protecting Their Brands Online," (August 19, 2002) at <http://www.verisign.com>.
197. See generally Regis McKenna, "Total Access: Giving Customers What They Want in an Anytime, Anywhere World," (Harvard Business School Press, 2002) at Ch.4.
198. A keyword system is based on technology that is independent to the domain name system, and operates on a layer 'above' it: see ICANN, Internationalized Domain Names (IDN) Committee, "Briefing Paper on Internet Keyword Issues," (February 15, 2002) at <http://www.icann.org/committees/idn/idn-keyword-paper.htm>. See, for example, the Internet keyword service offered by Netscape, at <http://wp.netscape.com/escapes/keywords/>.
199. This is evidenced by the replies to the WIPO Questionnaire, "Hypothetical Cases Concerning the Use of Trademarks on the Internet", summarized in WIPO document SCT/3/2 (1999), paras.16-21, available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/development_iplaw/index.htm.

200. See WIPO document SCT/2/9, paras.79-104 (1999), available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/development_iplaw/index.htm. See also Stanley U. Paylago, "Search Engine Manipulation: Creative Use of Meta tags or Trademark Infringement?" 40(3), IDEA – The Journal of Law and Technology, pp.451-471 (2000); D. M. Cendali, C. E. Forssander and R. J. Turiello Jr., "An Overview of Intellectual Property Issues Relating to the Internet," 89 Trademark Reporter, pp.529-532 (1999); S. Chong, "Internet Meta-tags and Trade Mark Issues," European Intellectual Property Review, at pp.275-277 (1998); N. S. Greenfield and L. Cristal, "The Challenge to Trademark Rights by Web Technologies: Linking Framing, Metatagging and Cyberstuffing," Trademark Law and the Internet, pp.207-216 (1999); T. F. Presson and J. R. Barney, "Trademarks as Meta tags: Infringement or Fair Use?," AIPLA Quarterly Journal, pp.147-178 (1998).
201. See generally, Neel Chatterjee and Steve Adams, "The Ghost in the Machine: Trademark Liability Resulting from Meta tags," 16 World Intellectual Property Report, pp.27-30 (2002).
202. See the replies to the WIPO Questionnaire, para.17, available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/development_iplaw/index.htm.
203. *Tata Sons Limited v. Bodacious Tatas & ors*, unreported ex parte interim injunction order of the Delhi High Court dated January 25, 1999: referred to by Pravin Anand, First WIPO E-Commerce Conference (September 1999).
204. *Genertel SpA v Crowe Italia Srl*, (January 18, 2001), in International IT and New Media Update, Freshfields Bruckhaus Deringer (Summer 2001).
205. See *Brookfield Communications Inc. v. West Coast Entertainment Corp.*, 50 U.S.P.Q. 2d 1545 (9th Cir. 1999). A similar approach is taken in the recent decision by the Tribunal de grande instance de Paris (March 24, 1999) in *Société Kaysersberg Packaging v. Société Kargit*, and in the judgment of the Landgericht Mannheim, 7 O 291/97 (August 1, 1997), involving the trademark "ARWIS."
206. 'Initial interest confusion' was described by the District Court in the American case of *Playboy Enterprises, Inc. v. Netscape Communications Corp.* (55 F. Supp. 2d 1070 (C.D. Ca., 1999) at 1073) as follows:
 "Generally speaking, initial interest confusion may result when a user conducts a search using a trademark term and the results of the search include websites not sponsored by the holder of the trademark term, but rather of competitors. (citing *Brookfield Comm., Inc. v. West Coast Ent. Corp.*, 174 F.3d 1036, 1062-64 (9th Cir. 1999)). The Ninth Circuit reasoned that the user may be diverted to an unsponsored site, and only realize that she has been diverted upon arriving at the competitor's site. Once there, however, even though the user knows she is not in the site initially sought, she may stay. In that way, the competitor has captured the trademark holder's potential visitors or customers."
 See generally Yelena Dunaevsky, "Don't Confuse Metatags with Initial Interest Confusion," 29 Fordham Urban Law School Journal, p.1349 (February 2002).
207. 985 F. Supp. 1220 (N.D. Cal. 1997).
208. 1998 U.S. Dist. LEXIS 10459 (E.D. Va. 1998).
209. See *Playboy v. Enterprises Inc. v. Welles*, 7 F. Supp.2d 1098, 47 U.S.P.Q.2d 1186. See also *Bernina of America v. Fashion Fabrics International*, 2001 U.S. Dist. LEXIS 2122, at pp.7-8.
210. 55 F. Supp. 2d 1070 (C.D. Cal.) affirmed without opinion 202 F. 3d 278 (9th Cir. 1999).
211. Numtec Interstahl, OGH, December 19, 2000, 4 Ob 308/00y. Original text (in German) at http://www.internet4jurists.at/entscheidungen/ogh4_308_00y.htm.
212. *Philippine Long Distance Telephone Company, Inc. v. Philippine League for Democratic Telecommunications, Inc. and Gerardo B. Kaimo*, Republic of the Philippines Regional Trial Court, National Capital Judicial Region, Quezon City, Branch 90, Civil Case No. 99-38800; see <http://www.pldt.com/ourcase.htm>.
213. *Bihari v. Gross*, 119 F. Supp. 2d 309 (S.D.N.Y. 2000).
214. An order issued by the United States Court of Appeals for the Seventh Circuit on October 18, 2002, modified its earlier opinion in *Promatek Industries Ltd. v. Equitrac Corporation*, (No. 00-4276, August 13, 2002), granting an injunction against the use of a competitor's misspelt trademark as a meta tag. The order removed a sentence of the earlier opinion which stated that the use of a competitor's trademark in a website was "a prohibited practice because of its potential for customer confusion" and replaced it with a sentence which read: "The problem here is not that Equitrac, which repairs Promatek products, used Promatek's trademark in its metatag, but that it used that trademark in a way calculated to deceive consumers into thinking that Equitrac was Promatek." See BNA Inc. "Seventh Circuit Clarifies Views on Metatags: 'Legitimate' Nondeceptive Uses Are Permitted," Vol. 7(42), Electronic Commerce and Law Report (October 30, 2002).
215. See table in para.126.
216. Chatterjee and Adams (2002), *supra* note 201, at p.28.
217. See *Playboy Enterprises Inc. v. Netscape Communications Corp.*, C.D. Calif., No. SA CV 99-320 AHS (Eex) (June 24, 1999). See also the replies to the WIPO Questionnaire, para.18, showing a wide divergence of views.
218. W.D. Texas, San Antonio Division, Case No. SA-02-CA-0087 EP, complaint filed on January 31, 2002.
219. At <http://www.advantage.msn.co.uk/flattened/3B5B34D1-1D47-4122-B90B-D3A4CB43D73A.asp>.
220. *Washingtonpost.Newsweek Interactive Co. v. Gator Corp.*, E.D. Va., Civil Action No.02-909-A, July 16, 2002. See Bureau of National Affairs, Inc., "Third Party Pop-Up Advertisements Likely Violated Trademarks in plaintiffs' Sites," BNA E-Commerce Law Daily, (July 19, 2002). See also Anick Jesdanun, "Publishers Sue Over Pop-Up Ads," FindLaw, (June 28, 2002) at <http://www.findlaw.com>.
221. See the definition of mousetrapping at <http://www.webopedia.com/TERM/M/mousetrapping.html>.
222. *FTC v. Zuccarini*, Civil Action No. 01-CV-4854; U.S. District Court for the Eastern District of Pennsylvania, 2002, U.S. Dist. LEXIS 13324; 2002-1 Trade Cas. (CCH) P73,690, April 9, 2002. See Associated Press, "Online Mousetrapping Leads to \$1.9 million Fine," USA Today, (May 24, 2002) at <http://www.usatoday.com/life/cyber/2002/05/24/mousetrapping-ftc.htm>.

223. See para.94.
224. For a general description of linking, see <http://www.bitlaw.com/internet/linking.html>.
225. *Ticketmaster Corp. v. Microsoft Corp.*, CV 97-3055 RAP (C.D. Cal., filed April 28, 1997), at <http://www.jmls.edu/cyber/cases/ticket1.html>.
226. *Ticketmaster Corp. v. Tickets.com, Inc.*, Case No. CV99-7654-HLH (BQRx), U.S. District Court for The Central District of California, 2000 U.S. Dist. LEXIS 12987; Copy. L. Rep. (CCH) P28,146, August 10, 2000, Decided.
227. *Ford Motor Company v. 2600 Enterprises, et al.*, 177 F. Supp. 2d 661, 2001 U.S. Dist. Lexis 21302 (E.D. Michigan, December 20, 2001).
228. See para.99.
229. *Washington Post Co. v. Total News, Inc.*, No. 97 Civ. 1190 (PKL) (S.D.N.Y.). The Washington Post's complaint is at <http://www.jmls.edu/cyber/cases/total1.html>. A line of cases in trademark law on the repackaging of trademarked goods also offers support for the contention that framing may violate trademark law, see <http://www.dlib.org/dlib/april98/04ourourke.html>.
230. See paras.154-166. The Joint Recommendation Concerning Provisions on the Protection of Marks, and Other Industrial Property Rights in Signs, on the Internet (with Explanatory Notes), adopted by the Assembly of the Paris Union for the Protection of Industrial Property and the General Assembly of WIPO, at the Thirty-Sixth Series of Meetings of the Assemblies of the Member States of WIPO (September 24-October 3, 2001) is available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/development_iplaw/index.htm.
231. Under Article 19 of the TRIPS Agreement, the trademark can be cancelled only after an uninterrupted period of at least three years.
232. See WIPO document SCT/2/9 (1999), *supra* note 201, at paras.60-61.
233. This view is supported by the responses to the WIPO Questionnaire to which 36 States replied. The responses are summarized in "Use of Trademarks on the Internet. Summary of Responses to Questionnaire," WIPO document SCT/3/2 (1999) *supra* note 199. See, in particular, paras.14-15 with regard to maintenance of rights. See further the factors for establishing a relationship with a particular country listed in WIPO document SCT/2/9 (1999), *supra* note 200, at paras.31-34.
234. See for example the decisions of the *Tribunal de Grande Instance de Nanterre, Ordonnance de référé* (October 13, 1996); *SG2 v. Brokat Informationssysteme GmbH* ("payline") and of the Kammergericht Berlin, 5 U 659/97 (March 25, 1997) (*Concert-Concept*). A majority of replies to the WIPO Questionnaire indicated that the use of a trademark on a 'passive' website (i.e., a website that is devoted to advertising) would be regarded as a trademark infringement, see WIPO document SCT/3/2 (1999), *supra* note 199, at para.10.
235. See WIPO document SCT/2/9 (1999), *supra* note 200, at para.62.
236. See WIPO document SCT/2/9 (1999), *supra* note 200, at paras.19-22.
237. See the replies to the WIPO Questionnaire, para.10, available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/development_iplaw/index.htm.
238. See WIPO document SCT/2/9 (1999), *supra* note 200, at paras.37 and 66.
239. This is explicitly recognized by Article 17 of the TRIPS Agreement.
240. See WIPO document SCT/2/9 (1999), *supra* note 200, paras.98 to 101; see also D. M. Kelly & J. M. Gelchinsky, "Trademarks on the Internet: How Does Fair Use Fare?," 114 Trademark World, pp.19-22 (1999).
241. See e.g., *Bally Total Fitness Holding Corp. v. Faber*, C.D. Cal., No. CV 98-1278 DDP (MANx), (December 21, 1998); see also Cendali *et al* (1999), *supra* note 200, at pp.543-557 (on issues of free speech, privacy, and defamation).
242. See WIPO SCT/3/4 (1999), *supra* note 194, at paras.27-31.
243. See e.g., the decisions of payline (1996) and of Concert-Concept (1997), and the more restrictive approach applied in *Playboy Enterprises Inc. v. Chuckleberry Publishing, Inc.*, 939 F. Supp.1032, 1039-40 (S.D.N.Y. 1996).
244. A majority of the States that replied to the WIPO Questionnaire indicated that, in infringement cases, courts would have to limit the effect of their decisions to the territory where the infringed trademark enjoys protection, see WIPO document SCT/3/2 (1999), *supra* note 199, at para.11.
245. See WIPO document SCT/2/9 (1999), *supra* note 200, at paras.67 to 69.
246. An example of this abusive practice might be cases of conflicts between well-known marks and domain names, as envisaged under Article 6 of the Joint Recommendation Concerning Provisions on the Protection of Well-Known Marks, adopted by the Assembly for the Paris Union for the Protection of Industrial Property and the General Assembly of WIPO, at the Thirty-Fourth Series of Meetings of the Assemblies of the Member States of WIPO (September 20-29, 1999), available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/development_iplaw/index.htm.
247. See WIPO document SCT/2/9 (1999), *supra* note 200, at paras.59, 127, and 145-148.
248. "In determining bad faith for the purposes of this paragraph, the competent authority shall take into consideration whether the person who obtained the registration of or used the mark which is in conflict with a well-known mark had, at the time when the mark was used or registered, or the application for its registration was filed, knowledge of or reason to know of, the well-known mark" (Article 4(5)(c), Joint Recommendation Concerning Provisions on the Protection of Well-Known Marks (1999)).
249. In its preparatory work from 1999 to 2001, the SCT examined the feasibility of harmonizing national rules about use and infringement of trademarks on the Internet, and produced a report: "Study on Trademarks on the Internet." The SCT also conducted a survey of national laws relating to uses of trademarks on the Internet: "The Summary of Responses to the Questionnaire," WIPO Document SCT/3/2 (1999), *supra* note 199, and WIPO Document SCT/3/4 (1999), *supra* note 194: all SCT documents are available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/trademarks.html.
250. Joint Recommendation Concerning Provisions on the Protection of Marks, and Other Industrial Property Rights in Signs, on the Internet (2001).

251. "Competent authority" is defined by the Joint Recommendation to mean "an administrative, judicial or quasi-judicial authority of a Member State which is competent for determining whether a right has been acquired, maintained or infringed, for determining remedies, or for determining whether an act of competition constitutes an act of unfair competition as the case may be": Joint Recommendation Concerning Provisions on the Protection of Marks (2001), Article 1(iv).
252. The term "commercial effect" was preferred to "in the course of trade," so as to include situations in which a non-profit company has produced a commercial effect by using a sign on the Internet without using it "in the course of trade." A sign can have a commercial effect without any business transactions being carried out in that Member State.
253. Joint Recommendation Concerning Provisions on the Protection of Well-Known Marks (1999), Article 2(1).
254. See Report of the first WIPO Process (1999) at para.247.
255. The protection of well-known marks in the Paris Convention is provided for in Article 6*bis*, section (1) of which provides as follows:
 "The countries of the Union undertake, ex officio if their legislation so permits, or at the request of an interested party, to refuse or to cancel the registration, and to prohibit the use, of a trademark which constitutes a reproduction, an imitation, or a translation, liable to create confusion, of a mark considered by the competent authority of the country of registration or use to be well known in that country as being already the mark of a person entitled to the benefits of this Convention and used for identical or similar goods. These provisions shall also apply when the essential part of the mark constitutes a reproduction of any such well-known mark or an imitation liable to create confusion therewith."
256. While Article 6*bis* of the Paris Convention is silent on what constitutes a well-known mark, Article 16.2 of the TRIPS Agreement provides some guidance as to the criteria that such a competent authority must take into account in forming its assessment:
 "Article 6*bis* of the Paris Convention (1967) shall apply, *mutatis mutandis*, to services. In determining whether a trademark is well-known, Members shall take account of the knowledge of the trademark in the relevant sector of the public, including knowledge in the Member concerned which has been obtained as a result of the promotion of the trademark."
 For discussion of international and national protection of well-known marks, see F. W. Mostert, "Famous and Well-Known Marks" (Butterworths, 1997).
257. See Joint Recommendation Concerning Provisions on the Protection of Well-Known Marks (1999), Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications, WIPO document SCT/3/8 (October 1999).
258. See *Ibid.*, Article 2. (Determination of Whether a Mark is a Well-Known Mark in a Member State).
259. The UDRP (Article 4(a)) provides that registration of a domain name shall be considered to be abusive when the complainant is able to establish the following three conditions:
 (i) the domain name is identical or confusingly similar to a trademark or service mark in which the complainant has rights; and
 (ii) the registrant has no rights or legitimate interests in respect of the domain name; and
 (iii) the domain name has been registered and is being used in bad faith.
 The UDRP, adopted by ICANN on August 26, 1999, is available at <http://www.icann.org/dndr/udrp/policy.htm>. See also, Report of the First WIPO Process (1999), at para.171.
260. In particular, Article 10*bis* of the Paris Convention provides that States party to the Treaty must provide effective protection against unfair competition. Any act of competition contrary to honest practices in industrial or commercial matters constitutes an act of unfair competition, and in particular "all acts of such a nature as to create confusion by any means whatever with the establishment, the goods, or the industrial or commercial activities, of a competitor."
261. Article 39 of the TRIPS Agreement relies on the obligation to provide protection against unfair competition in Article 10*bis* of the Paris Convention as a basis for extending protection to "undisclosed information," also known under various national laws as trade secrets.
262. See the responses to the WIPO Questionnaire, paras.16-21; a majority of responses considered Internet-specific forms of trademark use, such as meta tagging and sale of keywords, as acts of unfair competition.
263. See M. Hardie, "Hooked on Broadband," The Forrester Report (July 1999), at <http://www.forrester.com>.
264. A domain name is the alphanumeric address of a computer on the Internet, such as <http://www.wipo.int>. It enables a user to locate an Internet site without having to resort to its unique numerical or IP (Internet Protocol) address (such as 192.91.247.53). Certain Internet databases contain lists of domain names with the corresponding numerical addresses, enabling the domain name to be linked to the IP address and therefore connect computers via the Internet, upon request. The domain name system (DNS) is organized hierarchically, which allows for the decentralized matching of names and addresses.
265. See <http://ecommerce.wipo.int/primer/index.html>.
266. This Policy is based on the recommendations made by WIPO in its Report of the first WIPO Internet Domain Name Process (April 30, 1999). See "The Management of Internet Names and Addresses: Intellectual Property Issues," available at <http://wipo2.wipo.int/process1/report/finalreport.html>.
267. The functions of ICANN are explained in this Chapter, at para.203.
268. Supra note 194.
269. See paras.186 to 201 of the WIPO Primer on Electronic Commerce and Intellectual Property Issues at <http://ecommerce.wipo.int/primer/index.html>.
270. See <http://www.icann.org/minutes/prelim-report-16nov00.htm#Second> Annual Meeting.
271. See the .aero registration service site at <http://www.sita.com/>.
272. See the .biz registration service site at <http://www.neulevel.biz/>.
273. See the .coop registration service site at <http://www.cooperative.org/>.
274. See the .info registration service site at <http://www.afilias.info/gateway/>.
275. See the .museum registration office site at <http://musedoma.museum/>.
276. See the .name registration service site at <http://www.gnr.com>.

277. See the .pro registration service site at <http://www.registrypro.com/>.
278. See <http://www.icann.org/tlds/>.
279. *Ibid.*
280. See <http://www.icann.org/registrars/accredited-list.html>.
281. See Resolution 01.74, preliminary report of the meeting of the ICANN Board in Stockholm, June 4, 2001, at <http://www.icann.org/minutes/prelim-report-04jun01.htm#01.74>.
282. The framework of the evaluation process is being devised by the "New TLD Evaluation Process Planning Task Force," the terms of reference of which are given at <http://www.icann.org/committees/ntepptf>. This Task Force conducted public inquiries and published its report on July 31, 2002, available at <http://www.icann.org/committees/ntepptf/final-report-31jul02.htm>.
283. ASCII is short for "American Standard Code for Information Interchange." For more information and examples of ASCII characters, see <http://www.asciitable.com/>.
284. See the IETF Working Group site at <http://www.i-d-n.net>.
285. See the list of DNS internationalized domain name solution providers, either existing or planned, at <http://www.itu.int/mdns/resources/index.html> ("Current/Planned Solution Providers").
286. See Resolution 1.39 of the Board of ICANN at <http://www.icann.org/committees/idn/>.
287. See the final report published on August 28, 2001, available at <http://www.icann.org/committees/idn/final-report-28aug01.htm>. This report was preceded by another published in June 2000 which gave an account of the first findings of a survey conducted on the technical and legal questions raised by the internationalization of domain names (see <http://www.icann.org/committees/idn/status-report-05jul01.htm>).
288. See <http://www.icann.org/committees/idn/final-report-27jun02.htm>. Work in this area was planned for completion by the ICANN Meeting, Shanghai, October 2002. See Resolution 02.89 of the ICANN Board at <http://www.icann.org/minutes/prelim-report-28jun02.htm>.
289. See <http://www.itu.int/mlds/>.
290. See <http://www.itu.int/mlds/briefingpaper/itu/mdns-briefing-paper-final.doc>.
291. See <http://ecommerce.wipo.int/domains/international/>.
292. See Report of the Second WIPO Internet Domain Name Process, "The Recognition of Rights and the Use of Names in the Internet Domain Name System," at paras.22-27, (September 3, 2001), available at <http://wipo2.wipo.int/process2/report/>.
293. To date, the WIPO Center has received 32 complaints for internationalized domain names under the UDRP, in scripts including Chinese, Danish, French, German, Japanese, Korean, Norwegian, Spanish and Swedish characters. Refer to para.220.
294. See <http://www.commonname.com>.
295. See <http://www.netscape.com/>.
296. See http://www.commonname.com/en/pcn/help/cn_disputepolicy.asp.
297. See RFC 2826, "IAB Technical Comment on the Unique DNS Root," at <http://www.rfc-editor.org/rfc/rfc2826.txt>.
298. See the third component of ICANN's Internet coordination policy (ICP-3), "A Unique, Authoritative Root for the DNS" at <http://www.icann.org/icp/icp-3.htm>.
299. See http://www.new.net/policies_dispute.tp.
300. The procedural details of the introduction of .eu are set down in a European Commission communication dated July 5, 2000, and addressed to the Parliament and Council. The communication is available on http://europa.eu.int/eur-nex/en/com/cnc/2000/com_0421en01.pdf.
301. See http://europa.eu.int/information_society/topics/telecoms/internet/eu_domain/workpaper/text_regulation_pdf/dotEU-EN-regulation733-2002.pdf
302. The importance of making the contact details of domain name holders available was discussed in detail in the Report on the Second WIPO Internet Domain Name Process (2001), *supra* note 293, at paras.323-345. See also the WIPO ccTLD Best Practices for the Prevention and Resolution of Intellectual Property Disputes, available at <http://ecommerce.wipo.int/domains/ccTLDs/bestpractices/index.html>.
303. See the European Commission press release "Internet: Commission seeks views on cybersquatting," IP/02/1178, on http://europa.eu.int/rapid/start/cgi/guestfr.ksh?p_action.gettxt=gt&doc=IP/02/1178IOIRAPID&lg=FR&display=
304. The statutes of ICANN, and also information on its various meetings and activities, are to be found at <http://www.icann.org>.
305. See Framework for Global Electronic Commerce, (July 1, 1997), at <http://www.ecommerce.gov>.
306. See http://www.ntia.doc.gov/ntiahome/domainname/6_5_98dns.htm; see also the Green Paper of the National Telecommunications and Information Administration (NTIA) published on January 30, 1998, and entitled "A proposal to improve the technical management of Internet names and addresses", at <http://www.ntia.doc.gov/ntiahome/domainname/dnsdrft.htm>.
307. See <http://www.ntia.doc.gov/ntiahome/domainname/icann.htm>.
308. See <http://www.icann.org/general/lynn-reform-proposal-24feb02.htm>.
309. See Final Implementation Report and Recommendations of the Committee on ICANN Evolution and Reform, October 2, 2002 at <http://www.icann.org/committees/evol-reform/final-implementation-report-02oct02.htm>.
310. For a full definition of the Enum Protocol, see "Tutorial Paper on the Global Implementation of Enum," International Telecommunication Union, February 8, 2002, at <http://www.itu.int/itudoc/itu-t/workshop/enum/index.html>.
311. A URI is a sequence of characters that enables resources such as a document, image, file, database or e-mail address to be identified.
312. See <http://www.itu.int/osg/spu/Enum/index.html>.
313. See <http://www.ofcom.ch/en/aktuell/enum/popup5/popup.html>.
314. See "The History and Context of Telephone Number Mapping (ENUM)" at <http://www.ietf.org/rfc/rfc3245.txt?number03245>.

315. See <http://www.itu.int/osg/spu/Enum/index.html>
316. Beside the WIPO Arbitration and Mediation Center, the other institutions originally accredited by ICANN were the National Arbitration Forum, e-Resolution and the CPR Institution for Dispute Resolution. Subsequently, e-Resolution discontinued its activities in November 2001 and, in December 2001, ICANN accredited the Asian Domain Name Dispute Resolution Center, which became operational on February 28, 2002.
317. The percentages exceed 100% because some cases involve multiple domain names in different gTLDs.
318. A statistical analysis of the cases filed with the WIPO Arbitration and Mediation Center under the UDRP is available at the Center's site, at <http://www.arbiter.wipo.int/domains/statistics/index.html>.
319. See <http://www.arbiter.wipo.int/domains/filing/udrp/index.html>.
320. See <http://www.arbiter.wipo.int/domains/panel/index.html>.
321. Document SCT/S1/3, presented by the International Bureau of WIPO in October 2001 in connection with the special sessions on the Report on the Second WIPO Internet Domain Name Process, gives a more detailed account of the procedures introduced by the registry operators of the new generic top-level domain. The document is available at http://www.wipo.int/sct/en/documents/special_session/doc/sct_s1_3.doc.
322. See http://websvr01.afilias.info/register/dispute_resolution/sunrise_challenge_policy.
323. See <http://www.arbiter.wipo.int/domains/gtld/biz/stop/index.html>.
324. See <http://www.arbiter.wipo.int/domains/gtld/name/index.html>.
325. See <http://www.arbiter.wipo.int/domains/gtld/biz/rdrp/index.html#1>.
326. See <http://www.icann.org/tlds/agreements/sponsored/sponsorship-agmt-att12-08sep01.htm>.
327. The list of the ccTLDs and of the cases submitted to the WIPO Center may be consulted at <http://www.arbiter.wipo.int/domains/cctld/index.html>.
328. The decisions in these cases can be downloaded from the WIPO Center's site, at <http://www.arbiter.wipo.int/domains/decisions/index-gtld.html>.
329. See <http://www.arbiter.wipo.int/keywords/index.html>.
330. See paras.167 and 168 of the Report, at <http://wipo2.wipo.int/process1/report/index.html>.
331. The request was formulated in a letter from the Secretary of Communications, Information Technology and the Arts of the Australian Government, and was endorsed by Argentina, Australia, Canada, Denmark, France, the United States of America and the European Union. The text of the letter is to be found at <http://wipo2.wipo.int/process2/rfc/letter.html>.
332. See WIPO documents WO/GA/26/3 and WO/GA/26/10.
333. The Report is published on the WIPO website, at <http://wipo2.wipo.int/process2/report/index.html>.
334. See <http://ecommerce.wipo.int/domains/sct/documents/sct-s2-8.html>.
335. See also the Report of the Second WIPO Internet Domain Name Process (2001), *supra* note 292, at Chapter 3.
336. *Ibid.* at Chapter 4.
337. Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in the Armed Forces in the Field of 12 August 1949, (GC I), Articles 53 and 54; Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Conflicts of 8 June 1977 (AP I), Articles 38(1), 85 (3)(f).
338. The Delegation of the United States of America dissociated itself from this decision.
339. See also the Report of the Second WIPO Internet Domain Name Process (2001), *supra* note 292, at Chapter 5.
340. See also *Ibid.* at Chapter 6.
341. Articles 22 and 23. See Report of the Second WIPO Internet Domain Name Process (2001), *supra* note 292 at paras.205-222.
342. Special measures have been taken by ICANN for the protection of names of countries in the top-level domain .info; those measures are described in document SCT/S2/4 prepared by the International Bureau of WIPO (March 2002), in connection with the Special Sessions on the Report of the Second WIPO Internet Domain Name Process. That document is available at <http://ecommerce.wipo.int/domains/sct/documents/index.html>.
343. These issues concern, in particular, (1) the list to be relied upon to identify the names of countries which would benefit from the protection envisaged, (2) the extension of the deadline for the notification to the Secretariat of names by which countries are commonly known, and (3) how to deal with acquired rights.
344. See also the Report on the Second WIPO Internet Domain Name Process (2001), *supra* note 292, at Chapter 7.
345. See the text of the request at <http://wipo2.wipo.int/process2/rfc/letter2.html>.
346. See WIPO documents WO/GA/26/3 and WO/GA/26/10, para.26.
347. The Conference program and the statements of the speakers are available on the WIPO site, at <http://ecommerce.wipo.int/meetings/2001/cctlds/index.html>.
348. See the list of comments at <http://ecommerce.wipo.int/domains/cctlds/comments/index.html>.
349. The WIPO ccTLD Best Practices for the Prevention and Resolution of Intellectual Property Disputes are available at <http://ecommerce.wipo.int/domains/cctlds/bestpractices/index.html>.
350. See <http://www.domeinnaam.nl/live/>.
351. The ccTLD database is accessible on the WIPO site, at <http://ecommerce.wipo.int/databases/cctld/index.html>.
352. The trademark database portal is accessible on the WIPO site at <http://ecommerce.wipo.int/databases/trademark/output.html>.
353. The exclusive right is generally granted for a period of 20 years from the date of filing a patent application. See TRIPS Agreement, Article 33.
354. A number of offices provide patent information on the Internet: for example, the United States Patent and Trademark Office (<http://www.uspto.gov>), the Japan Patent Office (<http://www.jpo.go.jp>), the European Patent Office (<http://www.european-patent-office.org>), the Canadian Intellectual Property Office (<http://cipo.gc.ca>) and the Industrial Property Information Center in Thailand (<http://www.ipic.moc.go.th>). For a discussion of WIPO's plans to make public international patent data available online, see Chapter VI(b)(i) (WIPO_{NET}).

355. The patent system thus encourages the dissemination and transfer of technological knowledge by granting a fixed-term market exclusivity to an inventor in return for the clear and complete disclosure of the invention. See TRIPS Agreement, Article 29.
356. See generally, Bakels (2002), *supra* note 36. See also presentations on 'Business Method Patents' by: R. Stoll, Administrator for External Affairs, United States Patent and Trademark Office, U.S. Department of Commerce; Dariusz Szeleper, Attorney, Paris Court of Appeal; and A. Christie, Visiting Professor, School of Law, Duke University: all given at the Second WIPO E-Commerce Conference (September 2001). See also Chapter III(a).
357. *State Street Bank & Trust v. Signature Financial Group*, 47 USPQ 2d 1596 (CAFC 1998). See also *AT&T Corp. v. Excel Communications, Inc.*, No. 98-1338, 1999, WL 216234, F.3d (Fed. Cir. Apr. 14, 1999), where the Court stated that "[the focus in determining whether an invention containing a computer algorithm recites patentable subject matter is] not on whether there is a mathematical algorithm at work, but on whether the algorithm-containing invention, as a whole, produces a tangible, useful, result." Following the decision in *State Street Bank*, the number of applications for business-method patents in the United States of America surged, including: Cybergold's 'Attention Brokerage Scheme' (U.S. Patent No. 5,794,210); Amazon.com's '1-Click Ordering System' (U.S. Patent No. 5,960,411); and Priceline.com's 'Reverse Auction System' (U.S. Patent No. 5,794,207).
358. *SOHEI Decision*, T769/92, Decision of the EPO Board of Appeal (1992).
359. The EPO Board of Appeal decided in favor of patentability because of "the particular significance of all the different files in the memory and the special manner in which by the different processing means or in the different processing steps the input data and the data stored are handled." See Thomas B. Koch, "Patenting e-Business Methods in Europe," *International Internet Law Review*, pp.43-46 (April 2001), at <http://www.netlawreview.com>.
360. See, for example, Guidelines for Examination in the European Patent Office, Part C, Chapter IV, 1. General. According to the EPO, business inventions can be divided into three broad categories: (a) abstract business models (claims for a method of doing business in abstract) – to be rejected because they are methods of doing business 'as such'; (b) computer-implemented business methods (claims which specify computers, computer networks or other conventional programmable digital apparatus for carrying out at least some of the steps of the business method) – to be treated in the same way as any other such method; and (c) other apparatus implemented business methods (claims which specify other apparatus, possibly in addition to computers, such as mobile telephones) – to be treated in the same way as other computer implementations: see <http://www.european-patent-office.org/tws/appendix6.pdf>.
361. The Japan Patent Office has issued revised "Examination Guidelines for Computer Software Related Inventions," (December 28, 2000) (in Japanese) at <http://www.jpo.go.jp/info/tt1212-045.htm>. The revised Guidelines provide: (a) more case examples to enhance judgments on whether the business-related invention contains an inventive step; (b) specify that, in addition to "storage medium in which a computer program is recorded" (for applications filed on or after April 1, 1997), a "computer program" which was not recorded in any medium (for applications filed on or after January 10, 2001) shall be treated as "an invention of product"; and (c) "software" can be treated as an "invention" under Japanese Patent Law if the information processing using the software is actually embodied in hardware resources. For examples of business-method patent cases in Japan, see Takano (2001), *supra* note 36, at pp.32-42.
362. For example, improving the quality of search and examination of patent applications in this field and forming customer partnerships. See <http://www.uspto.gov/web/menu/busmethp/index.html>.
363. See <http://www.uspto.gov/web/menu/pbmethod/>. See also "Business Methods Patent Initiative: An Action Plan," at <http://www.uspto.gov/web/offices/com/sol/actionplan.html>.
364. The Trilateral Offices (European Patent Office, Japan Patent Office and United States Patent and Trademark Office) conducted a comparative study as regards business method related inventions, and produced a "Report on Comparative Study Carried Out under Trilateral Project B3b," for the Trilateral Technical Meeting (June 14-16, 2000) at http://www.uspto.gov/web/tws/b3b_start_page.htm.
365. Decision of the United States Court of Appeals (vacating the District Court order) in, *Amazon.com, Inc. v. Barnesandnoble.com, Inc. and Barnesandnoble.com, LLC*, 239 F.3d 1343; 2001 U.S. App. LEXIS 2163; 57 U.S.P.Q.2D (BNA) 1747, February 14, 2001, Decided. Earlier decision of the United States District Court, granting plaintiff's motion for preliminary injunction in, *Amazon.com, Inc. v. Barnesandnoble.com, Inc. and Barnesandnoble.com, LLC*, 73 F. Supp. 2d 1228; 1999 U.S. Dist. LEXIS 18660 (W.D. Washington); 53 U.S.P.Q.2D (BNA) 1115, December 1, 1999, Decided. See also Matt Richtel, "Are Patents Good or Bad for Business On-Line," *New York Times*, *Cyber Law Journal* (August 28, 1998), at <http://www.nytimes.com/library/tech/98/08/cyber/cyberlaw/28law.html>.
366. For a general overview on the issues raised by software patents at an international level, refer to Richard Poynder, "Patents and the Software Industry," United Kingdom Department of Trade and Industry and CSSA, at <http://www.dti.gov.uk/cii/docs/psi.pdf>. See also Dennis S. Karjala, "The Relative Roles of Patent and Copyright in the Protection of Computer Programs," 17 *John Marshall Journal of Computer and Information Law*, p.41 (Fall 1998).
367. See Rodney Cruise, "A Report on Patent Protection on Software, e-Commerce and Business Methods," FICPI – Review of Patent Protection of Software, e-Commerce and Business Methods Based on Voluntary Responses From Delegates of FICPI Member Countries (2001).
368. On September 1, 2002, Japan amended its Patent Law to expressly cover software. Section 2(3) of the Patent Law clarifies that: (i) a "thing" includes computer programs and (ii) "implementation" of an invention includes supplying software electronically. The amendment was intended to protect rightsholders against the transmission of patented programs without authorization via the Internet, see <http://www.jpo.go.jp/>.
369. In 1996, the United States Patent and Trademark Office issued its Examination Guidelines for Computer-Related Inventions, 61 Fed. Reg. 7478 (1996), which indicate that if the practical use of an abstract idea is patentable, subject to the denial of protection to scientific principles, then its disembodied instruction (expressed on a tangible media) is patentable, because patents provide control over the making of an invention and a functionally descriptive computer instruction serves that purpose. The Japan Patent Office published, in 1997, the Implementing Guidelines for Inventions in Specific Fields, Chapter 1 of which contains examination guidelines for computer software related inventions.
370. *In re Beauregard*, 53 F.3d 1583, 35 U.S.P.Q.2d 1383 (Fed. Cir. 1995). The Implementing Guidelines for Inventions in Specific Fields issued by the Japan Patent Office allow Beauregard-type claims. In Europe, the Board of Appeal of the European Patent Office noted that, in Decision T1173/97, "the Board is of the opinion that with regard to the exclusions under Article 52(2) and (3) EPC, it does not make any difference whether a computer program is claimed by itself or as a record on a carrier."

371. *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994), involving a claim to data structure that increases computer efficiency held statutory.
372. See, for example, "Training Materials for the Examination Guidelines for Computer-Related Inventions, Claim 13," issued by the United States Patent and Trademark Office (April 12, 1996).
373. Proposal for a Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions, February 2, 2002, COM(2002) 92 final, full text available at http://europa.eu.int/comm/internal_market/en/indprop/comp/com02-92en.pdf. For a description of the proposed Directive, see http://europa.eu.int/comm/internal_market/en/indprop/comp/02-277.htm.
374. Article 52 of the European Patent Convention (EPC) provides that "programs for computer as such" shall not be regarded as patentable inventions. As regards the practice of the European Patent Office, see *supra* note 370.
375. In order to address some of these questions, Japan amended its Patent Law to expressly provide that an invention which was made publicly available online, for example, via the Internet, prior to the filing of an application would constitute a novelty defeating bar. It also confirmed that an invention that was publicly disclosed online would fall within the six-month grace period, providing an exception to novelty-destroying disclosures (see the Japanese Patent Law, as amended by Law No. 41 (May 1999)). In the United States of America, the "Manual of Patent Examining Procedure," §2128, issued by the United States Patent and Trademark Office, provides guidelines with respect to the status of electronic publications as prior art and Internet searching.
376. "Results of the Questionnaires Concerning Disclosure of Information on the Internet and Other Issues Relating to the Internet," Document prepared by the International Bureau for the Standing Committee on the Law of Patents, Fifth Session, SCP/5/4 (May 14-19, 2001), at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/patents.html.
377. *State Street Bank & Trust v. Signature Financial Group*, 47 USPQ 2d 1596 (CAFC 1998) (concerning U.S. Patent No. 5,193,056 (the "056 patent")).
378. Documentation relating to the work of the Standing Committee on the Law of Patents may be found at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/patents.html.
379. Information concerning disclosure of technical information on the Internet and its impact on patentability was collected by the International Bureau (see WIPO document SCP/4/5, at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/patents.html). Further, a survey was conducted to gather current national and regional practices in that respect; see WIPO document SCP/5/4, at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/patents.html.
380. See WIPO document SCP/5/6, paras.180 to 182 (November 27, 2001), available at http://www.wipo.int/scp/en/documents/session_5/doc/scp5_6.doc.
381. Texts of the PLT and the Regulations under the PLT are available at <http://www.wipo.int/treaties/ip/plt/index.html>.
382. Further, the Diplomatic Conference adopted an Agreed Statement with a view to facilitating the implementation of Rule 8(1)(a) of the PLT, according to which the Diplomatic Conference requested the General Assembly of WIPO and the Contracting Parties of the PLT to provide the developing and least developed countries and countries in transition with additional technical assistance to meet their obligations under the PLT. It further urged industrialized market economy countries to provide, on request and on mutually agreed terms and conditions, technical and financial cooperation in favor of developing and least developed countries and countries in transition. Texts of the PLT and the Regulations under the PLT, as well as the Agreed Statements are available at <http://www.wipo.int/treaties/ip/plt/index.html>.
383. The further harmonization of substantive issues of patent law has been discussed since the fourth session of the SCP in November 2000. Working documents of these sessions are available on the WIPO website, at <http://www.wipo.int>.

CHAPTER IV



IV. THE ROLE OF PRIVATE INTERNATIONAL LAW AND ALTERNATIVE DISPUTE RESOLUTION

258. The traditional method of resolving legal conflict - court litigation - is largely organized on a territorial basis. Each country has its own courts, which may be called upon to rule upon disputes falling under their jurisdiction, mostly on the basis of the application of local laws. This territorially based dispute resolution model faces a number of challenges when applied to disputes arising on the Internet, where activity occurs with little regard for physical boundaries. In the intellectual property context, if an entity uses a sign on the Internet in which it has secured trademark rights in its country of establishment, but which can be accessed by users anywhere in the world, does the entity run the risk of infringing rights in other jurisdictions? The laws of which jurisdictions should be relied upon to determine whether such infringement has occurred? And which courts should have jurisdiction to determine this?

259. Much attention has been brought in recent years to private international law and alternative dispute resolution as means of alleviating these complex issues that the Internet poses. The following sections of this Survey discuss the relationship between these branches of the law and intellectual property and how they can contribute to enhancing its protection on the Internet.

(i) PRIVATE INTERNATIONAL LAW, INTELLECTUAL PROPERTY AND THE INTERNET

(a) *What is Private International Law?*

260. Private international law, also known as conflict of laws in more common law-oriented jurisdictions, is the body of law that seeks to resolve certain questions that result from the presence of a foreign element in legal relationships. Examples of such relationships include contractual disputes between parties located in different jurisdictions, the marital status of partners of different nationalities, the legal status of real estate located in a foreign jurisdiction, and, in the intellectual property context, disputes between a copyright owner residing in one country and Internet users residing in other countries who are accused of making available, on servers located in multiple jurisdictions, copyrighted material for download by any person anywhere in the world, without the necessary permissions.

261. Private international law is generally considered to consist of two major branches. The first branch seeks to determine which nation's courts have jurisdiction over disputes involving a foreign element and which conditions need to be met for decisions of foreign courts to be recognized and enforced within a country ("jurisdiction and the recognition and enforcement of judgments"). The second branch seeks to determine which nation's laws are to be applied to govern the substance of legal relationships involving a foreign element ("applicable law").

262. Private international law is, contrary to what the label suggests, not international law *strictu sensu*, i.e., it does not constitute a set of rights and obligations between States. To the contrary, private international law is municipal law and essentially aims to regulate conduct between private parties. Its only "international" dimension results from the fact that it comes into application because of the presence of a foreign element. One consequence of the inherently municipal nature of private international law is that each country has its own set of private international law rules. As there is relatively little harmonization or coordination of these various rules at the international level, and as they tend to be complex and therefore hard to apply consistently, there is no guarantee that the same dispute involving a foreign element will be decided upon in the same manner from one jurisdiction to another (each jurisdiction reaching different results, on the basis of different rules of private international law).

263. Another peculiar feature of private international law rules, in particular those concerning applicable law, is that they are neither substantive, nor procedural in nature. For instance, according to most private international law rules, questions concerning the legal status of real property are to be determined by reference to the substantive law of the country where the real property at issue is located. The private international law rules concerned thus do not purport to resolve the substance of the question, but merely function as a rule of attribution (or allocation) which allows to determine from among the laws of all countries in the world, which is to govern the matter.

264. Private international law has a long tradition in legal systems. Cross-border movements of persons and goods, typically in commerce, have been with us for millennia and are the primary catalysts of private disputes involving foreign elements. Such disputes require some form of private international law rules, however crude, to be resolved. The origins of private international law thus can be traced to ancient Greece and Rome, and the discipline flourished in Europe during the Middle Ages.³⁸⁴ With the huge increase in international trade and other, less commercial, interactions between citizens (e.g., marriages between persons of different nationalities) across the globe during the last century, private international law has developed into an indispensable component of the legal apparatus of each nation.

(b) *Private International Law and the Internet*

265. With the advent of the Internet, cross-border relationships have intensified, raising more complex questions of jurisdiction and applicable law. Although, as mentioned in the preceding paragraph, the international community has been confronted with fundamentally the same questions ever since the earliest manifestations of international trade, a number of special characteristics of Internet-based transactions have added novel dimensions to the debate. Among the most noteworthy of such characteristics the following can be mentioned.

(i) *Instantaneous Global Presence*

266. Prior to the Internet, presence in foreign markets generally was achieved on a piecemeal basis. First, penetration in the home market was assured, after which gradual expansion to foreign markets was contemplated, and such foreign markets were approached individually, or, at best, on a regional basis. Very often, the distribution of products in foreign markets was accompanied by some form of physical presence there, either by the producer itself or its local representative.

267. The Internet has altered the dynamics of this process radically. Once a website is created and published, it is immediately accessible from everywhere in the world. At the very least, persons throughout the globe can visit the site, but often they will also be able to order and download products from it. This global presence raises a number of pressing questions from a private international law perspective: If a website or other online presence establishes a connection with every country in the world, which courts should have jurisdiction over disputes resulting from such presence and which laws should be relied upon to resolve them? This feature of the Internet and the questions which it entails have been an important driving force behind the renewed interest, at the multilateral level, in private international law. As far as jurisdiction is concerned, this interest has found expression in the negotiations on the draft Hague Convention on Jurisdiction and Foreign Judgments in Civil and Commercial Matters, which is discussed in more detail below,³⁸⁵ and the project of the American Law Institute (ALI) on the development of a set of Principles on Jurisdiction and Recognition of Judgments in Intellectual Property Matters.

(ii) *Consumer Protection Issues*

268. Prior to the development of the Internet as a medium for commercial exchanges, consumers rarely entered into a direct relationship with foreign vendors. Typically, foreign products were distributed through local importers from whom consumers residing in the territory would make purchases. As a result of the global presence that the Internet enables, this model in many instances will not longer apply. Consumers can place orders on, or performs downloads from, the sites of foreign vendors, thus entering into a direct contractual relationship with them.

269. This shift in business model has important legal reverberations from the consumer protection point of view. To the extent both parties to the transaction are located in the same jurisdiction (i.e., the consumer and the local importer), there are no particular difficulties with respect to the questions of which courts have jurisdiction and which laws should apply to consumer disputes. However, if those parties are not located in the same country, the question arises whether the courts of the country of the consumer ("country of destination") or those of the vendor ("country of origin") should have jurisdiction. Similarly, the issue of which applicable law governs the consumer aspects of the transaction becomes more acute. Those who favor a country of origin approach argue that it would be impossible, or, at the least, unreasonably burdensome, to expect vendors to comply with the consumer protection laws of all the countries from which their websites can be reached. Those in favor of a country of destination approach maintain that consumers will have neither the resources nor the incentive to pursue vendors in foreign courts. As consumer protection is regarded a matter of public policy in many countries, these questions have proven particularly vexing to solve, even at the regional or national level.³⁸⁶

(iii) *Relevance of Intellectual Property*

270. There is a close relationship between intellectual property and the Internet, both in terms of the technical infrastructure of the network and the products that are traded on it. The content that is distributed through the Internet, either lawfully or unlawfully, includes software, text, music and films, products that are at the heart of the copyright system. Furthermore, much of the information technology which underlies the Internet potentially could benefit from intellectual property protection, although in many instances a deliberate choice was made not to seek such protection ("open standards"). The aspects of the Internet infrastructure which could appropriately be subjected to exclusive proprietary rights also is the subject of constant debate and attention.³⁸⁷ In light of these deep ties between intellectual property and the Internet, the question has arisen whether any private international law regime for the Internet could be deemed complete, if it does not also address intellectual property issues.

(c) *Sources of Private International Law*

271. While a fully articulated private international law regime for intellectual property has not been established at the international level, there exists a body of unified private international law in other areas of the law. The ensuing paragraphs provide a brief overview of the most important private international law instruments at the global and regional levels. It must be recognized, however, that, with the possible exception of the situation in Europe in respect of the jurisdiction and enforcement of judgments, the level of unification attained is relatively modest and that, consequently, private international law is still first and foremost a matter of municipal law.

272. The principal source of private international law rules at the multilateral level is the Hague Conference on Private International Law. The Hague Conference is an intergovernmental organization the purpose of which is "to work for the progressive unification of the rules of private international law."³⁸⁸ While the First Session of the Hague Conference was held in 1893, the organization only became a permanent intergovernmental organization with the adoption of its Statute, which entered into force in 1955. The Hague Conference currently has 62 Member States.

273. Many multilateral treaties on private international law have been concluded under the auspices of the Hague Conference.³⁸⁹ Most of these conventions concern questions of jurisdiction, recognition of judgments and of other official acts, or applicable law. Typically, the scope of the Hague conventions are highly focused and restricted to certain specific topics, such as questions of marital status, adoption, certain aspects of civil procedure and the international sale of goods. Only a few of the conventions are of more general application and, among those, figures the Convention of February 1, 1971 on the Recognition and Enforcement of Foreign Judgments in Civil and Commercial Matters, which is in force, but only has three Member States (Cyprus, Netherlands and Portugal) and one Non-Member State (Kuwait).

274. In 1992, discussions began at the Hague Conference, at the request of the United States of America, to explore the possibility of establishing a new multilateral instrument on the recognition and enforcement of judgments.³⁹⁰ Several drafts of such new proposed treaty, entitled Convention on Jurisdiction and Foreign Judgments in Civil and Commercial Matters (the "draft Hague Convention") have been tabled and it has been envisaged that a number of its provisions would be devoted specifically to intellectual property. Negotiations have been difficult and slow, and it is unclear at this stage whether the Convention ultimately will see the light of day. The provisions of the draft Convention concerning intellectual property nonetheless have received much attention and are therefore discussed in more detail below.³⁹¹

275. There also exist many private international law instruments at the regional level. In Europe, the most notable include the Brussels Convention on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters of September 27, 1968 (Brussels Convention), the Lugano Convention on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters of September 16, 1988 (Lugano Convention), and the EC Convention on the Law Applicable to Contractual Obligations of June 19, 1980 (Rome Convention). The Brussels Convention recently has been replaced by Council Regulation (EC) No. 44/2001 of December 22, 2000 on Jurisdiction and the Recognition and Enforcement of Judgments in Civil and Commercial Matters, which entered into effect on March 1, 2002 (Brussels II).³⁹² The Brussels Regulation and the Lugano Convention contain a number of provisions which are relevant to intellectual property and which are also discussed in more detail below.³⁹³

276. Regional agreements concerning private international law also exist in other regions than Europe. Important work in the area concerned has been achieved in Latin America and include the Treaties of Montevideo of January 11, 1889 and March 19, 1940, as well as the Bustamante Code of Private International Law of February 20, 1928, a code consisting of 437 different articles. Next to these regional treaties, certain countries have concluded bilateral treaties dealing with certain private international law issues that might arise between them.³⁹⁴

(d) *Private International Law, Harmonization and Intellectual Property*

277. The fundamental difficulty in coping with legal relationships involving foreign elements flows from the fact that the legal systems of more than one country may reasonably be found to have a connection with them. The application of the laws of one system, rather than the other, in most cases will lead to different results. One solution to this problem consists of selecting, based on certain criteria, from among the various potentially applicable legal systems, the laws of one particular legal system, to govern the legal relationship. This, in essence, is the exercise of determining the applicable law under a private international law approach. It is also the solution which encroaches the least on existing national law, because it requires no changes to such law in order to resolve the problem posed by the presence of the foreign element.

278. A radically different solution, which is much more intrusive on existing national law, consists of trying to remove, through a process of harmonization, the source of the problem by eliminating the differences that exist between the laws of countries on a given issue. Harmonization is achieved through the negotiation between States of treaties establishing uniform rules and, after the international instruments in question have been ratified or acceded to by the States concerned, the subsequent modification of municipal laws in order to bring them in line with the treaty provisions.

279. Apart from private international law and substantive harmonization of national laws, there exist also other means of dealing with problems resulting from cross-border legal relationships which may be considered to fall in between those categories in terms of their effect on existing national laws. Examples of the latter category in the intellectual property field include, for instance, the principle of national treatment. In the industrial property area, this principle is enshrined in Article 2 of the Paris Convention, which states as follows:

“Nationals of any country of the Union shall, as regards the protection of industrial property, enjoy in all the other countries of the Union the advantages that their respective laws now grant, or may hereafter grant, to nationals; all without prejudice to the rights specially provided for by this Convention. Consequently, they shall have the same protection as the latter, and the same legal remedy against any infringement of their rights, provided that the conditions and formalities imposed upon nationals are complied with.”

A similar requirement of national treatment exists in copyright and is contained in Article 5 of the Berne Convention providing that “[a]uthors shall enjoy, in respect of works for which they are protected under this Convention, in countries of the Union other than the country of origin, the rights which their respective laws do now or may hereafter grant to their nationals, as well as the rights specially granted by this Convention.” While the national treatment principle is aimed at resolving certain questions arising from the presence of foreign elements in a legal relationship (namely, persons desirous to protect their intellectual property in a foreign jurisdiction), this is not achieved through harmonizing the laws concerned. Indeed, the national treatment principle does not require nations to amend any substantive aspect of their intellectual property regimes, but merely requires them to allow foreigners to benefit from these regimes to the same extent and in the same manner as their nationals, without any discrimination with respect to the acquisition, maintenance and enforcement of the rights concerned. Neither does the national treatment principle reflect a private international law approach, as it does not purport to designate the law of any particular country that is to govern an intellectual property issue involving a foreigner, but merely states that foreigners should not be treated differently than nationals with respect to intellectual property issues.³⁹⁵

280. These differing approaches – reliance on private international law, substantive harmonization, or the application of general principles such as national treatment– are not mutually exclusive. On the one hand, private international law rules themselves are sometimes harmonized through treaties. On the other hand, even in areas where harmonized international rules exist, divergences often remain in the implementing legislation of States parties to the relevant treaties, which again may require resorting to private international law techniques to cope with them. Furthermore, harmonization treaties often include a combination of the various approaches. Which approach is preferred in relation to a particular question will depend primarily on the nature of the issue, the needs of parties whose interests are most affected by such issue and the degree to which States are willing to modify their municipal laws on the point in question.

281. Historically, for certain branches of the law, the emphasis has been on private international law solutions as a means of dealing with issues arising from cross-border legal relationships, while for other branches, the prevailing trend has been to try to harmonize the relevant norms. The three great international intellectual property treaties, the Paris Convention, the Berne Convention and the TRIPS Agreement, all place the emphasis on harmonization, both in terms of substance and procedure, and contain few provisions that could be characterized as rules of private international law. Nonetheless, they do not exclude a private international law approach altogether. A classic example in the latter regard is Article 5(2) of the Berne Convention, which states that “the extent of protection, as well as the means of redress afforded to the author to protect his rights, shall be governed exclusively by the laws of the country where protection is claimed.”³⁹⁶ More recently, negotiations during the WIPO Diplomatic Conference on the Protection of Audiovisual Performances (December 7 to 20, 2002) on the question of the international recognition of the transfer of rights of audiovisual performers centered at least in part on a possible private international law approach in order to bridge differing positions among delegations.³⁹⁷

282. The relatively modest attention which has been brought to private international law as a means of resolving problems arising from the presence of foreign elements by the intellectual property system results from three essential features: (a) the territorial nature of the intellectual property system, (b) the need for introducing minimum intellectual property standards across jurisdictions and (c) the reliance of the intellectual property system, notably in industrial property, on registration as a means of enabling, or at least, facilitating the protection of the rights concerned.

(i) *Territorial Nature of The Intellectual Property System*

283. Intellectual property law is "territorial," because its geographical scope of application is defined by and restricted to the boundaries of the nation. Each country determines, for its own territory and independently from any other country, what is to be protected as intellectual property, who should benefit from such protection, for how long and how protection should be enforced. Consequently, the fact that a person may have a valid and enforceable intellectual property right in one country, as such, has no bearing on whether that right will be recognized in another country. The territorial nature of intellectual property law is at least partially explained by its use as an instrument of economic and cultural policy by States. Intellectual property grants exclusive rights, in effect monopolies, which are intended, on the one hand, to stimulate market actors to invest in new creations by offering them a framework for reaping the rewards of their investments and, on the other, to safeguard the integrity of artistic works, as well as the reputation of artists. The determination of the conditions which have to be met for such rights to be granted, and of any exceptions to them, requires a careful balancing of competing interests. Traditionally, States have jealously guarded the power to strike the appropriate balance for their own jurisdictions, and such power has come to be accepted as an essential attribute of sovereignty. Historically, this deeply engrained notion of territoriality has restrained the reliance on private international law approaches in an intellectual property context. As noted by Cornish:

"[I]t is conceivable that nations would agree to treat inventors and authors as having personal rights to patents or copyright which are determined by their country of origin. In principle, then, they would be able to carry their rights thus defined to other countries and demand recognition and enforcement there. Thus, an author from country A which gives copyright for the author's life and 50 years would be able to demand that period of protection in country B, even though its local law is limited to a copyright of (say) 56 years. The same would be true of the range of material protected and the scope of the rights granted. In the early period of industrialization, the political unacceptability of this approach was soon enough appreciated and instead the territorial character of intellectual property became widely accepted during the nineteenth century."³⁹⁸

284. Enhanced application of private international law techniques in the intellectual property arena would require increased deference on the part of States to each other's policy choices in the areas of copyright, trademarks and patents. The historical prevalence of the territoriality principle suggests that there are limits to the degree of flexibility which States are prepared to exhibit in this connection.

(ii) *The Need For Minimum Standards of Intellectual Property Protection*

285. Resort to private international law techniques to resolve cross-border intellectual property disputes in a world where many countries have deficient intellectual property systems makes little sense, as conflict of law rules may designate the laws of countries with substandard intellectual property rules to govern a particular question. In other words, a functioning multilateral private international law regime for intellectual property presupposes that the intellectual property laws of most nations have reached a certain level of maturity. While many countries may be deemed to have reached that level several generations ago, the recognition of the need for robust intellectual property laws by countries worldwide is a relatively recent phenomenon, which initially manifested itself in the seventies and was accentuated by the conclusion of the TRIPS Agreement.³⁹⁹

(iii) *A System of Registered Rights*

286. One important component of the intellectual property system, namely industrial property, relies heavily on the concept of registration as a means of protecting rights. Typically, a producer will first secure its position in the local market by obtaining the necessary registrations there, later expand his business to foreign markets and obtain equivalent registrations in those jurisdictions. As a result of intellectual property's territoriality, each nation determines its own conditions and procedures for the acquisition of the registrations in question, and registrations must be obtained for each jurisdiction in which protection is sought. Producers who have a global market presence, and therefore must file for protection in multiple countries, are faced by a maze of differing registration conditions and formalities.

287. Already in the nineteenth century, it was realized that this situation could severely hamper the development of international trade and that some measure of coordination between the various national intellectual property systems had to be introduced. This policy objective has been, and continues to be, of such paramount importance that the creation of linkages and increased coordination between the various national systems of registered rights has tended to dominate the agenda of international industrial property negotiations. The realization of this objective has traditionally been considered far more urgent and effective as a means of enhancing intellectual property protection at the international level, than the creation of a private international law regime specifically tailored to suit intellectual property needs. This is well illustrated by the fact that two of the principal achievements of the Paris Convention, the provisions on national treatment (Article 2), as well as those on rights of priority (Article 4), facilitate the

registration of rights by foreigners in local markets, on the one hand, by ensuring that such foreigners are not discriminated against (national treatment) and, on the other, by offering applicants reasonable time to file applications in multiple countries (right of priority). Two other major milestones in international industrial property, the Madrid System and Patent Cooperation Treaty, essentially are a large-scale exercise in trying to mitigate the negative effects of the existence of different national and regional systems for the registration of trademarks and patents.

(e) *Jurisdiction and Applicable Law in Intellectual Property Disputes*

288. While there is no fully articulated private international law regime for intellectual property at the international level, several general principles can be distilled from the national and regional systems. This section provides a summary of these principles, as they have been applied, in particular in the United States of America and the European Union, to intellectual property disputes on the Internet.⁴⁰⁰ Mention also will be made of the latest status of the discussions on the draft Hague Convention and the project of the American Law Institute to develop a set of "Principles on Jurisdiction and Recognition of Judgments in Intellectual Property Matters."

(i) *Jurisdiction*

289. In the common law system, and relying in particular on United States terminology, the general requirement is that courts must have both jurisdiction over the defendant ("personal jurisdiction") and the subject matter of the dispute ("subject matter jurisdiction"). Whether a court has personal jurisdiction over a defendant will be a function of the degree of contact between the defendant and the forum (for instance, is the defendant a resident in the forum, or does he only have infrequent or minor contacts there?). Depending on the degree and level of contact, in the United States of America, such jurisdiction can be "general," meaning that the court has jurisdiction over the defendant even for acts committed outside the forum, or merely "specific," meaning that the court only has jurisdiction over the defendant with respect to those acts committed by him inside the forum. In the Internet context, this line of enquiry typically is reflected in the question of whether the defendant's website has sufficient connections with the forum for the court to exercise either general or specific jurisdiction. Two landmark cases in the United States of America – *Zippo Mfg. Co. v. Zippo Dot Com, Inc. (1996)*⁴⁰¹ and *Cybersell, Inc. v. Cybersell, Inc. (1997)*⁴⁰² – introduced the notions of "passive/interactive websites" and "purposeful availment" as standards to determine whether jurisdictional requirements are met in this context.⁴⁰³

290. Even if a court finds that it has personal jurisdiction over the defendant, it must still be verified whether the court has jurisdiction over the subject matter of the claim. Traditionally, common law courts have been reluctant to accept that they have subject matter jurisdiction over disputes concerning foreign intellectual property rights.⁴⁰⁴ This reluctance is largely explained by the territorial and public policy nature of intellectual property, which have led the courts in question to find that their consideration of foreign intellectual property laws would inappropriately impinge upon the sovereignty of the nations which promulgated them. Recently, however, United States and English courts have exhibited greater flexibility in this respect, in particular in disputes involving allegations of infringement of foreign copyright.⁴⁰⁵

291. In the European Union, the principal instrument governing questions of jurisdiction, including in intellectual property matters, is the Council Regulation (EC) No. 44/2001 of December 22, 2000 on Jurisdiction and the Recognition and Enforcement of Judgments in Civil and Commercial Matters (Brussels II). This regulation, which entered into force on March 1, 2002 replaces the Brussels Convention of September 27, 1968 and applies to the Member States of the European Union, except Denmark in relation to which the Brussels Convention remains in force. In addition to the Regulation and Brussels Convention, account has to be taken also of the Lugano Convention which extends the provisions of the Brussels Convention to the Member States of the European Free Trade Association (EFTA).⁴⁰⁶ One article, in particular, of Brussels II deals explicitly with intellectual property issues. This is Article 22 (4), which reads as follows:

"The following courts shall have exclusive jurisdiction, regardless of domicile:

- "4. in proceedings concerned with the registration or validity of patents, trade marks, designs, or other similar rights required to be deposited or registered, the courts of the Member State in which the deposit or registration has been applied for, has taken place or is under the terms of a Community instrument or an international convention deemed to have taken place.

Without prejudice to the jurisdiction of the European Patent Office under the Convention on the Grant of European Patents, signed at Munich on 5 October 1973, the courts of each Member State shall have exclusive jurisdiction, regardless of domicile, in proceedings concerned with the registration or validity of any European patent granted for that State."

292. A number of other articles of Brussels II, while not making explicit reference to intellectual property, are nonetheless also important in terms of determining jurisdiction over disputes involving intellectual property issues, including those that arise on the Internet. The two most significant such provisions are Article 2 (1) and Article 5 (3).⁴⁰⁷ Article 2 (1) lays down the general jurisdiction principle underpinning Brussels II, namely that “persons domiciled in a Member State shall, whatever their nationality, be sued in the courts of that Member State.” Article 5 (3) provides that “[a] person domiciled in a Member State may, in another Member State, be sued: ... in matters relating to tort, *delict or quasi-delict*, in the courts for the place where the harmful event occurred or may occur.” Intellectual property infringements generally will be regarded as torts under Brussels II.

293. In the case of *Handelskwekerij Bier B.V. v. Mines de Potasse d’Alsace S.A. (1978)*, the European Court of Justice ruled that the terms “place where the harmful event occurred” of Article 5 (3) covered both the place where the damage occurred and the place where the event causing the damage took place.⁴⁰⁸ Account also needs to be taken of the European Court of Justice’s decision in the case of *Shevill v. Presse Alliance S.A. (1995)*, in particular in relation to the extent of the relief that can be obtained before the various competent courts under the *Mines de Potasse* standard. According to *Shevill*, the courts of the places where the damage was suffered only have power to award compensation for damages suffered by the plaintiff within their own countries, but, if the action is brought against the defendant in a court of the country of its establishment, those courts have power to grant a fuller extent of damages, not restricted to those suffered in the forum.⁴⁰⁹

294. With respect to intellectual property infringements on the Internet, the application of the above general principles often crystallizes in the question of whether the mere accessibility of a website in the territory is a sufficient basis for finding jurisdiction, or whether something more than mere accessibility is required. Generally, at least in the United States of America, the mere accessibility of a website in a forum will not be deemed sufficient for a court to exercise jurisdiction over the defendant,⁴¹⁰ but this position is not uniformly shared in all countries.⁴¹¹ The European Court of Justice’s decision in *Mines de Potasse* likely implies that a plaintiff can sue, under Brussels II, in multiple courts to seek redress, namely in all places where damage was suffered and in the place where the infringement occurred. Because of the global accessibility of the Internet, the difficulty consists of localizing damages and the infringing act. In the copyright context, it would seem reasonable to accept that damage is suffered, at the very least, in the places where unlawful material was downloaded, as such downloads represent lost business for the plaintiff. Determining the place where the infringing act occurred appears more complicated.⁴¹² From the plaintiff’s point of view it is, of course, preferable, if the court which is seized finds that it has jurisdiction over claims for all damages arising out of the Internet activity which is the subject of the complaint, irrespective of the various countries in which those damages have been suffered. In the European context, *Shevill* may offer relief in this regard, provided the court which is seized finds that it has subject matter jurisdiction over any foreign intellectual property rights that may be at issue.

295. Mention also should be made of the discussions concerning jurisdiction that are held in the framework of the draft Hague Convention. As with Brussels II, several provisions of the draft impact upon intellectual property, but the most significant is the proposed Article 12 on Exclusive Jurisdiction. Various versions of this Article have been tabled since the start of the negotiations and each invariably has been the source of considerable controversy. Among the principal difficulties in industrial property figure the questions of whether the courts of the country of registration/protection should have exclusive jurisdiction also over infringement cases and how to deal with (in)validity issues that may arise as incidental questions in proceedings before courts other than those of the country of protection/registration.⁴¹³ The latest draft, as it relates to intellectual property, together with relevant commentary, can be found in the Summary of the Outcome of the Discussion in Commission II of the First Part of the Diplomatic Conference held from June 6 to 20, 2001 and reads as follows:⁴¹⁴

“Article 12 Exclusive jurisdiction

“ ...

“Intellectual property”⁴¹⁵

“[Alternative A”⁴¹⁶

“4. In proceedings in which the relief sought is a judgement on the grant, registration, validity, abandonment, revocation or infringement⁴¹⁷ of a patent or a mark, the courts of the Contracting State of grant or registration shall have exclusive jurisdiction.⁴¹⁸

“5. In proceedings in which the relief sought is a judgement on the validity, abandonment, or infringement of an unregistered mark [or design], the courts of the Contracting State in which rights in the mark [or design] arose shall have exclusive jurisdiction.]”

"[Alternative B]"⁴¹⁹

"5A. In relation to proceedings which have as their object the infringement of patents, trademarks, designs or other similar rights, the courts of the Contracting State referred to in the preceding paragraph [or in the provisions of Articles [3 to 16]] have jurisdiction."⁴²⁰

"Alternatives A and B"

"[6. Paragraphs 4 and 5 shall not apply where one of the above matters arises as an incidental question in proceedings before a court not having exclusive jurisdiction under those paragraphs. However, the ruling in that matter shall have no binding effect in subsequent proceedings, even if they are between the same parties. A matter arises as an incidental question if the court is not requested to give a judgement on that matter, even if a ruling on it is necessary in arriving at a decision.]"⁴²¹

"7. [In this Article, other registered industrial property rights [(but not copyright or neighbouring rights, even when registration or deposit is possible)]⁴²² shall be treated in the same way as patents and marks]

"[8. For the purpose of this Article, 'court' shall include a Patent Office or similar agency.]"⁴²³

296. It appears unclear, at present, whether negotiations on the draft Hague Convention will be successful and whether any international instrument that might ultimately be adopted will include provisions on intellectual property. In an effort to spur a debate on the desirability of an international regime for the recognition and enforcement of foreign judgments in intellectual property matters, the American Law Institute has initiated a project on the development of draft Principles on Jurisdiction and Recognition of Judgments in Intellectual Property Matters. The discussion has begun only recently and it is too early to say what direction the project might take.⁴²⁴

(ii) *Applicable Law*

297. While multilateral rules on jurisdictional issues arising in the context of intellectual property disputes are sparse, no international legal framework for determining the law applicable to such disputes is available either. The following paragraphs discuss some of the principal questions in this connection in the areas of copyright, trademarks and patents, with a particular focus on the acquisition⁴²⁵ and infringement of rights.

(a) *Acquisition of Rights*

298. In the area of copyright, Article 15 of the Berne Convention contains a number of provisions which concern the question of who is to be deemed the "author" of certain types of works. Article 15 (1) states that "[i]n order that the author of a literary or artistic work protected by this Convention shall, in the absence of proof to the contrary, be regarded as such, and consequently be entitled to institute infringement proceedings in the countries of the Union, it shall be sufficient for his name to appear on the work in the usual manner." Furthermore, Article 15 (2) provides that "[t]he person or body corporate whose name appears on a cinematographic work in the usual manner shall, in the absence of proof to the contrary, be presumed to be the maker of the said work."

299. Apart from these articles, the Berne Convention is on the whole quite silent on the question of the acquisition of rights. Furthermore, these provisions do not purport to determine substantively who is to be deemed an author, but are merely evidentiary rules establishing rebuttable ownership presumptions. Much more concerned with establishing the various types of rights which authors may have in their works, the Berne Convention thus leaves the question of the acquisition of rights, essentially, to national law.

300. In the absence of any firm guidance in the Berne Convention, the appropriate point of departure in considering the law applicable to the acquisition of copyrights is the territoriality principle. A strictly territorial reading of the copyright system would imply that each country determines, separately and on its own, who is to be regarded as an author of a work. At least theoretically, such point of view could result in changes in the identity of an author of a work, as it crosses national boundaries. In the context of the Internet, where works are transmitted around the globe instantaneously and where the notion of territories is hardly experienced as a practical constraint (compared, for instance, to bandwidth), such consequence may appear to be out of step with reality and a source of considerable legal uncertainty. As an alternative, it has been proposed that the law applicable to the acquisition of copyright could be determined by reference to a fixed point of attachment. The main possibilities discussed in this regard include

the personal law of the claimed author (i.e., the law of his or her nationality, or residence), the law of the forum, the law of the country in which protection is sought, or the law of the country of origin of the work.⁴²⁶

301. In the area of trademarks and patents, the territoriality principle is reinforced by the fact that these classes of rights, in most instances, are required to be registered in order to benefit from protection. As such, the acquisition of the rights concerned is to be determined on the basis of the law of the countries in which registration is sought. Although the Paris Convention does not reflect this principle explicitly, it follows implicitly from several of its provisions and remains basically unchallenged. The acquisition of unregistered trademarks (or “common law marks,” as they are known in certain jurisdictions) is determined on the basis of the law of the countries in which the marks are used, provided, of course, such countries offer protection to unregistered marks.⁴²⁷

302. Account also may be taken of the Joint Recommendation Concerning Provisions on the Protection of Marks, and Other Industrial Property Rights in Signs, on the Internet, adopted by the Assembly of the Paris Union for the Protection of Industrial Property and the General Assembly of WIPO in 2000 (the “WIPO Joint Recommendation”).⁴²⁸ The Joint Recommendation contains a number of articles that provide guidance on the circumstances under which the use of a sign on the Internet may form the basis for the acquisition of trademark rights in such sign. While, as clarified in its Explanatory Notes, the Joint Recommendation is expressly without prejudice to the law applicable to the issues falling under its scope (leaving this determination to the private international law of individual Member States), its approach, which consists of identifying points of attachment as a solution to questions raised by the ubiquity of the Internet, clearly is inspired by private international law.

303. In Article 5, the Joint Recommendation states that “[u]se of a sign on the Internet in a Member State, including forms of use that are made possible by technological advances, shall in every case be taken into consideration for determining whether the requirements under the applicable law of the Member State for acquiring or maintaining a right in the sign have been met.” However, an important limitation is introduced through Article 2 providing that “[u]se of a sign on the Internet shall constitute use in a Member State for the purposes of these provisions, only if the use has a commercial effect in that Member State. . . .” Article 3 lists a number of factors which may be considered to determine commercial effect in a Member State, including whether the user of the sign is doing, or has plans to do, business in the Member State in relation to identical or similar goods or services, the “level and character of commercial activity of the user in relation to the Member State,” the “connection of the manner of use of the sign on the Internet with the Member State” and “the relation of the use of the sign on the Internet with a right in that sign in the Member State.”

(b) *Infringement of Rights*

304. As regards infringements of trademarks and patents, the law of the country where protection is sought also is deemed the governing law, although, contrary to the Berne Convention, the Paris Convention does not state this explicitly.⁴²⁹ In other words, whether certain acts committed in one or more territories constitute an infringement of a trademark or a patent is to be judged separately for each territory in which such rights were acquired, based upon the substantive law of that jurisdiction.

305. Except for the separate category of domain name issues,⁴³⁰ the most vexing question regarding trademarks on the Internet results from the fact that any use of a sign on the web is visible anywhere and thus may potentially result in infringements in any number of jurisdictions, if rights corresponding to the sign are protected there. Entities contemplating to start businesses supported by an Internet presence, even though they may be aimed solely at the local market, may find themselves in the not so enviable position of having to clear their rights in multiple jurisdictions (theoretically in all), if they are to be sure of their legal position. Such lack of legal security and unreasonably heavy burden is hardly conducive to the healthy development of commerce on the Internet.⁴³¹

306. One aim of the WIPO Joint Recommendation is to provide guidance on how to alleviate these concerns. It does so through various different means. First, it establishes the principle in Articles 2 and 3 that the mere visibility of a sign used on the Internet in a particular jurisdiction can only form the basis for the finding of an infringement if the use “has a commercial effect” in the territory concerned. In addition, the Joint Recommendation introduces a procedure for notice and avoidance of conflict in Articles 9 through 12. Under this procedure, a rightsowner, who is of the view that the use of a sign on the Internet by a third party infringes its rights in a particular territory, can send a notification of infringement to such third party. The Joint Recommendation shields the third party from liability, if it indicates that it has a right in the sign in another territory and “expeditiously takes reasonable measures that are effective to avoid commercial effect in the Member State referred to in the notification.” The important advantage of the procedure contemplated by the Joint Recommendation is that a person intending to use a sign on the Internet no longer would be under the same pressure to clear in advance his rights in multiple jurisdictions, but can limit doing so in those where effectively business will be conducted, leaving any problems that may arise in other jurisdictions to be resolved *ex post* on the basis of the notification procedure, and this without running the risk of incurring liability.

307. The WIPO Joint Recommendation also contains a number of provisions that are intended to avoid that remedies are granted with too broad effect on the Internet. Article 13 establishes the general principle that “[t]he remedies provided for the infringements of rights or for acts of unfair competition in a Member State, through use of a sign on the Internet in that Member State, shall be proportionate to the commercial effect of the use in that Member State.” Furthermore, Article 15 stipulates that “[w]here the use of a sign on the Internet in a Member State infringes a right, or amounts to an act of unfair competition, under the laws of that Member State, the competent authority of the Member State should avoid, wherever possible, imposing a remedy that would have the effect of prohibiting any future use of the sign on the Internet.”

308. In the area of patents, one specific question may arise with respect to the law applicable to infringements when a patented invention consists of elements that are physically located in different territories. For example, in the case of process patents for a method to process and transfer certain data using computerized networks (e.g., the Internet), distinct elements in the claimed process could be performed in different territories. If an alleged infringer operates a system containing all of the claimed elements within the territory in which the invention is protected, there would be a straightforward claim for infringement. However, the question of applicable law (and jurisdiction) would be more difficult where a patented invention involves activities in several countries by several individuals.

309. One of the few provisions in the existing international intellectual property treaties which clearly have a private international law connotation is Article 5.2 of the Berne Convention concerning the law applicable to copyright infringement. This Article stipulates that “[t]he extent of protection, as well as the means of redress afforded to the author to protect his rights, shall be governed exclusively by the laws of the country where protection is claimed.” While there has been some hesitation whether the terms “country where protection is claimed” should be read to refer to the forum (i.e., the country where the court proceedings are brought) or the country where the infringing acts have occurred, the latter interpretation is more widely accepted.⁴³²

310. In the context of copyright on the Internet, the difficulty consists of determining where the infringing act occurred. If a file is made available on the Internet by a person residing in country A, on a server located in country B, for download or simple viewing by anyone in the world, where can it be said that the infringing act occurred? In the country where the file was uploaded? In the country where the server hosting the file is located? In each country where the file was downloaded? In each country from which the file was viewed?⁴³³

311. In the area of trademarks, the WIPO Joint Recommendation reflects a preference on the part of the international community to determine for each jurisdiction separately whether an infringement has occurred. In copyright, however, much of the discussions have centered on proposals to reduce the number of potentially applicable laws, as “an alternative to territoriality.”⁴³⁴ Several possible points of attachment have been considered in this connection.⁴³⁵ Inspired by the legal regime for satellite transmissions, an important portion of the debate has centered on the question of whether the application of the law of the country of emission, or of the country of reception is to be preferred.⁴³⁶ Neither solution, however, is without difficulty. Generally, determining the source of a transmission on the Internet or the location of its reception is a tenuous exercise.⁴³⁷ Furthermore, the application of the law of the country of emission may stimulate parties acting in bad faith to locate their Internet activities in jurisdictions with deficient intellectual property regimes in order to evade liability. Finally, the application of the law of the country of reception would require an assessment of whether an infringement has occurred in each separate jurisdiction. Such approach is considered hard to reconcile with the ubiquitous manner in which copyrighted material travels over the Internet.

(ii) ALTERNATIVE DISPUTE RESOLUTION

(a) *What are the Methods of Alternative Dispute Resolution?*

312. ‘Alternative Dispute Resolution’ (ADR) is used here in its widest sense, including all procedures aimed at resolving disputes between private parties outside of the court system, typically, but not necessarily, with the help of a neutral third party. The following paragraphs provide a non-exhaustive overview of the most commonly used ADR techniques in the order of increasing formality. The various mechanisms are not necessarily mutually exclusive in any particular conflict, but can be used sequentially or in a customized combination. They may also be used as an adjunct to court litigation. The WIPO Arbitration and Mediation Center administers procedures and offers assistance in all of these areas.

(i) *Negotiation*

313. Negotiation is an informal process where the parties attempt to resolve their differences through direct interaction. Negotiations are often the first step in more complex dispute-resolution activities.⁴³⁸ Negotiations can be structured in advance by

determining, for example, the participants, the subject matter to be addressed, or various activities to be undertaken by the parties at various stages of the process. Such structures can be agreed upon by the parties, or imposed by external sources, such as self-regulatory instruments or legislation.

(ii) *Mediation*

314. Mediation (also known as conciliation) is a voluntary, non-binding, confidential and flexible procedure in which a neutral intermediary, the mediator, endeavors, at the request of the parties to a dispute, to assist them in reaching a mutually satisfactory settlement of the dispute, or to provide a neutral evaluation of the parties' respective positions. The mediator does not have any power to impose a settlement on the parties. Mediation is also voluntary in the sense that either party may, if it so chooses, abandon the mediation at any stage prior to the signing of an agreed settlement.⁴³⁹

(iii) *Expert Determination*

315. Expert determination is a procedure by which parties agree to submit a particular dispute, usually of a technical, scientific or industry-specific nature, to an expert in the particular subject matter. The parties can authorize the expert either to render a decision that is binding between the parties as a matter of contract law, or to make a non-binding recommendation on the basis of his or her expertise. Expert determination is often invoked in aid of a parallel dispute resolution process.

(iv) *Regulated Infrastructure*

316. Entities in control of an infrastructure, such as operators of market platforms, online auction sites, or Internet service providers, often issue rules and establish mechanisms to resolve compliance disputes. Access to the infrastructure is made dependent on submission to those mechanisms. Since non-compliance can be sanctioned by exclusion, regulated infrastructures have an in-built enforcement mechanism. The most prominent example of such mechanisms is the Uniform Domain Name Dispute Resolution Policy (UDRP), which is dealt with in more detail below.⁴⁴⁰

(v) *Arbitration*

317. Arbitration is probably the best known alternative to court litigation and traditionally well established in international trade. Arbitration is a procedure in which a dispute is submitted, by agreement of the parties, to an arbitrator or to a tribunal of several arbitrators who give a decision on the dispute that is binding on the parties. Arbitration is also binding in the sense that no party can unilaterally withdraw from the proceedings or resort to court litigation once the parties have agreed to submit a dispute to arbitration.⁴⁴¹

(b) *The WIPO Arbitration and Mediation Center*

318. In order to make the advantages of ADR widely available to intellectual property owners, WIPO has established, in 1994, the WIPO Arbitration and Mediation Center (the Center). The procedures offered by the Center under the WIPO Mediation Rules, the WIPO Arbitration Rules and the WIPO Expedited Arbitration Rules are particularly appropriate for technology, entertainment and other disputes involving intellectual property. Parties can draw upon a growing list of more than 1,000 independent arbitrators and mediators from some 70 countries covering the entire legal and technical spectrum of intellectual property.⁴⁴²

319. The Center has focused significant resources on establishing an operational and legal framework for the administration of disputes relating to the Internet and electronic commerce. For example, today the Center is recognized as the leading dispute resolution service provider for disputes arising out of the registration and use of Internet domain names. Between December 1999 and October 2002, the Center has received some 4,500 cases under the UDRP alone, relating to approximately 8,000 domain names. The Center also administers a number of specific policies designed to resolve disputes in the new generic top level domains, namely .aero, .biz, .coop, .info, .museum, .name and .pro. With disputes arising from these new domains, the total number of cases received by the Center amounts to 20,000.⁴⁴³

320. Since the end of 2001, the Center has also observed a marked increase in the number of arbitrations and mediations under the WIPO Arbitration, Expedited Arbitration and Mediation Rules that have been filed with the Center. These have so far involved parties from 13 countries on three continents and have been conducted in English, French and German. The subject matter of the proceedings includes both contractual disputes (e.g. software licences, distribution agreements for pharmaceutical products and research and development agreements) and non-contractual disputes (e.g. patent infringement). In addition, the Center is frequently asked to recommend WIPO neutrals, or to act as appointing authority, by parties to disputes that are not subject

to the WIPO Rules but that require experience in arbitration or mediation as well as specialized knowledge of the intellectual property rights in dispute.⁴⁴⁴

321. In addition to providing dispute resolution services to private parties, the Center is frequently consulted on issues relating to intellectual property dispute resolution and the Internet and has been involved in the development of various tailor-made procedures. The most prominent example is the UDRP which is based on recommendations made by WIPO to address certain abusive practices in the domain name system. Also in the area of e-commerce, the Center has, on the request of the Application Service Provider Industry Consortium (ASPIC), developed a set of dispute avoidance and resolution best practices specifically tailored to meet the needs of Application Service Providers (ASP).⁴⁴⁵

(c) *General Characteristics of ADR*

322. ADR is private and, in principle, based on the agreement of the parties involved. The parties' consent is the basis for the legitimacy of the proceedings. The private and consensual basis of ADR is the reason for its flexibility: the parties decide whether and how to resolve their disputes, there is no predetermined number of ADR mechanisms, and, thus, no limit to parties' ability to tailor the proceedings to their needs and circumstances.

323. The underlying consent is often part of a contractual relationship between the parties and is expressed in a contract clause determining the procedures to resolve disputes arising out of, or relating to, the parties' contractual relationship. Such "pre-dispute" clauses are not always individually negotiated, but can also be part of a standard agreement or an adhesion contract offered on a "take it or leave it basis." As a general matter pre-dispute clauses provide the parties with a high degree of certainty as to how their disputes will be resolved, a fact that will serve to expedite the actual proceedings. The dispute resolution process can, however, also be determined in a submission agreement concluded after a dispute has arisen, particularly if the parties' relationship is such that an agreement on the process can be achieved without significant delay, expense or acrimony. Examples of (pre-dispute) contract clauses and (post-dispute) submission agreements are the recommended contract clauses and submission agreements provided in the WIPO Mediation Rules, the WIPO Arbitration Rules and the WIPO Expedited Arbitration Rules.⁴⁴⁶

324. A dispute resolution process may be conducted ad hoc, i.e., the parties determine, possibly with the help of a neutral, the procedures according to which the dispute will be resolved. The process may also be conducted under procedures offered by an experienced institutional service provider, such as the WIPO Arbitration and Mediation Center, that has made available comprehensive and proven Mediation Rules, Arbitration Rules and Expedited Arbitration Rules and provides procedural and administrative support to parties and neutrals. In administering procedures, the Center assists the parties in selecting qualified neutrals (i.e., arbitrators or mediators), determines the neutral's fees in consultation with both the parties and the neutral, provides guidance as to the application of the relevant procedural rules, administers all financial aspects of the proceeding, organizes any support services that may be needed, and ensures the overall neutrality and efficiency of the procedure.⁴⁴⁷

(d) *ADR in E-Commerce*

325. Disputes in e-commerce are at least as recurrent and varied as disputes occurring in more traditional commercial relationships. Many of the classic advantages of ADR are therefore equally valid in an e-commerce context. However, in the experience of the WIPO Arbitration and Mediation Center, the Internet has influenced dispute resolution procedures in at least two respects:

- (1) It has posed new challenges that make the need for efficient dispute resolution mechanisms both more pressing and more complex. Some of these challenges will be addressed later in this section; and
- (2) In addition to creating new challenges, the Internet has also influenced the way disputes are resolved. Online methods can render procedures more efficient and are increasingly being used in the context of ADR as well as by courts. ADR procedures using electronic means of communication and case management are often referred to as "Online Dispute Resolution" (ODR) without, however, implying a conceptual difference to ADR in general.

326. In certain situations, parties might still prefer to refer their disputes to court litigation because of its public nature. This is the case, for example, if a party is interested in a public precedent to clarify the legal situation, if the other party is totally uncooperative or has been acting in bad faith, as is often the case in an extra-contractual infringement dispute, or if parties expect a public institution, such as a patent or trademark office, to undertake a certain activity as a result of the procedure, such as the registration, cancellation or invalidation of a registered industrial property right. Alternative means of resolving disputes are, however, becoming increasingly important in the various types of e-commerce transactions. The following paragraphs highlight some of the

most important dispute resolution needs in various types of e-commerce transactions, and examine how these needs can be served by ADR proceedings such as those offered by the WIPO Arbitration and Mediation Center.

327. A Single International Forum. Disputes in e-commerce can be, and increasingly are, as global as the Internet. This is mainly due to two factors:

- (1) The Internet facilitates direct commercial relationships between parties in different areas of the world, such that in many cases, a party cannot even determine with a reasonable degree of certainty where its contracting partner is located; and
- (2) Because the Internet offers an instantaneous global presence, any act on the Internet can have legal consequences anywhere in the world;⁴⁴⁸ displaying a sign on the Internet might be considered to infringe registered or unregistered rights in potentially any jurisdiction of the world,⁴⁴⁹ likewise, commercial practices that are legitimate in one country, might be considered unfair or illegal in others. It is increasingly difficult for anyone involved in e-commerce to determine with a reasonable degree of certainty in which country its activities might be legally relevant.

328. As a result of these factors, there is a tension between the largely national and territorial character of court litigation and the international – or “a-national” character of e-commerce disputes. Parties might have to protect their rights, or be held liable, in potentially any jurisdiction, and under the law of potentially any country, that is connected to the Internet. In addition, since national laws and practices differ widely, multi-jurisdictional litigation always carries the risk of producing inconsistent results. While it is true that international elements have always been present in (international) trade, such elements now affect potentially every e-commerce transaction and are far more difficult to control.

329. ADR, being consensual, allows parties to keep disputes under control by determining a single neutral forum as well as the rules, if any, for resolving their disputes, rather than having to litigate in a multitude of jurisdictions and under a multitude of different laws. This is particularly true if the proceeding is administered by an international ADR provider such as the WIPO Arbitration and Mediation Center. Like e-commerce itself, ADR is not strictly bound by territorial borders and, especially if the procedure is administered online, can take place in the same virtual arena.

330. Accessibility. International trade was traditionally carried out by a limited number of intermediaries that took orders in one country and placed them in another, thus bridging linguistic and cultural differences, and assuming part of the economic and legal risks. This has changed with the advent of the Internet: its low entry barriers enable direct contacts between less sophisticated actors, such as individuals and small entities, and encourage a greater incidence of small and standardized transactions. The value of these transactions will often lie below the threshold justifying court litigation. As a result, the number of disputes, as well as the number of parties involved, tends to be higher, whereas the range of problems is more limited than in traditional international trade. E-commerce needs, therefore, dispute resolution mechanisms that are inexpensive, fast, and easy to access and use while at the same time providing meaningful remedies.

331. While court litigation can provide effective remedies, it is often perceived as cumbersome and expensive. In most cases, litigation requires the assistance of lawyers, parties have to wait for the allocation of court time (which is often scarce), and procedures, as well as the applicable law, are strictly regulated. Court litigation is, therefore, unattractive for the resolution of small and standardized disputes. This is even more apparent if the parties are located in different countries.

332. Because of their essentially private nature, ADR procedures are flexible and can be structured in a way that is both efficient and easy to use, particularly if the range of problems to be addressed is limited and can easily be standardized. Parties can, for example, dispense with hearings, meetings or other face-to-face communications, and decide to conduct the proceeding completely or partly online. They can streamline the procedure by limiting the range of problems to be addressed, as well as the scope and number of written or oral pleadings. Access is, of course, simplified if the dispute resolution procedure has been determined in advance, for example in a contract clause, in an institutional arrangement (such as a certification or “trustmark” scheme), or as part of a regulated infrastructure (such as the UDRP).

333. Preserving Trust and Reputation. E-commerce takes place in an environment that cuts across territorial and cultural boundaries thus creating a risk of cultural or linguistic misunderstandings while at the same time lacking the informal means of developing trust through face-to-face relationships. Potential customers might hesitate to buy if they are uncertain as to how future disputes will be resolved. This concern is particularly relevant for smaller e-commerce vendors that cannot rely on the reputation of a strong trademark as a means to instill trust.

334. In addition, a good reputation can easily be lost in a dispute. For many companies, it is therefore of vital importance that a dispute with another company or a customer does not become public. Court proceedings are, however, generally public. The negative publicity of a public dispute may have severe consequences for the company's future funding and other business and marketing activities.

335. ADR can provide means to accommodate both the need to create trust as well as the need to preserve a company's reputation. Because of the private nature of ADR, the proceedings themselves can be kept confidential thus allowing parties to focus on the merits of the dispute without concern about its public impact.⁴⁵⁰ Offering to engage in inexpensive, accessible and efficient ADR mechanisms operated by an independent third party can be a means of building trust. Such mechanisms are even more effective if they involve a neutral and independent entity that certifies a vendor's conformity with certain standards and offers to administer ADR proceedings. This is the case, for example, in "trustmark" schemes⁴⁵¹ which have been developed to enhance the credibility of e-commerce vendors. Similarly, regulated infrastructures requiring submission to ADR as a condition for access can enhance trust in, and preserve the integrity of, the infrastructure as a whole.

336. The concern for creating trust and preserving reputation is often shared by a group of companies or even a whole industry. Some industries have developed codes of conduct that include ADR mechanisms (such as mediation, ombudspersons, dispute review boards or arbitration) allowing outsiders to challenge a particular member's compliance with the standards. Such mechanisms can serve to enhance the integrity and reputation of the trade or industry group as a whole, and are often used as a means to pre-empt public regulation.

337. Efficiency. One of the driving forces of e-commerce is efficiency, the fact that transactions can take place more efficiently online than off-line. Competition requires e-commerce companies to be as efficient and cost-effective as possible in their activities. This also applies to the way disputes are resolved. Instead of the highly formalized, but often cumbersome and costly court proceedings, companies increasingly seek business solutions: effective action under their control that takes care of the problem while preserving commercial relationships and reputations. This need is evidenced by the general tendency towards more informal means of ADR, which, like mediation, are interest-based, rather than rights-based, and allow parties to find a solution by reference to their business needs, without being strictly bound to legal positions.

(e) *ADR, E-Commerce and Intellectual Property*

338. The close relationship between intellectual property and e-commerce has already been emphasized above.⁴⁵² Intellectual property rights turn intangible assets, such as software, music, movies or information in general, into goods that can be traded digitally. Intellectual property also provides much of the framework in which e-commerce takes place: the software which makes online transactions possible, novel business models, or the identifiers, such as trademarks, which enable consumers to find what they want online. E-commerce disputes therefore often involve intellectual property rights.

339. ADR has, however, traditionally played only a modest role in the resolution of intellectual property disputes. This has to do with the fundamentally territorial nature of intellectual property rights which are, in principle, only granted for, and protected in, individual countries (or, as is increasingly the case in Europe, regions).⁴⁵³ ADR was also widely regarded as inappropriate for the resolution of intellectual property disputes, since intellectual property was perceived as a matter of public policy, rather than a system of private rights and, as such, it did not seem to lend itself easily to private settlement.

340. ADR is, however, gaining increasing importance in intellectual property disputes. This is evidenced by the growing number of intellectual property disputes filed with institutional ADR providers such as the WIPO Arbitration and Mediation Center. E-commerce has contributed to pushing intellectual property rights to the center of economic activity – there are more intellectual property rights, more owners of such rights, and more transactions involving such rights. Intellectual property rights are also increasingly being marketed on an international scale, while the means to protect and enforce them are still firmly rooted in territoriality: court litigation in intellectual property matters may therefore involve a multitude of procedures in different jurisdictions, with a risk of inconsistent outcomes. In addition, courts cannot always respond to the efficiency demands of intellectual property owners, who can hardly afford to divert scarce resources in terms of time and money to lengthy litigation.⁴⁵⁴ Since court procedures are generally public, they provide few means of responding to the particularly sensitive confidentiality interests of intellectual property owners, and the expertise needed to properly address the often highly technical issues in intellectual property disputes is not always readily available within the national court systems.

341. ADR proceedings allow parties to avoid many of these disadvantages. As stated above, ADR can cope with multi-jurisdictional disputes, can be tailored to fit the efficiency demands of the parties, as well as the confidentiality concerns. ADR procedures also allow parties to select expert neutrals who are knowledgeable about the business, technical and legal issues that may be involved in the dispute.

342. As stated above, ADR might be less suitable in extra-contractual infringement disputes, or if one of the parties seeks to establish a public legal precedent, such as a general declaration of patent validity or invalidity, rather than an award which is limited to the relationship between the parties. ADR works best if it can be based on a pre-existing relationship between the parties, such as a license agreement, a franchise, or a distribution contract. Such relationships will often exist in e-commerce, since most of the content distributed over the Internet, as well as much of its infrastructure, is protected by intellectual property rights that are marketed through licensing agreements. Thus, e-commerce contracts, both in business-to-consumer (B2C), as well as in business-to-business (B2B) relationships, more often than not relate to intellectual property rights, involve licensing agreements, and can therefore provide a basis for ADR clauses.

(f) *ADR and Legal Systems*

343. While ADR was traditionally developed almost completely outside of national legal systems, its benefits are today acknowledged almost everywhere in the world. ADR is, in fact, increasingly integrated into the legal systems themselves and is gaining increasing legitimacy as a means for resolving disputes between private parties. Countries attempt to channel the resolution of private disputes into ADR in an effort to release pressure from the national court systems by requiring, or at least encouraging, parties to engage in mediation or other forms of ADR prior to seeking judicial remedies.⁴⁵⁵ Procedural laws refer to, or even integrate, methods such as mediation or conciliation, which are typical for ADR. National courts are authorized, and sometimes required, to depart from strict legal procedures by using ADR methods. In addition to enforcing arbitral awards, some countries, such as the Netherlands and France, provide specific mechanisms for enforcing the outcome of other types of domestic ADR procedures as well.⁴⁵⁶

344. The integration of ADR into the various legal systems is part of a wider trend that is not limited to e-commerce. The specific challenges of e-commerce have, however, contributed to that trend. An example is the expanded liability exposure of entities involved in e-commerce, which can be managed and controlled through ADR mechanisms. It has been pointed out above that the legal consequences of e-commerce activities are increasingly difficult to predict. E-commerce companies have to assess the legal relevance of their e-commerce on a worldwide scale. Smaller companies that take advantage of the Internet's low entry barriers are, however, often either not aware of such risks or lack the resources for a comprehensive legal analysis. In order to respond to such difficulties, some national and international norms shield entities from liability for their Internet activities up to the point when they are notified that such activities are illegal or infringe the intellectual property rights of another. Once notified, the entity is required to take measures to end the illegal or infringing state of affairs. An example is the "notice and avoidance of conflict procedure" in the WIPO Joint Recommendation on the Use of Marks, and Other Industrial Property Rights in Signs, on the Internet.⁴⁵⁷ Such norms call for "structured negotiations", an ADR mechanism, between the party sending the notification, and the entity which is required to act. The fact that the latter engages in the proceeding shields it from legal liability for its prior activities.

345. Structured negotiations are also used to manage the even more complex liability exposure of e-commerce intermediaries such as Internet service providers, application service providers⁴⁵⁸ and operators of market platforms or online auction sites. Such intermediaries provide access to a certain technical infrastructure. They typically operate under the double risk of being held liable for the conduct of the users of their services as well as by their users themselves for a denial of service. Examples for norms regulating that risk with the help of ADR mechanisms is the "notice and take down procedure" established by the United States Digital Millennium Copyright Act (DMCA) and similar provisions of the EU E-Commerce Directive.⁴⁵⁹ Under the DMCA, an Internet service provider⁴⁶⁰ must respond to a notification⁴⁶¹ that certain material posted under its control infringes someone else's copyright by "expeditiously" taking down that material. In addition, the provider must promptly inform its subscriber that access to its web page has been disabled. If the subscriber then files a "counter notification,"⁴⁶² the service provider must put the content back on the server within 10 to 14 business days, unless the copyright owner initiates court proceedings against the subscriber.

346. Regulated infrastructures can provide another means of controlling and managing the double liability exposure of intermediaries.⁴⁶³ National law might accept the fact that an intermediary provides efficient means for the resolution of disputes between its subscribers and third parties claiming that their rights have been infringed by a subscriber, as a reason for excluding, or at least limiting, the intermediary's (vicarious) liability for activities by its subscribers.

(g) *ADR Limits and Challenges*

347. As a private, consent-based dispute mechanism, ADR has certain structural limitations. The following paragraphs analyze these limitations with a particular reference to e-commerce, and provide an overview of means to address them.

348. Consent. While a court has the authority to order parties subject to its jurisdiction to be joined in court proceedings, there are no means to force a party to participate in an ADR procedure against its will. ADR is therefore commonly assumed to be viable only in the context of contractual relationships. Indeed, an increasing number of e-commerce transactions are subject to ADR clauses. In such cases, the dispute resolution process in question is not always negotiated individually, but often forms part of standard terms and conditions.

349. ADR is gradually moving beyond the purely contractual sphere, particularly in e-commerce. This is, for example, the case when e-commerce vendors unilaterally pledge to submit to ADR if their customers so wish, which often happens in the context of a “trustmark” or certification scheme⁴⁶⁴ operated by a neutral entity. ADR proceedings can even be used to resolve what are essentially extra-contractual disputes, if one party unilaterally submitted to ADR, e.g., in the context of a regulated infrastructure, or as part of any industry-wide code of conduct. The most notable example of this is the resolution of domain name disputes under the UDRP, which is specifically designed to address bad faith trademark infringements, a type of dispute that was traditionally outside the reach of ADR mechanisms. As a result of such developments, ADR, while still conceptually based on the agreement of the parties,⁴⁶⁵ is increasingly becoming integrated into institutional systems. This trend is reinforced by the tendency of national laws to channel private dispute resolution into ADR by encouraging, or even requiring, parties to try alternative means of resolving their disputes prior to seeking judicial remedies.⁴⁶⁶

350. Enforcement. The outcome of most ADR procedures is not directly enforceable by public mechanisms. If the parties have reached a settlement, it is in most countries enforceable only as a matter of (national) contract law.⁴⁶⁷ Some ADR procedures provide, however, very effective enforcement options. The most prominent example is arbitration. Arbitral awards are recognized and can be enforced, subject to a limited number of specified exceptions, in the more than 120 contracting states of the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (the “New York Convention”).⁴⁶⁸ As a result of this Convention, the enforcement of arbitral awards is more efficient than the enforcement of court judgments, which cannot rely on a comparable comprehensive international instrument but is still grounded on bilateral or regional agreements, or on national laws based on comity.

351. Rather than relying on public mechanisms, enforcement can also be facilitated in the context of an institutional structure. Among the most efficient examples are regulated infrastructures which provide an in-built enforcement mechanism, because a decision that a subscriber has failed to comply with the conditions for use can be sanctioned by exclusion. The pressure to abide by the outcome of an ADR procedure is less direct, but can nevertheless be efficient, in “trustmark” or certification schemes where a vendor risks losing its certification in case of non-compliance, or in industry-wide codes of conduct where a member of the group risks additional sanctions, such as public criticism, for not complying with the outcome of an ADR procedure.

352. Efficiency versus Due Process. Efficiency is one of the major advantages of ADR. Efficiency, however, normally calls for a reduction of complexity. Complex disputes require more complex proceedings, while disputes concerning only a limited range or a standard set of problems can more easily be resolved in streamlined procedures. Efficiency gains will, therefore, be most tangible in less complex proceedings. ADR is flexible and can be tailored to fit the type of disputes to be resolved.

353. Efficiency must, however, be balanced by due process safeguards. There are two basic elements that need to be taken into account in that context:

■■■ The less the procedure relies on human interaction and the more it is conducted without face-to-face meetings, the more important are due process safeguards to ensure that the parties are properly notified and to limit the risk of misunderstandings; and

■■■ The more binding the procedure and the more severe its potential consequences (such as a final decision which cannot be appealed), the more important are due process safeguards. While due process safeguards can be less stringent for ADR mechanisms which, like mediation, depend on the continuous agreement of both parties to proceed, they are crucially important for procedures such as arbitration where the award is final.

354. National laws and the New York Convention therefore provide a number of due process requirements for the recognition and enforcement of arbitral awards. While arbitration procedures are subject to a broad set of due process safeguards that developed over time, control mechanisms are less developed with regard to other ADR mechanisms, even though some mechanisms (such as regulated infrastructures) provide fairly efficient enforcement options. However, where the procedure in question does not exclude access to the national court system, as is the case under the UDRP, recourse to litigation can provide an additional safeguard and function as an appeal. Non-exclusive procedures are also more likely to be acceptable under national consumer protection laws which tend to invalidate pre-dispute ADR clauses depriving consumers of their right to go to court.⁴⁶⁹

355. The following are examples of the most important due process safeguards that need to be taken into account in basically any ADR procedure.⁴⁷⁰

- All ADR procedures should be supported by the agreement of the parties;⁴⁷¹
- If third parties are involved as facilitators or decision-makers, they must be impartial and independent;
- Both parties must be duly notified of the proceedings;
- Both parties must, within the scope of the procedure, be given sufficient opportunity to present their case;
- If the proceedings can result in binding decisions, such decisions should only be based on facts that had been part of the proceedings;
- Any such decisions should provide reasons; and
- There should be an internal or external appeal mechanism, or at least means to control compliance with due process safeguards.⁴⁷²

356. Confidentiality. Confidentiality is traditionally mentioned as one of the key advantages of ADR. Companies may fear the adverse effects of publicity for their reputation among customers, business partners or competitors. Moreover, confidential procedures allow the presentation of secret or confidential business information. Intellectual property owners tend to be particularly sensitive regarding confidentiality given the value and vulnerability of their intangible assets.⁴⁷³

357. If, however, the procedure is part of an institutional structure (and the voluntary element is reduced to a minimum) as is the case, for example, in regulated infrastructures, the interest in preserving confidentiality is balanced by a need for transparency. Confidentiality might create distrust in the integrity of the system, and be regarded as serving vested interests only. Transparency, on the other hand, can ensure the neutral administration of procedures, further the uniform and consistent application of rules, and help to develop a coherent body of jurisprudence.

(h) *An Example: The WIPO UDRP Experience*

358. The ADR procedure established by the Uniform Domain Name Dispute Resolution Policy (UDRP) provides some insight into the advantages and challenges of establishing ADR mechanisms in an online environment. The UDRP has served as a model for various other dispute resolution policies established for ccTLDs,⁴⁷⁴ as well as for the new gTLDs.⁴⁷⁵ The following paragraphs highlight some general characteristics of the system that have contributed to its success, and attempt to draw some general conclusions from the experience of the WIPO Arbitration and Mediation Center. The procedure is also addressed in Chapter III(c).

359. Contractual and Mandatory. The UDRP is efficient because it is mandatory. There is no need to negotiate the parties' submission prior to the procedure since their consent is part of a contractual hierarchy that lies at the basis of the Domain Name System. On the top of that hierarchy, ICANN has the authority to accredit registrars and to determine the conditions of their operation. As part of that authority, ICANN obliges registrars to require submission to the UDRP in their registration agreements with domain name registrants. As a result, all registrants of domain names in the concerned gTLDs⁴⁷⁶ are contractually bound to the UDRP. The UDRP is mandatory in the sense that a procedure can be initiated by a complainant and run its full course even if the registrant refuses to participate.

360. Direct Enforcement. Another distinct advantage of the UDRP is its in-built enforcement mechanism which is also based on the contractual hierarchy of the Domain Name System. ICANN requires registrars to directly implement UDRP decisions ordering the cancellation or transfer of a domain name. This dispenses with the need to have UDRP decisions reviewed or confirmed by a court or any public authority prior to their implementation.⁴⁷⁷

361. In addition, registrars are required to block transfers of domain names by registrants during a pending administrative proceeding (UDRP, paragraph 4) or for a period of 15 business days after such proceeding is concluded (UDRP, paragraph 8). This prevents bad faith registrants from frustrating the UDRP proceedings by transferring the disputed domain name to a third party which is not formally involved in the procedure, a practice which is commonly referred to as “cyberflight”, and obviates the need to seek more costly injunctive relief from courts.

362. International. The UDRP provides a single forum for the resolution of disputes that would otherwise present difficult issues of international jurisdiction because of the likelihood that the parties are based in different jurisdictions,⁴⁷⁸ and that trademarks protected in several countries are involved. The UDRP also establishes a single set of rules for the administration as well as for the decision on the dispute, and does not rely, in principle, on national law.

363. Scope. It has been stated above that efficiency requires a reduction of complexity. UDRP proceedings can be streamlined and efficient, because they are limited to “cybersquatting”, i.e., bad faith registration and use of a domain name that is identical or confusingly similar to the complainant’s mark by a person that has neither a right, nor a legitimate interest in the registered term.⁴⁷⁹ This restriction reflects the common denominator of internationally agreed and accepted principles concerning the abuse of trademark or service mark and has facilitated the acceptance of the UDRP. The UDRP does not attempt to resolve disputes between parties that both hold a right or legitimate interest in the domain name. Such disputes would require a much more complex assessment of the rights and interests involved and do not lend themselves easily to streamlining and standardization, especially in an international context. Also contributing to the overall efficiency of the UDRP is the fact that remedies are limited to cancellation or transfer of domain names that are directly enforceable in the Domain Name System, and that panels cannot award monetary damages which would have to be enforced by public means.

364. Streamlined Procedures. Procedures under the UDRP are, in principle, limited to one set of pleadings from either party. In addition, each procedural step is subject to deadlines. Procedures are almost exclusively conducted online,⁴⁸⁰ and – absent exceptional circumstances – dispense with in-person hearings (UDRP Rules, paragraph 13). As a result, a procedure under the UDRP can be completed within two months.

365. Due process safeguards. Since submission to the UDRP is mandatory for domain name registrants, and since remedies are directly enforceable, the UDRP contains a number of procedural safeguards:

■■■ *Neutrality*: The procedures are administered by neutral dispute-resolution institutions that are not involved in the registration of domain names;

■■■ *Notice*: The UDRP requires institutions to use all possible ways of notifying the respondent of the complaint (see UDRP Rules, paragraph 2(a));

■■■ *Language*: The language of the procedure will be the language of the registration agreement, unless the parties agree or the panel – in exceptional circumstances – determines otherwise (UDRP Rules, paragraph 11). This allows a respondent to defend its case in the language which it is most likely to master;

■■■ *Burden of Proof*: The complainant carries the burden of establishing all elements even if the respondent is in default (UDRP, paragraph 4(a));

■■■ *Impartiality and Independence*: Decisions are rendered by impartial and independent panelists (UDRP Rules, paragraph 7) whose profiles are publicly available (UDRP Rules, paragraph 6(a)). Either party can request that the dispute be decided by a three-member panel in which case both parties participate in the selection of the panelists (UDRP, paragraphs 3(b)(iv) and 5(b)(iv)). Panelists are under an obligation to ensure that both parties are treated with equality and that each party is given a fair opportunity to present its case (UDRP Rules, paragraph 10(b));

■■■ *Reasoned Decisions*: Decisions shall be in writing, provide the reasons on which they are based, and identify the name of the panelist (UDRP Rules, paragraph 15(a));

■■■ *Appeal*: The UDRP itself does not provide an appeal mechanism. However, either party is free to bring the dispute before a national court of justice before, during or after the procedure; and

■■■ *Fees*: All fees for a UDRP proceeding are to be paid exclusively by the complainant, except where the respondent has opted for a three member panel, in which case the fees are split evenly between the parties.⁴⁸¹

366. Transparency versus confidentiality. The UDRP has largely opted for transparency with a view to discourage cybersquatting and to allow a coherent body of jurisprudence to develop. As long as a procedure is pending, only the disputed domain name and the case number are published; once a decision is rendered, it is published in full, also providing the name of the panelist(s) (UDRP Rules, paragraph 15(a)). The WIPO Arbitration and Mediation Center has further enhanced the transparency of the UDRP dispute resolution mechanism by providing a searchable "Index of WIPO UDRP Panel Decisions".⁴⁸² This index allows interested parties to search for decisions that relate to a particular subject matter or address a particular legal issue.

(i) *New Developments in ADR*

367. Based on what has been said in the previous paragraphs and on the experience of the WIPO Arbitration and Mediation Center, it is possible to identify a number of trends concerning the future development of ADR in e-commerce.

368. Online ADR. ADR will not only increasingly relate to e-commerce activities, but will also make increasing use of online means of communication and case administration. It seems likely that procedures for resolving disputes related to the parties' online presence will, like the UDRP, as much as possible be placed in the same online environment. Certain types of procedures will dispense with in-person hearings or meetings wherever possible. In certain, albeit limited, situations, the use of online means might go so far as to refer even the resolution of the dispute itself to a computer system.⁴⁸³

369. Expansion of ADR. ADR has traditionally been limited to particular sectors. Arbitration, for example, was almost exclusively confined to high-value disputes in international trade, while mediation was originally most popular in the area of family or labor disputes. E-commerce, with its special needs for efficient dispute resolution on an international level, has accelerated the trend towards ADR also in areas that, like intellectual property, have traditionally relied almost exclusively on court litigation.

370. Informal ADR. It appears likely that there will be a tendency towards less formal ADR methods that do not exclude the parties' recourse to litigation. E-commerce, with its emphasis on efficiency, increasingly favors the speedy, interest-based and less costly resolution of disputes through ADR over formal and complex, and therefore more costly, procedures. Informal ADR procedures - particularly if they do not exclude the parties' recourse to national courts - raise fewer due process concerns and are more likely to be accepted under the national legal systems involved. While arbitration will continue to play a dominant role in business-to-business disputes, less formal procedures, such as structured negotiation, mediation or other tailor-made schemes are likely to be increasingly used for business disputes as well as disputes involving consumers and private individuals.

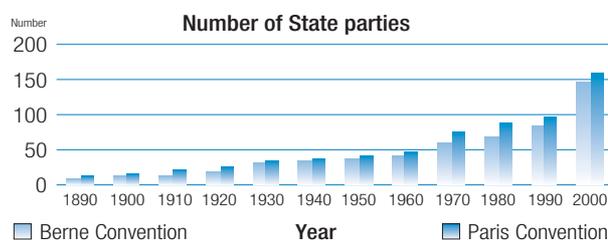
371. Tailored ADR Procedures. In order to realize the efficiency gains that are likely to result from streamlined and standardized procedures, ADR will increasingly be tailored to specific types of disputes, such as disputes arising in specific businesses or industry sectors (e.g., insurance, Internet service providers and application service providers⁴⁸⁴), from specific types of transactions (e.g., e-commerce auctions) or for specific subject matters (e.g., cybersquatting⁴⁸⁵ and privacy). As such, the procedures are likely to become part of the (legal or business) standard in the specific area concerned, and are more likely to be accepted by the stakeholders concerned.

372. ADR in Institutional Relationships. The development of specific ADR mechanisms for specific types of disputes will also further the trend to integrate ADR procedures into institutional relationships, such as certification or "trustmark" schemes, self-regulation and industry standards, or regulated infrastructures (as in the case of the UDRP). Such institutional solutions dispense with the need to bargain for both parties' submission to the proceedings, thus increasing the efficiency as well as the legal certainty of dispute resolution.

373. In-built Enforcement Mechanisms. As part of institutional relationships, ADR procedures often provide in-built enforcement mechanisms since non-compliance can be sanctioned by exclusion from the certification scheme, the industry, or the infrastructure concerned. The experience under the UDRP has shown that such mechanisms greatly enhance the efficiency of ADR procedures and largely dispense with the need to seek the help of public enforcement mechanisms.

374. **Public Support.** Given the interest of government and public authorities in channeling the resolution of private disputes into ADR, it is likely that ADR mechanisms will be supported and encouraged by public regulation. Hybrid dispute resolution systems result if a public authority defers to solutions developed through private ADR, or lends its authority to the outcome of ADR procedures. Increasing public attention to ADR is also likely to result in more active policing of minimum procedural safeguards, while public scrutiny has so far largely been confined to regulating arbitration.

384. See H. Battifol and P. Lagarde, *"Droit International Privé,"* (8th edition, 1993), Volume 1, at pp.17-31.
385. See A. D. Haines, "The Impact of the Internet on the Judgements Project: Thoughts for the Future," available at <http://www.hcch.net/e/workprog/jdgm.html>.
386. See, for instance, Joint Declaration of the European Council and the European Commission, available at http://europe.eu.int/comm/justice_home/unit/civil_en.htm and United States Federal Trade Commission, "Consumer Protection in the Global Electronic Marketplace – Looking Ahead" (September 2000), available at <http://www.ftc.gov/bcp/icpw/lookingahead/lookingahead.htm>.
387. Reference is made in this connection to, for instance, the discussions regarding the patentability of online business models. For more on this subject, see paras.243-246.
388. See Article 1 of the Statute of the Hague Conference on Private International Law.
389. A list of such treaties is available at <http://www.hcch.net/e/conventions/index.html>.
390. According to the United States Patent and Trademark Office (65 Fed. Reg. 61306/RIN 0651-AB25), "[t]he impetus behind th[is] request was to gain recognition and enforcement of U.S. judgments in other countries. While U.S. courts generally recognize and enforce judgments from other countries, U.S. judgments do not always receive the same treatment abroad."
391. See paras.288-296.
392. Similarly, a Regulation aimed at replacing the Rome Convention is currently under consideration. See "EU Actions on Jurisdiction, Choice of Law Watched Closely by E-Commerce Interests," E-Commerce and Law Report (March 20, 2002).
393. See paras.288-294. Specifically with regard to patents in the European context, account also has to be taken of the provisions of the European Patent Convention concerning opposition procedures and its Protocol on Jurisdiction and the Recognition of Decisions in respect of the Right to the Grant of a European Patent. For a discussion of these provisions, see J. Fawcett and P. Torremans, "Intellectual Property and Private International Law," at pp.27-28 and 52-61.
394. For examples of such bilateral arrangements, in particular those concluded by France, see Battifol *et al*, *supra* note 384, at pp.605-608.
395. For instance, if a foreigner wished to obtain the registration of a sound as a trademark in a particular country, typically a private international law rule would provide that questions of the registrability of a mark by foreigners are to be determined by reference to the law of a given country. The national treatment principle, however, only implies that the country in which registration is sought could not lawfully allow its nationals to register sound marks, but not foreigners.
396. For a discussion of this provision and its relationship with private international law, see A. Lucas, Private International Law Aspects of the Protection of Works and of the Subject Matter of Related Rights Transmitted over Digital Networks, WIPO Forum on Private International Law and Intellectual Property, Geneva, (January 30 and 31, 2001) (document WIPO/PIL/01/1 Prov.). See also paras.298-299.
397. See "Understanding of Provisions of the Instrument, Diplomatic Conference on the Protection of Audiovisual Performances," Geneva (December 7 to 20, 2000) (document IAVP/DC/33).
398. W.R. Cornish, "Intellectual Property" (4th edition) (Sweet & Maxwell, 1999), at pp.26-27.
399. The Paris and Berne Unions, from the date of their constitution in 1883 and 1886 until 1960, included less than 50 members each. Presently, however, 164 States are party to the Paris Convention, 149 to the Berne Convention and 144 to the TRIPS Agreement. During the period from 1991 until 2000 alone, more States became party to the Paris Convention (63) and the Berne Convention (64) than the total membership for each Union eighty years after their establishment. This evolution can be graphically illustrated as follows:



400. For a more complete discussion of the subject, reference is made to the papers presented at the WIPO Forum on Private International Law and Intellectual Property, available at <http://www.wipo.int/pil-forum/en>.
401. 952 F. Supp. 1119, 1124 (W. D. Pa. 1996).
402. 130 F. 3d 414 (9th Cir. 1997).
403. See D. Rice, "Jurisdiction over E-commerce Disputes: Different Perspectives under American and European Law in 2002," International Federation of Computer Law Associations, Berlin (June 7-8, 2002).

404. See G. Austin, "Private International Law and Intellectual Property Rights, A Common Law Overview," January 2001, pp.8-10, available at <http://www.wipo.int/pil-forum/en>. Specifically in relation to trademarks, see G. Dinwoodie, "Private International Aspects of the Protection of Trademarks," January 2001, pp.18-26, available at <http://www.wipo.int/pil-forum/en>.
405. See Austin (2001), *ibid*, at pp.8-10, available at <http://www.wipo.int/pil-forum/en>.
406. EFTA comprises four Member States: Iceland, Liechtenstein, Norway and Switzerland. For more information on EFTA, see <http://www.efta.int>.
407. Still others include Article 6 (1) on joint defendants, the provisions of Section 4 concerning jurisdiction over consumer contracts and the provisions of Section 9 on *lis pendens* - related actions.
408. See the discussion of the case in Cheshire and North, "Private International Law" (13th edition), at pp.215-216.
409. J.C. Ginsburg, "Private International Law Aspects of the Protection of Works and Objects of Related Rights Transmitted Through Digital Networks," (December 1998), at pp.18-19, available at <http://www.wipo.int/news/en>.
410. See J.C. Ginsburg, "Private International Law Aspects of the Protection of Works and Objects of Related Rights Transmitted Through Digital Networks" (2000 Update) (January 2001), at pp. 3-6, available at <http://www.wipo.int/pil-forum/en> and Dinwoodie (2001), *supra* note 405, at pp.15-18. See also para. 289.
411. For instance in France, in relation to trademark infringement on the Internet, see *SG2 v. Brokat Informationssysteme GmbH*, Nanterre Court of Appeals (1996), as discussed in Dinwoodie (2001), *supra* note 405, at pp.17-18. See also *VEJF and LICRA v. Yahoo! Inc. and Yahoo France*, Ordonnance of November 20, 2000, *Tribunal de Grande Instance de Paris*, available at <http://www.legalis.net>.
412. See paras.304-311.
413. See A. Kur, "International Hague Convention on Jurisdiction and Foreign Judgments: A Way Forward for I.P.?", *European Intellectual Property Review*, at pp.175-183 (April 2002).
414. The Summary is available at ftp://ftp.hcch.net/doc/jdgm2001draft_e.doc. All text in italics, including the footnotes, where copied verbatim from the Summary.
415. *Three proposals have been made with respect to the treatment of intellectual property in the Convention. The first two appear within general brackets and are each bracketed also (Alternatives A and B). That indicates that there is no consensus on the inclusion of intellectual property within the scope of the Convention or in respect of each of the proposals themselves. For the third proposal, see note below.*
416. *The main difference between Alternatives A and B is whether proceedings for the infringement of patents and marks and such other rights as may be covered by this provision should fall within the exclusive jurisdiction or not. In addition, for a number of the delegations that favour an exclusive jurisdiction also for infringement under this provision, a satisfactory final or disconnection clause with respect to existing and future instruments regulating jurisdiction, recognition and enforcement for specific areas such as intellectual property is a precondition for including infringement in this Article on exclusive jurisdiction.*
417. *It was pointed out that, when deciding which proceedings (e.g. infringement proceedings based on provisions of an Unfair Competition Act or of a Patent or Trademark Act, or proceedings concerning certain common law torts such as passing off) were to be covered by 'infringement', the solution should be consistent with the possible exclusion of 'antitrust or competition claims' from the scope of the Convention.*
418. *This paragraph also covers situations where an application for the grant or registration of a patent or mark has been filed.*
419. *This Alternative does not dispute the proposition in Alternative A that there should be exclusive jurisdiction in respect of proceedings that have as their object the registration, validity, nullity or revocation of patents, trade marks, designs or other similar rights. To that extent paragraphs 4 and 5 would remain if paragraph 5A was accepted. Alternative B refers only to proposed paragraph 5A. Paragraphs 6, 7 and 8 are common to both Alternatives.*
420. *This provision will have to be excluded from the exceptions stated in Article 17.*
421. *The purpose of this paragraph is to maintain non-exclusive jurisdiction where a matter otherwise falling within the scope of paragraphs 4 and 5 arises as an incidental question in proceedings which do not have as their object one or more of the matters described in that paragraph. The intention is that any decision made between the parties on such an incidental question will not have a preclusory effect in another State, in other cases when produced by one of the parties. There is no consensus on this paragraph.*
422. *There is no consensus on the words included within the brackets. Other suggestions are to exclude copyright from the scope of the Convention either in whole or only copyright infringement on-line. Furthermore, the following text was proposed as an alternative: ["In proceedings concerning the infringement of a copyright or any neighbouring right, the courts of the Contracting State under whose laws the copyright or the neighbouring right is claimed to be infringed shall have exclusive jurisdiction"]. This proposal seeks to include copyright within the exclusive jurisdiction of the courts of the Contracting State under whose law a copyright is claimed to have been infringed. This is an alternative to the exclusion of proceedings for the infringement of copyright proposed in para 7 above.*
423. *This paragraph might be necessary to ensure that decisions of these organs are covered by the chapter on recognition: see the definition of 'judgment' in Article 23.*
424. An early draft was presented by Rochelle Dreyfuss and Jane Ginsburg, two of the three reporters on the ALI project, at the WIPO Forum on Private International Law and Intellectual Property in January 2001. The draft is available as document WIPO/PIL/01/7, see <http://www.wipo.int/pil-forum/en/>.
425. The incidence of the transfer of rights through agreement is not considered.
426. See Ginsburg (1998), *supra* note 410, at pp.18-19, and A. Lucas, "Aspects de Droit International Privé de la Protection d'Oeuvres et d'Objets de Droits Connexes Transmis par Réseaux Numériques Mondiaux," (January 2001), at pp.11-20, available at <http://www.wipo.int/pil-forum/en>.
427. See F. Blumer, "Patent Law and International Private Law on Both Sides of the Atlantic," (January 2001), at p.6, available at <http://www.wipo.int/pil-forum/en>, and Dinwoodie (2001), *supra* note 404, at pp.26-28.
428. The WIPO Joint Recommendation is discussed more fully at paras.154-166.

429. See Blumer (2001), *supra* note 427, at p.6, and Dinwoodie (2001), *supra* note 404, at pp.30 and 31.
430. Other portions of this paper are specifically devoted to domain names, see Chapter III(d).
431. See also Dinwoodie (2001), *supra* note 404, at pp.26-27.
432. See Ginsburg (1998), *supra* note 409, at p.35, and Lucas (2001), *supra* note 397, at p.6.
433. This option would imply that the mere accessibility of a website is sufficient grounds for finding copyright infringement.
434. See Ginsburg (1998), *supra* note 409, at p.37.
435. See *Ibid.* at pp.37-45.
436. See Lucas (2001), *supra* note 396, at pp.26-34.
437. Imagine an international traveler who uploads a file on a server from his laptop (or, inversely, downloads one from the server on his laptop) when he is in transit in an airport lounge in between flights. Apart from the fact that it would be hard to determine where exactly the person was when he uploaded/downloaded the file, the location of the airport lounge is quite random and, as such, should have little bearing on the outcome of the dispute.
438. In order to help parties determine an appropriate method or procedure for resolving a particular dispute, the WIPO Arbitration and Mediation Center offers a "Good Offices" service.
439. For information on the Mediation services offered by the WIPO Arbitration and Mediation Center, see Guide to WIPO Mediation, WIPO Publication No. 449 and the Center's website at <http://arbitr.wipo.int/mediation/index.html>.
440. For information about the WIPO Arbitration and Mediation Center's services under the UDRP, see <http://arbitr.wipo.int/domains/gttd/udrp/index.html>.
441. For information on the Arbitration services offered by the WIPO Arbitration and Mediation Center, see the Center's website at <http://arbitr.wipo.int/arbitration/index.html>.
442. Further information about the WIPO Arbitration and Mediation Center in general is available at <http://arbitr.wipo.int/center/index.html>.
443. Further information on the Center's activities in the area of domain name dispute resolution is available under <http://arbitr.wipo.int/domains/index.html>. See also paras.213-218.
444. For information on the Center's neutrals see <http://arbitr.wipo.int/neutrals/index.html>.
445. See "Dispute Avoidance and Resolution Best Practices for the Application Service Provider Industry", WIPO Publication No. 837.1.
446. Available at <http://arbitr.wipo.int/arbitration/contract-clauses/index.html>.
447. Further information about the services of the WIPO Arbitration and Mediation Center is available online at <http://arbitr.wipo.int/center/index.html>.
448. See also paras.265-270.
449. This problem is addressed by the WIPO Joint Recommendation Concerning Provisions on the Protection of Marks, and Other Industrial Property Rights in Signs, on the Internet, see footnote 164.
450. See the detailed confidentiality provisions in Articles 52 and 73 to 76 of the WIPO Arbitration Rules and Articles 14 to 17 of the WIPO Mediation Rules.
451. An overview of various "trustmark" schemes is provided in "Addressing Disputes in Electronic Commerce", ABA Task Force On Electronic Commerce and Alternative Dispute Resolution, Task Force Draft, at pp.24-28 (March 2002).
452. See para.270.
453. See paras.300-301.
454. It is interesting to note in that context that the number of settlements in patent litigation in the USA has increased by more than 100% over the last ten years, see Gauri Prakash-Canjels, "Trends in Patent Cases: 1990-2000", IDEA-The Journal of Law and Technology, Vol. 41, pp.283-295 (2001).
455. See the overview of national provisions on ADR in OECD Document DSTI/ICCP/CP(2002)1/FINAL of July 17, 2002 "Legal Provisions Related to Business-to-Consumer Alternative Dispute Resolution in Relation to Privacy and Consumer Protection".
456. See OECD document DSTI/ICCP/REG/CP(2002)1/FINAL, at p.9.
457. WIPO Publication No. 845, available at http://www.wipo.int/about-ip/en/index.html?wipo_content_frame=/about-ip/en/development_iplaw/index.htm. See also Chapter III(b).
458. The WIPO Arbitration and Mediation Center has worked with the Application Service Provider Industry Consortium (ASPIC) to develop of a set of dispute avoidance and resolution best practices specifically tailored to meet the complex liability exposure of application service providers (ASP), see <http://arbitr.wipo.int/asp/index.html> and "Dispute Avoidance and Resolution Best Practices for the Application Service Provider Industry," WIPO Publication No. 837.1.
459. Public Law No. 105-304, 112 Stat. 2860 (October 28, 1998). The EU E-Commerce Directive (Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market, Official Journal Nr. L 178, July 17, 2000, pp.1-16) contains similar provisions without, however, structuring the negotiation process as clearly. Pursuant to Article 15 "information society service providers" shall not be obliged to monitor the information they transmit or store; however, Articles 13 and 14 exclude providers from liability for the caching or hosting of information, provided that they act expeditiously to remove or disable access to the information upon obtaining actual knowledge.
460. "Internet service provider" is defined in Section 512(k)(1)(A) of the U.S. Copyright Act as "an entity offering the transmission, routing, or providing of connections for digital online communications, between or among points specified by a user, of material of the user's choosing, without modification to the content of the material as sent or received."
461. Section 512(c)(3) of the U.S. Copyright Act specifies a number of formal requirements that must be fulfilled in order to trigger the obligation to act on the part of the service provider.

462. A "counter notification" must again comply with certain statutory requirements, see Section 512(g)(1) of the U.S. Copyright Act.
463. See para.316.
464. See para.335.
465. Under the UDRP, the ADR agreement is concluded when the complainant files a complaint thus accepting the offer made by the domain name registrant in its registration agreement to submit to the procedure.
466. See para.343.
467. Some countries, such as the Netherlands and France, provide specific mechanisms, such as judicial confirmation, for enforcing the outcome of a domestic ADR procedure, see OECD document DSTI/ICCP/REG/CP(2002)1/FINAL, at p.9.
468. The Convention was adopted on June 10, 1958, and went into force on June 9, 1959. The text, as well as a list of contracting parties, is available on the website of the United Nations Commission on International Trade Law (UNCITRAL), <http://www.uncitral.org>, as well as on the website of the WIPO Arbitration and Mediation Center, at <http://arbiter.wipo.int/arbitration/ny-convention/index.html>.
469. See OECD Document DSTI/ICCP/REG/CP(2002)1/FINAL, at p.9.
470. The list tracks the list of reasons, contained in Article V1 of the New York Convention, for which recognition and enforcement of an arbitral award may be refused. The list can be regarded as an international minimum standard of due process for binding ADR procedures.
471. In arbitration, or in regulated infrastructures such as the UDRP, parties are bound to an agreement expressed before the proceeding; less formal procedures, such as mediation, rely on the continuing agreement of both parties to remain engaged since either party can simply cease to participate at any time.
472. Arbitral awards are subject to a limited judicial control; UDRP decisions do not preclude either party from re-litigating the dispute in a competent national court of justice. In both cases, the "appeal" is not part of the system itself, but relies on the "external" public court system.
473. The detailed confidentiality provisions in Articles 52 and 73 to 76 of the WIPO Arbitration Rules and Articles 14 to 17 of the WIPO Mediation Rules take account of such interests.
474. An overview is provided on the website of the WIPO Arbitration and Mediation Center, available at <http://arbiter.wipo.int/domains/cctld/index.html>.
475. Overview on the Center's website, at <http://arbiter.wipo.int/domains/gtld/newgtld.html>.
476. The UDRP applies directly to domain name registrations in .com, .net, .org, as well as in the new gTLDs .aero, .biz, .coop, .info, .museum, .name and .pro.
477. A losing registrant can, however, block the implementation by initiating court proceedings with a competent court of justice within ten days after notification of decision, see paragraph 4(k) UDRP.
478. The UDRP disputes received by the WIPO Arbitration and Mediation Center between December 1999 and August 2002 involved parties located in 108 countries. In about 50% of all cases, Complainant and Respondent were based in different jurisdictions. Cases have, so far, been administered in Chinese, English, French, German, Japanese, Korean, Norwegian, Portuguese and Spanish.
479. See paragraph 4(a) UDRP. It is interesting to note that the institutional basis of the UDRP, namely the fact that it forms part of a regulated infrastructure, makes it possible to resolve disputes involving fraud or bad faith, which are not usually regarded as likely candidates for ADR.
480. Except for the submission of the complaint (paragraphs 3(a) UDRP Rules) and the response (paragraph 5(b) UDRP Rules).
481. UDRP, Paragraph 4(g). The current WIPO schedule of fees is available at <http://arbiter.wipo.int/domains/fees/index.html>.
482. Available at <http://arbiter.wipo.int/domains/search/index.html>.
483. For example, "blind bidding" procedures pursuant to which parties to a purely monetary dispute submit monetary offers and demands to an automated system. The offers and demands are not disclosed to the other party, but compared in various rounds. The case is settled if offer and demand are matching, or fall within a specific range (e.g., 30%); in the latter event, the case is settled for the average of offer and demand.
484. An example is the above mentioned cooperation between the WIPO Arbitration and Mediation Center and the Application Service Provider Industry Consortium (ASPIC).
485. An obvious example is the UDRP.

CHAPTER V



V. ISSUES FOR DEVELOPING COUNTRIES IN THE DIGITAL ENVIRONMENT

375. This Chapter examines the current situation with respect to developing countries in the digital environment. First, it examines the 'digital divide' and the differential pattern of developing and least developed countries in take-up of the new technologies. The changing nature and demographics of Internet use is discussed, as well as the role of innovation and creativity, as intellectual property, in bridging that digital divide. Finally, it examines the role of WIPO, as an international intergovernmental organization mandated to work with developing countries in the field of intellectual property, to overcome the challenges and realize the potential offered by the digital age. Two programs, in particular, are highlighted: the museums project, and the development of traditional knowledge databases and digital libraries.

(i) INTRODUCTION

376. The digital divide subsists between developed and developing countries, despite growing concern and a proliferation of international programs designed to encourage developing countries' progress and engagement in the digital economy. At the same time, however, we are witnessing a transformation in the demographics of Internet users, including dramatic growth in online populations in developing country regions, and a change in the culture and content of online material. Progress is not uniform among developing countries and countries whose economies are in transition. The countries that have experienced most digital development include those that have placed emphasis on e-government, IT education and skills training, and have implemented legal and policy infrastructures that encourage investment in e-commerce, including intellectual property laws and services.

377. The network of networks that is the Internet creates an insatiable demand for content, and an opportunity for its production that has not been fully taken up by the developing countries. The implementation of copyright laws, modernized by the WIPO Internet Treaties, enable these countries to encourage creative development and protect it in the online environment. The digital economy also rewards technical ingenuity, and this investment in research and invention has traditionally been protected through the patent system. Those countries that have implemented systems to encourage and reward such ingenuity are also well placed to exploit the opportunities offered by the digital age. Significant challenges remain, however, and WIPO's role is to assist developing countries to use the intellectual property system as a means to encourage innovation and creativity, reward investment in the digital economy, and preserve and exploit their cultural heritage in a global marketplace.

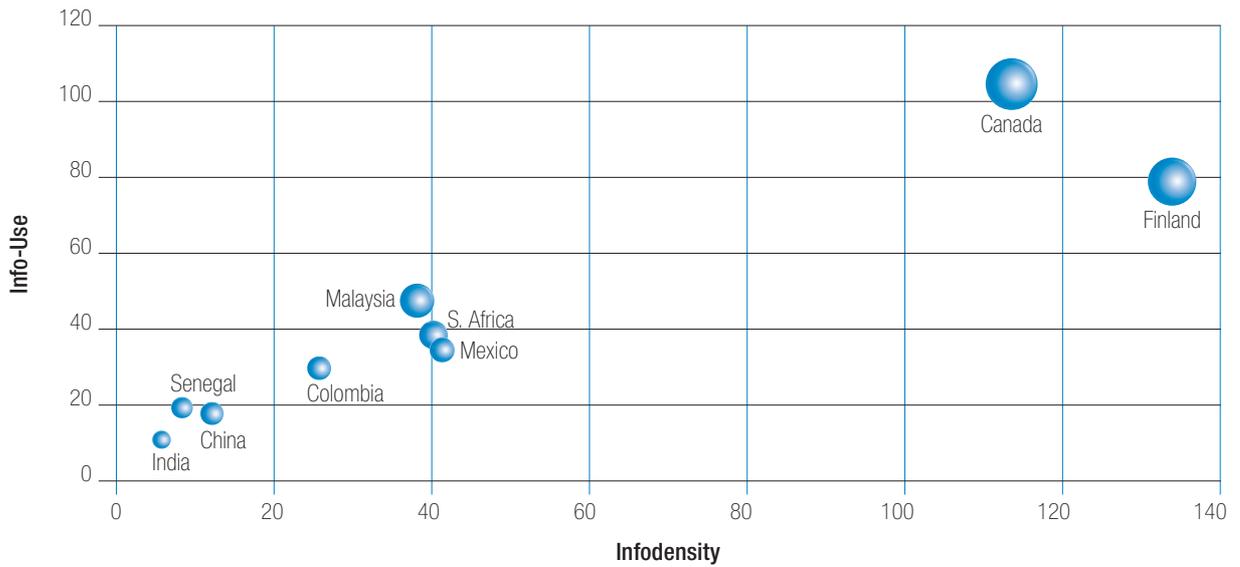
(ii) 'DIGITAL BRIDGES' OVER THE DIGITAL DIVIDE

378. As the Internet and its 'killer apps', including the World Wide Web and e-mail, have evolved, it is evident that digital technologies are transforming the way in which international trade and communications are conducted. These changes originated in the developed world, in North America and Europe, where the Internet and its related information technologies (IT) were developed, but have been taken up by virtually every country in the world. Early expectations focused on a 'global information infrastructure,' with increased participation in policy development and engagement in e-commerce by all countries. The reality is somewhat different. A 'digital divide' now exists between technologically developed and developing countries, as well as between populations within countries, and between genders and age groups worldwide.⁴⁸⁶ The G8 Digital Opportunity Task Force (DOT Force), described the phenomenon as follows:

"This 'digital divide' is, in effect, a reflection of existing broader socio-economic inequalities and can be characterized by insufficient infrastructure, high cost of access, inappropriate or weak policy regimes, inefficiencies in the provision of telecommunication networks and services, lack of locally created content, and uneven ability to derive economic and social benefits from information-intensive activities."⁴⁸⁷

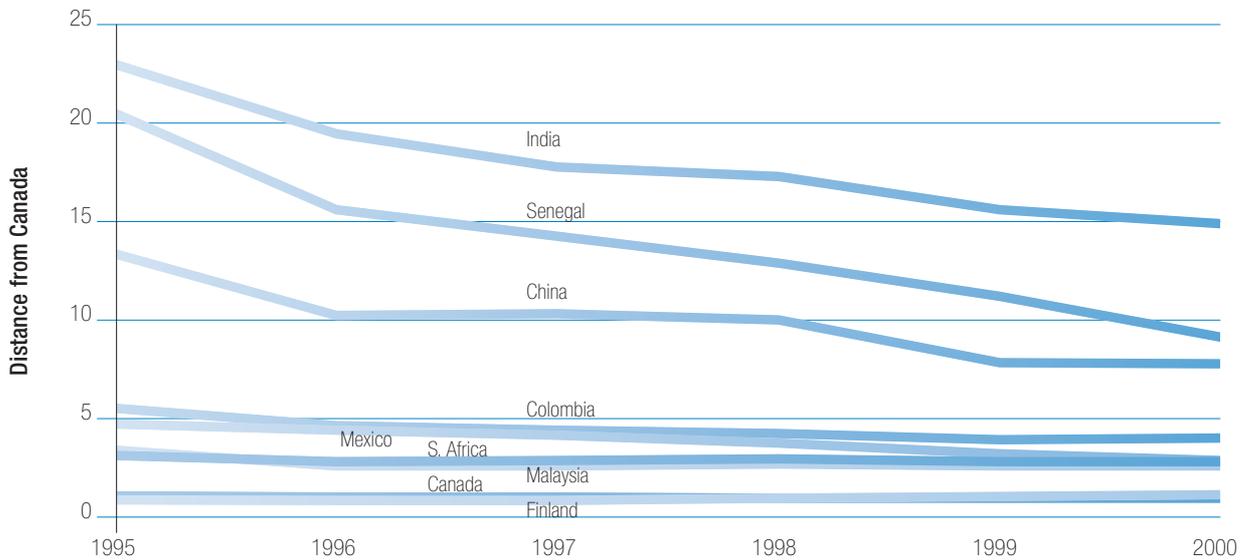
379. The United Nations Secretary General, Kofi Annan, talked of building 'digital bridges' to enable the socio-economic development of billions of people throughout the world who are not connected to the digital technologies and their potential benefits.⁴⁸⁸ The international community faces the challenge of ensuring that all countries are equipped to take advantage of the promise held out by the digital technologies and ensuring that the digital divide does not widen.⁴⁸⁹ An Orbicom study on "Monitoring the Digital Divide", that sought to quantify the digital and knowledge divide based on nine sample countries benchmarked against Canada, concluded that "the magnitude of the gap between developed and developing countries is enormous."⁴⁹⁰ As demonstrated below, the study did find that the digital divide is narrowing, if slowly, although with marked differences in speed among countries depending to a large extent on the diffusion of new technologies.⁴⁹¹

Digital Divide 2000



Source: George Sciadas, "Monitoring the Digital Divide," Orbicom-CIDA Project Report, at p.20 (2002). Reproduced with the permission of Orbicom.

The evolution of the Digital Divide



Source: George Sciadas, "Monitoring the Digital Divide," Orbicom-CIDA Project Report, at p.23 (2002). Reproduced with the permission of Orbicom.

380. The intellectual property system is a tool that may be used to narrow the digital divide. National policies and legal systems that include up-to-date intellectual property laws can support foreign and local investment and encourage the creation of local content that enables the population to derive economic as well as social benefits from their creative endeavors. As described in the Digital Opportunity Initiative Report:

“Although historically many developing countries appeared to benefit from reverse engineering and lax enforcement of intellectual property rights, in the long run the development of knowledge-intensive industries is unlikely to take place without appropriate property and commercial laws. These regimes should incorporate generally accepted principles of fairness, speed and dependability of execution, effective enforcement, and compliance with international norms regarding intellectual property rights protection.”⁴⁹²

WIPO and the international intellectual property system play an important role in enabling developing countries to build the bridges that enable them to engage in e-commerce, promoting the future development of their intellectual property, while protecting and preserving their cultural heritage.

(iii) ACCESS AND PARTICIPATION IN THE DIGITAL ECONOMY

381. As described in Chapter I,⁴⁹³ the online population is expanding exponentially, growing in size by four annually and, while currently numbering some 605 million users, is forecast to reach more than 709 million users by 2004, and one billion by 2005.⁴⁹⁴ This figure, however, still represents only about 10% of the global population, and reflects a world where one third of people have never made a telephone call.⁴⁹⁵ Online access is also unevenly distributed geographically - of worldwide users: some 37% are in the Americas, 31% in Asia, 29% in Europe, and only 1% in Africa.⁴⁹⁶

382. To a degree, this distribution reflects national levels of economic development, but is also affected by diverse issues that include: the distribution of Internet hosts, availability and cost of access to telecommunications infrastructure; levels of education and literacy (as well as technical or 'e-literacy'), and regulatory policies on telecommunications and e-commerce. The distribution of Internet 'hosts' (referring to the number of computers directly linked to the Internet network),⁴⁹⁷ for example, largely mirrors the dispersal of the online population. The number of Internet hosts per 10,000 inhabitants is divided as follows: 1,333 Internet hosts in the Americas,

885 in Oceania, 191 in Europe, 29 in Asia and 3 in Africa.⁴⁹⁸ The cost of Internet access also varies widely between countries and regions depending upon telecommunications infrastructure and government policies, although, in general, the relatively high cost of access in developing countries places them at a disadvantage with respect to e-commerce readiness and development. In Nepal, for example, the monthly Internet access charge represents 278% of average monthly income, compared to 60% in Sri Lanka, and 1.2% in the United States of America.⁴⁹⁹

383. Access to telecommunications technologies, including the Internet, is a significant step in bridging the digital divide, and there is an increasing awareness of its importance. The Report of the G8 Digital Opportunity Task Force (DOT Force) states:

"[Information and communication technologies] (ICT) cannot of course act as a panacea for all development problems, but by dramatically improving communication and exchange of information, they can create powerful social and economic networks, which in turn provide the basis for major advances in development.

By enabling these new networks to collect and share local knowledge and information, ICT can provide new and more efficient methods of production, bring previously unattainable markets within the reach of local producers, improve the delivery of government services, and increase access to basic social goods and services. There need be no trade-off between investment in ICT and the achievement of development objectives."⁵⁰⁰

384. There is, at the same time, a broad change in global patterns of Internet use and access. Demographically, the greatest increase in Internet users is foreseen to take place in Asia, where the number of users grew by 5.6% in the last quarter of 2001, compared with 4.9% growth in Europe, 3.3% in Latin America and 2.5% growth in the United States of America.⁵⁰¹ It is forecast that the number of users in the Asia-Pacific region will rise to 180 million by the end of 2002, surpassing both Europe and North America, and is expected to rise to 236 million by 2004.⁵⁰² In particular, the number of Chinese users is expected to increase by 36.6% to reach 51 million by 2004, while India's online population is anticipated to grow by 47% to reach 10.1 million by that time.⁵⁰³ The increase in user numbers in the Asia-Pacific region may bear a relationship to the growth in regional e-commerce revenues - it is forecast that revenues in the Asia-Pacific region will increase from US\$76.8 billion at the end of 2001, to US\$338.5 billion by the end of 2004.⁵⁰⁴

385. Similar Internet-based growth patterns can be observed in other developing country regions. In Latin America, the online population is forecast to reach 60.6 million in 2004 (up from 33 million users in 2002).⁵⁰⁵ In Africa, historically an area of low Internet penetration, Internet use is also reported to be increasing. The United Nations Information and Communication Technologies Task Force reported in October 2002 that the number of dial-up Internet access subscribers in Africa had risen by 20% in the previous 18 months, concentrated in urban areas and through corporate networks. Nevertheless, it reported that (excluding the relatively more developed South Africa and Northern Africa), only one in 250 Africans are online, compared to one in two North Americans and Europeans.⁵⁰⁶

386. Even as the pattern of Internet users is changing, as described above,⁵⁰⁷ we are witnessing a transformation in the customs and nature of the Internet, exemplified by the decreasing dominance of English as a language both of users, and of content. It is reported that 63.5% of global Internet users are from non-English speaking regions, reflecting the reality that 92% of the world's population are not native English speakers.⁵⁰⁸ Non-English language content is also increasing, and almost one third of websites are reportedly in a language other than English.⁵⁰⁹ Nevertheless, the lack of online content originating from beyond the

industrial world, and the lack of development of software applications relevant to developing countries, deters national populations from accessing the Internet, and engaging in e-commerce, education and training. In the African context, for example, the Economic Commission for Africa has stated that:

“The bottom line concerning ICT access and empowerment in Africa is content. Only when useful information is available at affordable costs to the end user can it serve in development, and this means not only accessing content from elsewhere, but also generation and diffusion of content at all levels. National content on the information highway is not only a heritage for social, cultural and intellectual development, but also represents the national “information capital” from which a vast array of value added products can be derived, with corresponding wealth generation by national industry and particularly the content industries.”⁵¹⁰

(iv) OPPORTUNITIES AND CHALLENGES

387. Despite, or because of, the lessons learned as a result of the bursting of the ‘dot.com’ bubble in 2000, many commentators still believe that the Internet offers developing countries enhanced opportunities for accelerated integration into the global economy.⁵¹¹ In particular, there are comparative advantages for accessing new international markets at low cost and with minimal capital investment, for improving competitiveness and customer services, and for realizing cost savings by reducing physical transactions and overheads.⁵¹² Small and medium sized enterprises (SMEs), in particular, may take advantage of these benefits and improvements in communication systems, particularly of mobile networks, to access new markets and reduce administration costs, while avoiding the traditional limitations of restricted access to information, high market-entry costs, and isolation from their potential markets.⁵¹³

388. The economic sectors likely to benefit the most from the introduction of e-commerce are in the services areas (computer hardware and software, tourism services,⁵¹⁴ publishing and information services, finance, Internet services, and other professional services), and this may be of particular relevance to emerging economies that are in the process of shifting their economic development priorities from the agricultural to the service sector.⁵¹⁵

389. On the other hand, developing countries also face a number of particular challenges in realizing these opportunities.⁵¹⁶ These include the necessity for up-front investment in order to compete globally; a relative lack of participation in policy-making and standard setting for e-commerce; the competitive disadvantage resulting from a lack of capital convertibility of currency; and the possible impact, or fear of impact, on government revenues. The most significant constraint upon the growth of e-commerce in developing countries, however, may be the absence of a sufficient information infrastructure, consisting of affordable telecommunications, accessible network services, computer hardware and software, and technical know-how and support.

390. In addition, developing countries often lack the electronic payment systems that are necessary to support commercial electronic transactions. Only a small percentage of the populations in developing countries use credit cards and, in a number of countries, prohibitions exist on use of credit cards for transactions involving foreign currency.⁵¹⁷ As a result, many businesses in developing countries currently use the Internet for marketing and communications purposes, rather than for commercial transactions. Finally, as noted above, developing countries have a low density of computer population and a commensurate lack of public awareness of information technology and computer literacy.

391. Certain developing and least developed countries are responding to this challenge by investing in the expansion of telecommunication networks. Others, such as Mozambique and the United Republic of Tanzania, for example, are ending state monopolies in this sector and liberalizing the telecommunications market. The advent and relatively rapid commercial diffusion of satellite and wireless telecommunications is a development that is going some way towards easing access problems in developing countries. E-commerce depends upon awareness in local business communities of the potential benefits to be gained through access to the Internet and e-commerce, and of the consequent need for investment in training human resources. This, in turn, enables local communities, businesses and governments to take a lead role in developing policies for e-commerce which take into account each country’s unique cultural and economic character.

392. Programs to increase public access to the Internet have been established by governments and the private sector in developing countries, and Internet access is being promoted not only through the use of personal computers but also through community-based centers.⁵¹⁸ Numerous developing countries are also exploring the possibilities offered by the Internet for mass education purposes and for reaching isolated and rural communities, and community access centers are also now increasingly being used for distance learning purposes. Faced with limited resources to invest in computing hardware, it is reported that a number of countries have explored the possibility of shared access via community centers in Jamaica, mobile Internet units in Asia, Internet cafes in Latin America and Eastern Europe, email kiosks in India and public Internet posts in Mongolia.⁵¹⁹

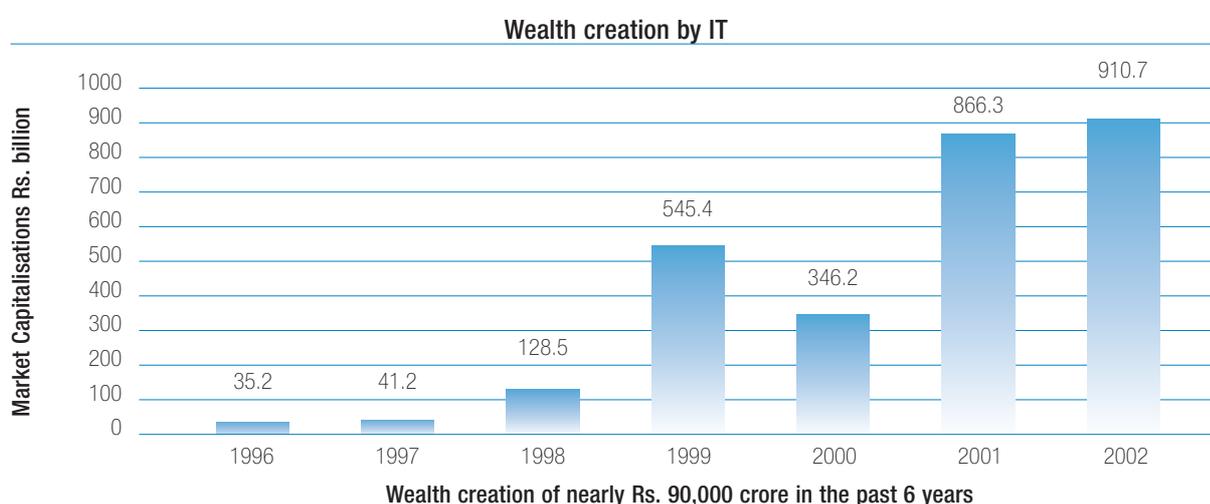
(v) DIFFERENTIAL E-DEVELOPMENT

393. The level of digital development among countries classed as developing or least developed is not even. Certain countries, such as India and Malaysia in the Asia-Pacific region, South Africa in the African region and Estonia among the Central and East European countries, have demonstrated relatively rapid uptake of digital technologies and corresponding growth in their digital economies. While the reasons are manifold, the governments of countries that exhibit greater digital development have focused on training and export of information technologies, telecommunications and infrastructure development, and legal and policy regimes that promote the protection of intellectual property and are therefore conducive to e-development.

394. In Estonia, for example, more than 39% of Estonians currently use the Web and Internet usage in that country exceeds the usage rate in a number of Western European countries, including France and Italy.⁵²⁰ In the Central and Eastern European region in which Estonia is situated, however, Internet penetration is expected to reach only 21% by 2005, well below levels in Western Europe. The main barriers to growth of Internet penetration in the region are described as low household incomes, slow deregulation of telecommunications and a lack of confidence and training in e-commerce.⁵²¹ In Estonia, since 1991, the Government has focused on policy and regulatory reform to develop its market economy and attract foreign investment, and is using information technologies as a key tool in this endeavor, concentrating on connectivity and improving its telecommunications infrastructure. Emphasizing education and skills training, every Estonian school is now online and 'telecottages' connect remote rural areas, leading to a computer literacy rate higher than many countries in Western Europe. Exploiting its intellectual capital is also a priority, as described in a Digital Opportunity Initiative report, "Estonia is attempting to leverage people and knowledge capital as key assets in its pursuit of economic development."⁵²²

395. In Malaysia, the Government's 'Vision 2020' development plan foresees a knowledge-rich Malaysian society, through the development of its technology and communications sector, including the high profile 'Multimedia Super Corridor'(MSC) project began in 1994.⁵²³ The Government's plan is to position itself as a global leader in the information age, and it has implemented policies to encourage growth in the high technology sector and to promote local and foreign investment. Significant investments are being made in telecommunications and network infrastructure, and in skills training and computer literacy through the Multimedia University and mobile Internet units designed for schools and isolated communities. Malaysia has also encouraged local content development.⁵²⁴ In 1996, the Government adopted the National Information Technology Agenda and corresponding Council, designed to transform the country into a knowledge society, or 'k-economy'. In order to protect the emerging digital economy, Malaysia revised its Copyright Act in 1997 to ensure adequate protection for companies investing in new technologies and multimedia.⁵²⁵

396. India provides an example of a developing country that is successfully fostering its economic development by focusing on high technology, investing in its human resources through training and skills development, and implementing national policies and laws that establish intellectual property protection for its domestic and international endeavors. The Digital Opportunity Initiative Report states that: "India's well-established framework for protecting intellectual property rights has been an important inducement to business investment."⁵²⁶ The Indian software and service industry has flourished in this environment, reaching an annual revenue of US\$10 billion in 2001-2. Of this revenue, 76% is in software exports (of which 89% is destined for North America and Europe), a sector that grew 29% over the previous year. In the current year, the software industry generated 92,000 new jobs, and indirect employment for 250,000 people.⁵²⁷ The software industry, currently attracting US\$800 million in foreign direct investment to India, is forecast to attract US\$1.2 billion by 2005. The graph below demonstrates the role of information technologies in wealth creation in India.⁵²⁸



Source: Nasscom FY02: Software and Service Industry Performance (July 18, 2002) at <http://www.nasscom.org>

397. Similar developments have taken place in some least developed countries including, for example, Bangladesh, which foresees software development as a focus for future export industries. In Costa Rica, information communications technologies represent 38% of exports and have contributed to a major increase in gross national product. The multinational high-tech manufacturer, Intel, decided to invest in a software and semiconductor development center in Costa Rica and to invest through its venture capital fund in a domestic software company, giving other companies the confidence to invest in the country.⁵²⁹ Costa Rica's strategy for e-development includes liberalized telecommunications and improving the protection of intellectual property rights. It is notable that Costa Rica is a party to both WIPO Internet Treaties.

(vi) THE ROLE OF CREATIVITY IN DEVELOPMENT

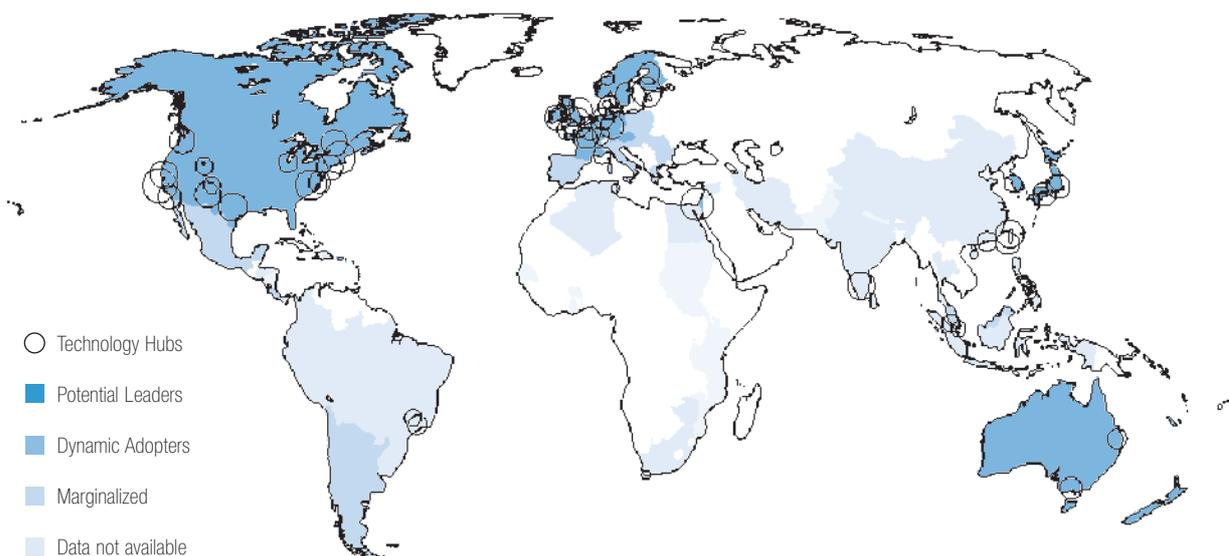
398. It is apparent that the digital divide is a multifaceted concept that does not merely trace the line between industrial and developing societies.⁵³⁰ As described above, among countries whose economies may be described as developing or least developed, there exist significant differences in levels of digital development, and participation in e-commerce and the digital economy. While these differences may be ascribed to many causes, they are in part a reflection of the degree to which those countries have encouraged local innovation and content development, and promoted and protected their local industries through the intellectual property system.⁵³¹

399. The importance of inventiveness and creativity in promoting economic development is well recognized. Under the new conditions of the digital economy, the sources of wealth are increasingly found in intellectual, as opposed to physical, capital. For example, it is technical innovation, traditionally rewarded through the patent system, that steers the evolution of the digital technologies and attracts investment.

400. In his book, Thomas Homer-Dixon describes "The Ingenuity Gap"⁵³² and explores the implications of the disparity between a society's demand for ingenuity to solve its problems and the supply of ideas in response to those problems. He describes a 'creativity divide', which preceded the digital divide and which, it is argued, can be addressed by advances in information technologies. He states that: "[t]he sweep of technological change . . . is the most tangible evidence of the fabulous power of human ingenuity."⁵³³ Similarly, some commentators have spoken of the need for developing countries to 'unleash' the creativity and intellectual capacity of their people, and utilize information and communications technologies to overcome the challenges of the digital divide.⁵³⁴ At the same time, it is important that intellectual property systems are in place that will enable countries to preserve their intellectual property heritage, including in music, art and medicine, to ensure that it is protected from unfair use, as well as to receive the benefits of its exploitation in a global economy.

401. The degree to which each country places importance on ingenuity and on its protection, is not simply a question of economic development, but is an outcome of policy decisions and priorities accorded by each government. The effect of such policy choices is demonstrated in the graph and study described below.

The Geography of Technological Innovation and Achievement
UNDP Human Development Report 2001



402. As described in the UNDP Development Report 2001, a study by Wired Magazine rated global locations of significance in the digital environment based on the following four factors: the ability to train skilled workers or develop new technologies, the presence of established companies and multinational corporations to provide expertise and economic stability, the population's entrepreneurialism, and the availability of venture capital.⁵³⁵ Forty-six locations were identified as technology hubs, shown on the above map as black circles.⁵³⁶ It is notable that prominent among those countries shown as leaders in the field of technology are a number of developing countries including Brazil, Hong Kong (SAR of China), India, Malaysia, South Africa, Taiwan (Province of the People's Republic of China) and Tunisia. Among the 'potential leader' countries shown on the map are included the following countries classed as developing or in transition: Argentina, Bulgaria, Czech Republic, Hungary, Mexico, Romania, Slovakia and Slovenia. Among the 'dynamic adopters' are listed the following, all developing or least developed countries: Algeria, Bolivia, China, Colombia, Dominican Republic, Ecuador, Egypt, El Salvador, Honduras, India, Indonesia, Islamic Republic of Iran, Jamaica, Panama, Paraguay, Peru, Philippines, Sri Lanka, Syrian Arab Republic, Thailand, Trinidad and Tobago, Tunisia, Uruguay and Zimbabwe.

403. There is a strong connection between the promotion and protection of investment in technological development, and the intellectual property system. Effective national intellectual property laws provide the incentive for foreign investment as well as local research and development, establishing an environment where investment and output in technological development is protected. A World Bank study of transition economies in Eastern Europe and Central Asia has presented evidence that foreign trade and investment is a key factor in technology transfer and in improving countries' and their domestic enterprises' Internet access.⁵³⁷

404. Human resource development, particularly in the field of education, research and skills training in information and communications technologies has proven to be a key factor in narrowing the digital divide between one country and another, and between sectors of a national population. Countries such as India have invested in self-reliance in technological education and become exporters of high-tech human resources. As a result, India's technical colleges graduate more than 73,000 skilled workers each year.⁵³⁸ The downturn in developed world economies has seen the return of numbers of these highly skilled workers to the developing countries, bringing with them the valuable experience gained in overseas markets, in a form of human technology transfer.⁵³⁹ There remains, however, a considerable shortage of skilled IT professionals, able to support the infrastructures and applications incorporated in e-businesses. It is forecast that demand for IT workers, at least in the United States of America, will continue to outstrip supply at least into 2004.⁵⁴⁰ Countries that elect to invest in education aimed at 'digital literacy' and training of skilled workers, are well placed to capitalize on this demand, both within and without the developing regions.⁵⁴¹

(vii) WIPO's DIGITAL AGENDA IN DEVELOPING COUNTRIES

405. How can the international community, and international organizations such as WIPO, assist developing countries to take advantage of the benefits of the digital environment, while avoiding its pitfalls? How can intellectual property protection and services, and the assistance of WIPO, play a positive role in facilitating the development of e-commerce in developing countries?

406. As a first step, the participation of developing countries in e-commerce may be enhanced through the provision of development cooperation and assistance to install and update basic telecommunications infrastructure, including through programs such as WIPONET, described in Chapter VI (b)(i).⁵⁴² At the same time, it is important that each country establish a framework of intellectual property laws and regulations, and the concomitant intellectual property services, to reassure intellectual property owners and commercial enterprises that their assets will be protected in an online environment. This legal infrastructure encourages private sector investment, accelerates economic development and provides a secure foundation on which a digital economy can develop. Investment is also needed in education, information sharing and skills training programs, to encourage participation in e-commerce.

407. One of the most significant steps developing countries may take to establish this legal infrastructure is the incorporation of international intellectual property agreements, such as the Berne Convention⁵⁴³ and Paris Convention,⁵⁴⁴ the WIPO Internet Treaties (WCT and WPPT), and the TRIPS Agreement, into national law. These treaties, each now in force, modernize intellectual property laws for the digital environment and provide governments with the tools to protect their nationals' intellectual property assets both nationally and internationally, as well as to ensure that their territories do not become havens for intellectual property piracy and infringement, thereby discouraging international investment and technology transfer.⁵⁴⁵ WIPO's technical assistance program for least developed countries (LDCs) has organized a number of national, regional and interregional meetings for LDCs to raise awareness of the implications and assist in the implementation of the TRIPS Agreement.⁵⁴⁶

408. WIPO is endeavoring, through its programs of cooperation for development, to mitigate the disadvantages faced by developing countries and LDCs, and to ensure that they are able to participate in the rapid development of electronic commerce. The WIPO Small and Medium Sized Enterprises (SME) Division also works to raise awareness of intellectual property issues related

to e-commerce, with an emphasis on smaller businesses that are most prevalent in developing countries.⁵⁴⁷ The major emphasis of these programs is on education and skills training, with the aim of building awareness of the ways in which e-commerce is affecting intellectual property and the ways in which intellectual property may facilitate e-commerce, and of assisting developing countries to formulate responses to these issues. WIPO's programs therefore concentrate on assisting practitioners and policy-makers in developing countries to understand, assess and assimilate the new technologies.

409. The initial discussions on the intellectual property implications of e-commerce for developing countries took place at the first session of the WIPO Permanent Committee on Cooperation for Development Related to Intellectual Property in June 1999. Since that time, WIPO has organized three series of regional consultations directly related to its Digital Agenda and e-commerce. The first series of regional consultations, conducted between June and August 1999, involved meetings in Buenos Aires (Argentina), Kingston (Jamaica), Kuala Lumpur (Malaysia), Mombasa (Kenya), and Rabat (Morocco). The second series of regional consultations, conducted between May and October 2000, involved meetings in Sao Paulo (Brazil), Kingston (Jamaica), Amman (Jordan), Krakow (Poland) and Chiang Mai (Thailand). The third series of WIPO regional consultations on e-commerce, to be conducted over 2002-3, has, to date, involved meetings in Minsk (Belarus), Kingston (Jamaica) and Colombo (Sri Lanka). These meetings are designed to assist developing countries to gain access to intellectual property information, receive specific guidance through model provisions, participate in global policy formulation and exploit the opportunities offered by digital technologies.

410. In addition, as a component of the two WIPO Internet Domain Name Processes, WIPO conducted two series of regional consultations in conjunction with its online consultations. These consultations were designed to inform as well as gather information and regional views on the reform of the Internet domain name system and the management of related intellectual property issues.⁵⁴⁸ The discussions were taken into account in formulating the recommendations put forward in the final reports of the two Processes, published in 1999 and 2001.⁵⁴⁹

411. The regional consultations, and the WIPO Internet Domain Name Processes, highlighted a number of concerns and issues of developing countries in the digital context, namely:

- ■ ■ identification of the intellectual property issues raised by e-commerce, and assistance in the formulation of appropriate policies in response to those issues;
- ■ ■ development of a modernized intellectual property regime conducive to e-commerce, that protects the rights of indigenous artists, creators and small businesses, while also providing a basis for economic development and investment;
- ■ ■ provision of technical assistance aimed at enhancing intellectual property protection through, in particular, projects for the automation of national, sub-regional and regional Intellectual Property Offices and related institutions, such as national societies for the collective management of copyright;
- ■ ■ assistance in the development of national and regional intellectual property policy and legislation;
- ■ ■ assistance in the development and administration of national Internet domain name resources, principally the country code top-level domains (ccTLDs), and related design and provision of dispute resolution procedures to resolve domain name conflicts; and
- ■ ■ the conduct of public awareness campaigns and specialized training activities.

412. The WIPO Digital Agenda, issued at the close of the first WIPO International Conference on Electronic Commerce and Intellectual Property, and approved by the WIPO Member States at their Assemblies in September 1999, focused the first of its ten points on how developing countries may be assisted by the Organization to draw maximum benefit from the use of intellectual property law and services to participate in e-commerce.⁵⁵⁰ E-commerce, and its implications for developing countries was also prominent in the program of the second WIPO International Conference on Electronic Commerce and Intellectual Property, held in September 2001.⁵⁵¹ E-commerce, and its implications for developing countries, has also featured on the agenda of the meetings of the WIPO Assemblies annually since September 1999, and numerous developing country delegations have emphasized their concern of ensuring equal access to the opportunities offered by the digital technologies. The Member States have noted that WIPO has a fundamental role to play in this respect, in cooperation with relevant international organizations, such as the International Telecommunications Union (ITU), United Nations Commission on International Trade Law (UNCITRAL), United Nations Conference on Trade and Development (UNCTAD), and the World Trade Organization (WTO).

413. The WIPONET project, as described in Chapter VI(b)(i) and noted in the WIPO Digital Agenda, assists developing countries to access intellectual property information in digital form. By providing a basic level of connectivity to those Intellectual Property Offices not yet on line, together with the skills training to utilize it, it enhances those countries' opportunities to utilize their intellectual property assets in e-commerce. The integration of WIPO's developing country Member States into WIPONET is aimed at significantly broadening their participation in e-commerce and participation in policy-making for its future development.

414. With respect to LDCs, WIPO has provided assistance to 34 such countries to assist in the technical upgrading of their Intellectual Property Offices, in particular to ensure access to information technology support systems. In light of the efficiency gains described in Chapter VI(a), WIPO has also facilitated the visits of advisory missions to those offices in most LDCs, including those who are not Members of WIPO, to provide advice on modernizing management systems and streamlining their administrative procedures.

415. WIPO, through the WIPO Worldwide Academy, is delivering an Internet and CD-ROM based distance learning program on intellectual property for developing countries, now conducted in English, French and Spanish, and in development in Arabic, Russian and Portuguese. Since June 1999, some 10,000 participants from 136 countries have registered in this program. Educational modules devoted to teaching intellectual property aspects of e-commerce have been developed and will be deployed in 2003. The program largely relies on academic inputs by developing country universities and other individuals and research institutions worldwide.

(viii) MUSEUMS AND IMAGES OF CULTURAL HERITAGE ONLINE

416. E-commerce has clear implications for developing countries' traditional means for protecting intellectual property rights, and for the protection and dissemination of indigenous intellectual property in the newly accessible global markets.⁵⁵² In this context, WIPO is developing projects that may assist in the digital exploitation of countries' cultural and artistic heritage in an online environment. The WIPO museums project, described below, is an example of this work. At the same time, some developing countries may be reluctant to fully embrace e-commerce through fear that their indigenous intellectual property may be put at greater risk of infringement by exposure in the global digital environment. The development of a strong intellectual property framework, as noted above, and facilitated discussion of issues such as security, encryption technologies, privacy, consumer protection and dispute settlement, for example, address these fears and encourage developing countries to exploit the opportunities offered by e-commerce.⁵⁵³

417. Museums play an important role in collecting, conserving, exhibiting and disseminating the cultural and artistic heritage of the world. They preserve cultural integrity and diversity, and fulfil their mission of exhibiting their collections to an audience that may be both national and international. Until now, museums have managed the physical objects in their collections and pursued traditional means to fulfil their mandate. With the development of digital technology, the cultural heritage contained in museum collections – which may consist of manuscripts, photographs, paintings, sculpture and cultural artifacts – may now be digitized and disseminated in digital form using new media and networked channels. Digitization may involve the creation of digital images reproduced from the museums' collections. Once any work has been captured digitally it may be transmitted freely, or under license and protected by technical means, over networks such as the Internet.

418. The digitization of museum images offers great promise, particularly in developing countries, for promoting economic development, academic and scientific research and education. It may allow museums to manage and exploit their collections of cultural and artistic heritage, while encouraging the sharing and increase of knowledge of the world's culture. The creation of a digital archive may assist in preserving national cultural heritage and, by giving artists access to their cultural patrimony, provide an incentive for further creativity. The Internet offers museums – including small, regional and specialist museums and galleries – a unique opportunity, largely unexplored to date, to make their cultural riches available to any person in the general community with access to a computer network.

419. At the same time, however, the process of making digitized museum images available online may involve significant investment and pose some risks to museums as custodians of cultural heritage. Museums wishing to place their collections online must first process the electronic images of their works. Digitization can be an expensive and technically complex process, and there are attendant costs associated with establishing and maintaining an online presence to enable such images to be publicly accessed. Once in digital form, concerns about protection of intellectual property rights have come to the fore. These concerns have sometimes paralyzed those who would otherwise enthusiastically embrace the new technologies. This situation is complicated by the fact that, within many museums, rights administration procedures are currently based on a physical, print model of publication and distribution, and do not envisage the possibility of digital images of the works. Thus, in order to digitize works,

museums would face the issue of whether the rights they currently hold would entitle them to make digital reproductions, which in turn may entail interpreting the scope of any agreements between the museums and artists. It is therefore important that museums are able to come to an understanding of these issues and to exercise control over the availability and use of their digital collections, so as to minimize the risks involved.

420. Development of digital museum projects is thus constrained by the lack of experience, international accepted norms and standards in this area. There are, in addition, no widely accepted contractual licensing arrangements for making cultural material available online. Museum digitization projects raise policy, technical and financial issues that need to be addressed before museum images are made available in the digital environment.⁵⁵⁴

421. In the face of these uncertainties, a number of cultural heritage institutions are developing new projects for online licensing of their collections, led by a number of museum consortia.⁵⁵⁵ These entities have focused on making images available, free-of-charge, for educational purposes. The Art Museum Image Consortium (AMICO),⁵⁵⁶ for example, is a not-for-profit organization that provides a database documenting some 100,000 digitized artworks drawn from 30 museums in North America, that are principally licensed for use by educational institutions for research and teaching purposes. Similarly, the Museums and the Online Archive of California Project MOAC, provides free public access to more than 150,000 images drawn from 11 public and private museums, libraries and archival collections in California.⁵⁵⁷ Another model of digital exploitation may be found in the online collection of the Hermitage Museum of St. Petersburg.⁵⁵⁸ The Hermitage Museum has made its digital collection available free-of-charge for personal use only, and has incorporated a system of invisible watermarks to ensure that the digital use of the images can be monitored.

422. WIPO is exploring the potential of a museum project to assist museums in developing countries in particular, to make images from their collections of cultural heritage and related information available online for commercial, educational and social purposes. The project would explore the intellectual property, legal and administrative issues that define a system for providing cultural heritage images over digital networks. The project would also explore and develop appropriate technologies to provide and regulate access to the collections, including technological protection measures to protect the images against unlawful copying and manipulation, which can be built into a comprehensive web-based electronic image management system. Such new systems would need to be carefully integrated with museums' existing collection management systems. Potential user groups, with appropriate terms and conditions for each, would also need to be defined, including universities and the academic and research communities, primary schools, periodicals, individual users and commercial interests.

423. At this early stage of the project, WIPO has provided intellectual property advice to institutions of cultural heritage located in several Member States, initially in the Arab region. In addition, a study was commissioned by the International Intellectual Property Institute in 2001, entitled "Managing Museum Digital Assets: A Resource Guide for Museums."

424. The project is intended to be integrated with WIPONET, the global intellectual property information network discussed in Chapter VI(b). The WIPONET will allow museums participating in the project to have their online collections hosted on servers maintained within the framework of WIPONET. In this way, WIPO may be in a unique position to provide expert assistance to such museums and to enhance networked access to their collections, and enable developing countries to protect and manage their cultural and artistic heritage by employing the intellectual property system in an electronic environment.

(ix) TRADITIONAL KNOWLEDGE DATABASES AND DIGITAL LIBRARIES

425. Intellectual property protection for traditional knowledge has been put forward as a potential means for countries' economic development, and has been the subject of discussions in WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore since its first meeting in 2001.⁵⁵⁹ In order to fulfil this promise, however, systems are required that will enable the ready exchange of intellectual property information related to traditional knowledge. One means of achieving such an exchange is through an infrastructure based on digital networks and databases.

426. The use of such digital networks and databases seeks to achieve a double objective:

- (a) for disclosed traditional knowledge, the databases would aim at defensive protection of the knowledge. 'Defensive protection' refers to measures aimed at preventing the acquisition of intellectual property rights over traditional knowledge by parties other than the customary traditional knowledge holders themselves. Databases which improve the availability, searchability and exchange of traditional knowledge as prior art may therefore be considered as measures for the defensive protection of traditional knowledge;

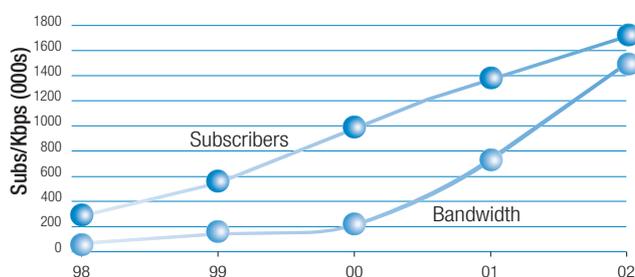
(b) for undisclosed traditional knowledge, if so desired by the knowledge holders, the databases could aim to facilitate the positive legal protection of the knowledge. 'Positive legal protection' refers to the use of existing intellectual property or contractual rights, or the development of *sui generis* rights, to enable the affirmative protection of traditional knowledge by and for traditional knowledge holders themselves. In some countries, traditional knowledge databases or registries fulfil this objective because registration may give rise to specific rights of the traditional knowledge holders to restrict the way the traditional knowledge is used by others, or to claim compensation for its use.

427. With respect to the use of databases for positive legal protection of traditional knowledge, discussions have focused on the relationship between patents granted for traditional knowledge-based inventions and the relevant 'prior art' in the field. As described in the WIPO "Progress Report on the Status of Traditional Knowledge as Prior Art,"⁵⁶⁰ the term 'prior art' refers to the body of knowledge available to the public before the filing date (or priority date, if priority is claimed), of an application for registration of a patent, utility model or industrial design. Examiners refer to the relevant prior art and compare it to the claimed subject matter when assessing such applications, in order to determine whether the requirements of novelty and inventive step have been met. Recently, concerns have been raised as to whether disclosed traditional knowledge has been adequately taken into account when searching the prior art (e.g., it is claimed that pharmaceutical patents have been granted which had to be revoked once traditional medicines were considered as part of the relevant prior art). The question is how the documentation that records disclosed traditional knowledge originating from new intellectual property stakeholders, such as indigenous and local communities, may be integrated into the body of searchable prior art that is accessible to patent examiners. In this respect, information communications technologies may provide some answer. It is to be emphasized that this approach has been taken only for disclosed traditional knowledge, which in most countries is considered to be in the public domain.

428. The challenge lies in the fact that traditional knowledge information is not readily available or well ordered, nor can it be easily retrieved, because no searchable databases of traditional knowledge information have been made available to the patent-granting authorities. Following its proposal made in the WIPO Standing Committee on Information Technology,⁵⁶¹ the Council of Scientific and Industrial Research (CSIR) of India has developed a prototype Traditional Knowledge Digital Library (TKDL),⁵⁶² based on the existing WIPO program of Intellectual Property Digital Libraries. In cooperation with the CSIR, WIPO has developed a test database that includes data on the traditional uses of 50 medicinal plants from South Asia, based on information in the public domain compiled in the Indian 'Health Heritage' database by the CSIR.⁵⁶³ The project aims to utilize digital technologies to ensure that relevant parties have adequate access to non-patent literature dealing with disclosed traditional knowledge as prior art.

429. Subsequently, WIPO has established a portal⁵⁶⁴ that provides access to other online databases of traditional knowledge compiled by third parties. In addition to the Indian Health Heritage test database, access is provided to databases relating to traditional Chinese medicine patents, Indian ayurveda, and the World Bank Indigenous Knowledge database. These database applications are designed to make disclosed traditional knowledge data available to Intellectual Property Offices, so as to be integrated into their existing procedures for filing, examination, granting and application of intellectual property titles, and to enable the electronic exchange of standardized data within intellectual property information systems and the general public, as appropriate. With respect to the use of databases for positive legal protection of traditional knowledge, Member States, indigenous peoples and local communities are compiling registers of traditional knowledge, usually in limited-access databases, in efforts to organize, promote and protect their heritage of traditional knowledge and to facilitate its exchange. Such registers have been created in India, Peru, the Philippines, and by the Inuit of Nunavik and the Dene in Canada. In addition to their proven usefulness in improving the availability and exchange of information in digital form, such registers may gain even greater importance if legal protection is granted to registered knowledge.⁵⁶⁵

486. For a general discussion of the digital divide, see the presentation of J. O. Okpaku, Sr., President and CEO, Telecom Africa Corporation, Second WIPO E-Commerce Conference (September 2001).
487. See Report of the Digital Opportunity Task Force (DOT Force), "Digital Opportunities for All: Meeting the Challenge," (May 11, 2001), at p.6, available at http://www.dotforce.org/reports/DOT_Force_Report_V_5.0h.html. The DOT Force was created by the G8 Heads of State at their Kyushu-Okinawa Summit, July 2000, and comprised 43 teams from government, private sector, non-profit organizations and international organizations, representing developed and developing countries.
488. Message of United Nations Secretary-General Kofi Annan to the meeting of the Internet Corporation for Assigned Names and Numbers (ICANN), in Accra, Ghana, March 10 to 14, 2002. See also the Report of the UN ICT Task Force Meeting "Digital Bridge to Africa: The Launch of the Digital Diaspora Network - Africa," (DDN-A), New York (July 12, 2002).
489. Research demonstrates that 55 countries in the world account for more than 99% of all spending on information technology. See 1999 IDC/World Times Information Society Index, at <http://www.idcresearch.com>. Moreover, more than two-thirds of the online users are located in the United States and Europe. See Datamonitor, "The Future of the Internet" at <http://www.datamonitor.com>.
490. George Sciadas, "Monitoring the Digital Divide," Orbicom-CIDA Project Report, at p.vii, (2002), available at <http://www.orbicom.uqam.ca/projects/ddi2002/ddi2002.pdf>. Orbicom is composed of the UNESCO Chairs in Communications.
491. *Ibid*, at p.23.
492. Accenture, Markle and United Nations Development Programme (UNDP), "Creating a Development Dynamic: Final Report of the Digital Opportunity Initiative," July 2001, at para.3.1.4., available at <http://www.opt-init.org/framework/pages/contents.html>.
493. See Chapter I, paras.7-8.
494. See Nua Internet Surveys, Nua.com report, "More than 600 million people have Net access," (November 1, 2002), at <http://www.nua.com/surveys>. See also Caspian Networks, "Internet Still Growing Dramatically Says Internet Founder,"
495. See Report of the Digital Opportunity Task Force (DOT Force), "Digital Opportunities for All: Meeting the Challenge," (May 11, 2001), at p.6, available at http://www.dotforce.org/reports/DOT_Force_Report_V_5.0h.html.
496. See "World Telecommunication Indicators," ITU (March 2002), at A-67. See above, ITU graph showing 'Geographical Distribution of Online Population,' at Chapter I, para.8.
497. An 'Internet host' is a component of a computer network consisting of two computer systems: the host is the system that contains the data, while the user's computer is called the remote terminal: see definition given by Webopedia at <http://www.webopedia.com/TERM/H/host.htm>.
498. See "World Telecommunication Indicators," ITU (March 2002), at A-67.
499. See United Nations Development Programme (UNDP), "Human Development Report 2001," 2001, at p.81 (Figure 4.1), available at <http://www.undp.org/hdr2001/>. See also above, ITU graph showing 'Dial-Up Internet Tariffs, 2001' at Chapter I, para.9.
500. See Report of the Digital Opportunity Task Force (DOT Force), "Digital Opportunities for All: Meeting the Challenge," (May 11, 2001), at p.3, available at http://www.dotforce.org/reports/DOT_Force_Report_V_5.0h.html.
501. See Nua Internet Surveys, ZDNet (UK) Report, "Half a Billion Online," (March 8, 2002), at <http://www.nua.com/surveys>.
502. A study conducted by eMarketer indicates that by the end of 2002, there are expected to be more than 180 million users in the Asia Pacific region, compared with 175.7 million users in Latin America, and 4.6 million in Africa. See Nua Internet Surveys, eMarketer Report, "Asia-Pacific to Have Most Internet Users," (September 6, 2002), at <http://www.nua.com/surveys>.
503. See Nua Internet Surveys, Newsbytes Asia Report, "Asian Pacific Net Users to Reach 72 Million This Year," (January 8, 2001), at <http://www.nua.com/surveys>.
504. See Nua Internet Surveys, eMarketer Report, "Ecommerce Revenues to Rise in Asia-Pacific," (October 22, 2002), at <http://www.nua.com/surveys>.
505. See Nua Internet Surveys, eMarketer Report, "Latin American Net Population to Soar," (October 21, 2002), at <http://www.nua.com/surveys>.
506. Growth of Internet Use in Africa



Source: Mike Jensen, "Information and Communication Technologies (ICTs) in Africa – A Status Report," (UNICTTF III/2002/13) to the Third Task Force Meeting, New York, (September 30 – October 1, 2002), available at <http://www.unicttaskforce.org/>. See also Nua Internet Surveys, Reuters Report "Internet Use Increasing in Africa," (October 1, 2002), at <http://www.nua.com/surveys/>.

507. See Chapter I, para.10.
508. Global Internet Statistics, reported by Global Reach (September 30, 2002), at <http://www.greach.com>.
509. Messaging Online, reported at WorldLingo, at http://www.worldlingo.com/resources/language_statistics.html.
510. United Nations Economic Commission for Africa (ECA) "Digital Opportunities: Challenges and Prospects for Africa: Background Note," in ECOSOC, Dialogues at the Economic and Social Council "Supporting Africa's Efforts to Achieve Sustainable Development" at Chapter IV, available at <http://www.unictaskforce.org/thirdmeeting/documents/SupportingAfricasEfforts.pdf>.
511. See presentation of A. Soota, Chairman and Managing Director, MindTree Consulting, on Developing Countries and Electronic Commerce, First WIPO E-commerce Conference (September 1999).
512. For a description of cost savings realized through e-commerce, see United Nations Conference on Trade and Development (UNCTAD), "E-Commerce and Development Report, 2001" (UNCTAD/SDTE/ECB/1), at Chapter 2(B). See also presentations of O. Jorge Mera, Secretary of State, President, Dominican Institute of Telecommunications, Dominican Republic; R. Soto Platero, Board Member, National Chamber of Commerce, Uruguay; and J. Okpaku Sr., President and CEO, Telecom Africa Corporation, Nigeria, at Second WIPO E-Commerce Conference (September 2001). See also presentation of the Honorable R. Farley, MP, Minister of Industry and International Business, Ministry of Industry, Commerce and Business Development, Barbados, First WIPO E-Commerce Conference (September 1999).
513. E-commerce offers particular benefits for SMEs in emerging economies, such as Latin America and the Caribbean region. See presentation of Senator Dale D. Marshall, Chairman of the Joint Public-Private Sector Committee of Experts on Electronic Commerce of the Free Trade Area of the Americas (FTAA), First WIPO E-Commerce Conference (September 1999).
514. For a discussion of the importance of e-commerce in tourism for developing countries, see United Nations Conference on Trade and Development (UNCTAD), "E-Commerce and Development Report, 2001" (UNCTAD/SDTE/ECB/1), at Chapter 3.
515. See also presentation of Senator Dale D. Marshall, Chairman of the Joint Public-Private Sector Committee of Experts on Electronic Commerce of the Free Trade Area of the Americas (FTAA), First WIPO E-Commerce Conference (September 1999).
516. See presentation of A. Soota, Chairman and Managing Director, MindTree Consulting, on Developing Countries and Electronic Commerce, First WIPO E-Commerce Conference (September 1999).
517. Among 1 billion Visa cards issued worldwide, only 2% are issued to holders in Central Europe, the Middle East and Africa: see United Nations Conference on Trade and Development (UNCTAD), E-Commerce and Development Report, 2001" (UNCTAD/SDTE/ECB/1), at Chapter 7, p.148.
518. See, for example, the International Telecommunication Union (ITU)'s development initiative, the Electronic Commerce for Developing Countries (EC-DC) pilot project, with its goal to establish B2C e-businesses run and operated by local professionals in developing countries, and which makes use of shared infrastructure and community-based network centers. By 2001, more than 225 organizations were participating in the EC-DC project, involving more than 110 countries in Africa, the Asia & Pacific region, Europe and the CIS, the Americas and the Arab States: see <http://www.itu.int/ITU-D/e-strategy/ecdc/>. See also Alexander Ntoko, "Bridging the Digital Divide," ISR (March/April 2001), available at <http://www.itu.int/ITU-D/ecdc/pressarticles/ECDC-ISRMarch2001.pdf>.
519. See Ashfaq Ishaq, "On the Global Digital Divide," Vol. 38(3), Finance & Development: International Monetary Fund (September 2001).
520. See Nua Internet Surveys, Europemedia Report (based on a TSIInteractive Study), "Estonia Top for Net Usage in Central Europe," (September 3, 2002), at <http://www.nua.com/surveys>.
521. See Nua Internet Surveys, Yankee Group Report, "Internet Use Up in Central, Eastern Europe," (November 29, 2001), at <http://www.nua.com/surveys>.
522. Accenture *et al* (2001), *supra* note 492, at Appendix 3, Case 3 – Estonia.
523. The Malaysian Multimedia Super Corridor, launched in 1998 and anticipated to involve 20 years of development, is 15 km wide and 50 km long, stretching from Kuala Lumpur to the international airport, and includes two 'smart cities' (Putrajaya, the new seat of e-Government, and Cyberjaya, a multimedia center for research and development, a MultiMedia University and hub for multinational IT headquarters); see <http://www.mdc.com.my>.
524. See, for example, the Agritani e-Marketplace, that provides an online agricultural trading site for farmers in the Asia Pacific region, <http://www.agritani.net>; cited in Accenture *et al* (2001), *supra* note 493, at Appendix 3, Case 5 – Malaysia.
525. See R. Ramachandran, National Information Technology Council (NITC), Malaysia, "K-Measures Towards Building a Knowledge Society and Economy," (May 2002), available at http://www.statistics.gov.uk/IAOSLondon2002/contributed_papers/downloads/IP_Ramachandran.doc.
526. Accenture *et al*, *supra* note 493, at Appendix 3, Case 4 – India.
527. The Indian software and service industry is expected to reach US\$12.3 billion by 2002-3. See "Nasscom FY02 - Software and Service Industry Performance Report," (2002), available at http://www.nasscom.org/artdisplay.asp?Art_id=1311.
528. See Nasscom FY02 – Software and Service Industry Performance (July 18, 2002), at p.8, available at <http://www.nasscom.org/download/FYo2-results.pdf>.
529. See UNDP Human Development Report 2001. See also Accenture *et al*, *supra* note 492, at para. 2.3.3.
530. Joseph O. Okpaku, Sr. spoke of the various aspects of the 'digital divide' as including: the infrastructure digital divide, the information digital divide, the knowledge digital divide, the intellectual digital divide, the human resource capacity divide, the cultural digital divide, the content digital divide and the digital opportunity divide in his presentation at the Second WIPO E-Commerce Conference (September 2001).
531. See Report of the Digital Opportunity Task Force (DOT Force), "Digital Opportunities for All: Meeting the Challenge," (May 11, 2001), Action Point 8 (National and International Effort to Support Local Content and Applications Creation) at p.22, available at http://www.dotforce.org/reports/DOT_Force_Report_V_5.0h.html.

532. Thomas Homer-Dixon, "The Ingenuity Gap" (Vintage, 2001).
533. See also Ishaq (2001), *supra* note 519.
534. The UNDP writes of each government's need to "unleash the creativity of its people" in its Human Development Report 2001 at p.79. Similarly, Joseph O. Okpaku, Sr., spoke of developing countries "unleashing their intellectual capacity" in his presentation at Second WIPO E-Commerce Conference (September 2001).
535. UNDP Development Report 2001. Wired Magazine is at <http://www.wired.com>.
536. The 36 locations identified as technology hubs were as follows, in descending order of significance: Silicon Valley (USA), Boston (USA), Stockholm-Kista (Sweden), Israel, Raleigh-Durham-Chapel Hill (USA), London (United Kingdom), Helsinki (Finland), Austin, (USA), San Francisco (USA), Taipei (Taiwan, Province of the People's Republic of China), Bangalore (India), New York City (USA), Albuquerque (USA), Montreal (Canada), Seattle (USA), Cambridge (United Kingdom), Dublin (Ireland), Los Angeles (USA), Malmö (Sweden), Copenhagen (Denmark), Bavaria (Germany), Flanders (Belgium), Tokyo (Japan), Kyoto (Japan), Hsinchu (Taiwan, Province of the People's Republic of China), Virginia (USA), Thames Valley (United Kingdom), Paris (France), Baden-Württemberg (Germany), Oulu (Finland), Melbourne (Australia), Hong Kong (SAR of China), Chicago (USA), Queensland (Australia), Sao Paulo (Brazil), Salt Lake City (USA), Santa Fe (USA), Glasgow-Edinburgh (United Kingdom), Saxony (Germany), Sophia Antipolis (France), Incheon (Republic of Korea), Kuala Lumpur (Malaysia), Campinas (Brazil), Singapore, Trondheim (Norway), El Ghazala (Tunisia), Gauteng (South Africa); source, Hillner 2000.
537. See George R. G. Clarke, "Bridging the Digital Divide: How Enterprise Ownership and Foreign Competition Affect Internet Accession Eastern Europe and Central Asia," The World Bank, Development Research Group, Regulation and Competition Policy (July 2001).
538. See UNDP Human Development Report 2001 at p.37. The Indian Government has established Indian Institutes of Technology in several cities and a policy to encourage research and development in personal computing, and revenues from the IT training sector continue to grow: see Accenture *et al* (2001) at Appendix 3, Case 4 – India.
539. Joseph O. Okpaku, Sr. has stated:
 "Significantly, the topography of the ICT Human Resource Digital Divide cannot be drawn along any traditional lines of nationality, race or economy, because the earlier globalisation, the globalisation of education, brought together peoples from around the world to the centres of excellence in IT research and development. Today, it is an understatement to say that a major source (by no means all) of the scientific and engineering expertise driving the innovation and creating the solutions which drive the New Economy comes from experts from the developing world working at academic and research institutions mainly in the industrial world."
 See presentation at Second WIPO E-Commerce Conference (September 2001). See also UNDP Human Development Report 2001, quoting Chang 2001, at p.103.

540. **U.S. IT Worker Demand, Supply, and Openings, 2000-2004**



Source: IDC, 2001

- See IDC eNewsletter, ITForecaster, "The War for IT Talent is Over, and the Talent Won," (March 20, 2001), at <http://www.idc.com>. See also Marianne Kolding, IDC Report, "Europe's IT Skills Shortage: 2001-2005" (August 2002), abstracted at <http://www.idc.com/getdoc.jsp?containerId=TT03J>.
541. See Report of the Digital Opportunity Task Force (DOT Force), "Digital Opportunities for All: Meeting the Challenge," Action Point 3 at p.16 (May 11, 2001), available at http://www.dotforce.org/reports/DOT_Force_Report_V_5.0h.html. See also the G8 Africa Action Plan, para. 5.4 (Helping Africa create digital opportunities), at <http://www.g8.gc.ca/kananaskis/afraction-en.asp>. See Accenture *et al* (2001), *supra* note 492, at para 3.1.2. See also the discussion of ICT e-education initiatives in Africa by Karima Bounemra Ben Soltane, United Nations Economic Commission for Africa Report, "Regional ICT Developments: The AISI Perspective," at part II(i) (UNICTTF III/2002/15); and by Nii Narku Quaynor, "Africa's Digital Rights", both presented at Third Meeting of the UN-ICT Task Force, New York, (September 30 – October 1, 2002).
542. There is also scope for joint projects of cooperation for development, such as the ITU Electronic Commerce for Developing Countries (EC-DC) project, which focuses on web-based marketing and consumer sales by small and medium enterprises: see ITU website at <http://www.itu.int/ITU-D/e-strategy/ecdc/>.
543. Berne Convention for the Protection of Literary and Artistic Works, available at <http://www.wipo.int/treaties/ip/berne/index.html>.
544. Paris Convention for the Protection of Industrial Property, available at <http://www.wipo.int/treaties/ip/paris/index.html>.
545. See presentation of the Honorable W. M. Daley, Secretary of Commerce, Department of Commerce, United States of America, First WIPO E-Commerce Conference (September 1999), see also presentation of Senator D. Marshall, Chairman, Chairman of the Joint Public-Private Sector Committee of Experts on Electronic Commerce of the Free Trade Area of the Americas (FTAA), First WIPO E-Commerce Conference (September 1999).
546. For further information about the work of the WIPO Least Developed Countries Unit, see http://www.wipo.int/dcs/en/tech_assistance.htm.
547. See the WIPO SME's Division website as it relates to e-commerce, at <http://www.wipo.int/sme/en/index.html>.

548. The first WIPO Process consultations were conducted in 1998-1999 in Rio de Janeiro (Brazil), Cairo (Egypt), Budapest (Hungary), Hyderabad (India), Mexico City (Mexico), Asunción (Paraguay), Dakar (Senegal), Singapore and Cape Town (South Africa). The Second WIPO Process consultations were conducted in 2000-2001 in Brussels (Belgium), Accra (Ghana), Buenos Aires (Argentina), Melbourne (Australia), Washington D.C., (United States of America), Valencia (Spain), and in conjunction with regional e-commerce meetings, in São Paulo (Brazil), Chiang Mai (Thailand), Amman (Jordan), and Krakow (Poland).
549. The first WIPO Process Report, "Management of Internet Names and Addresses: Intellectual Property Issues," (1999) and the Second WIPO Process Report, "The Recognition of Rights and the Use of Names in the Internet Domain Name System," (2001) are available at <http://ecommerce.wipo.int/domains/index.html>.
550. For a full description of the WIPO Digital Agenda, see Chapter VII. The 10-point WIPO Digital Agenda is also available at <http://ecommerce.wipo.int/agenda/index.html>.
551. See presentations of O. Jorge Mera, Secretary of State, President, Dominican Institute of Telecommunications, Dominican Republic; R. Soto Platero, Board Member, National Chamber of Commerce, Uruguay; and J. Okpaku Sr., President and CEO, Telecom Africa Corporation, Nigeria, at Second WIPO E-Commerce Conference (September 2001).
552. See presentations of M. Hentati, Curator of the Ennejma Ezzahra Palace, Assistant to Director, Centre for Arab and Mediterranean Music; C. Karp, Director of Internet Strategy and Technology, Swedish Museum of Natural History, President Muse Doma, .MUSEUM; M. Richard, Head of Multimedia Department, National Reunion of Museums, at Second WIPO E-Commerce Conference (September 2001).
553. See presentation of the Honorable R. Farley, MP, Minister of Industry and International Business, Ministry of Industry, Commerce and Business Development, Barbados, First WIPO E-Commerce Conference (September 1999).
554. For detailed discussion of these issues, see presentation of M. Shapiro, General Counsel, International Intellectual Property Institute, First WIPO E-Commerce Conference (September 1999).
555. Art Web, a consortium of the Bridgeman Art Library, *La Réunion des musées nationaux*, and *Bildarchiv Preussischer Kulturbesitz*, offers a consolidated point of access for these three European image archives. The Corbis Corporation, a subsidiary of Microsoft, has entered into non-exclusive licensing arrangements with the Philadelphia Museum of Art, the Royal Ontario Museum in Canada, the National Gallery in London and the Hermitage museum in Russia.
556. The AMICO Library of works of art includes over 13,000 paintings, 5,900 sculptures, 23,800 prints, 13,700 drawings and watercolours, 29,000 photographs, 1,800 textiles, 1,600 costumes and jewelry, 9,800 works of decorative art and 1,200 books and manuscripts. Spanning the ages, the collection contains over 2,500 works dated B.C., as well as 53,000 works dated from 1901 to the present. Some 55% of the collection is sourced from the Americas, 32% from Europe, 7% from Asia, and 5% from Africa. See <http://www.amico.org>.
557. The Museums and the Online Archive of California Project is at <http://www.oac.cdlib.org/>. It is reported that less than 7% of museum collections in the United States of America are exhibited at any time; see Kendra Mayfield, "Bringing Mountain of Art to World," *Wired News*, (October 29, 2002), at <http://www.wired.com>.
558. The website of the Hermitage Museum digital collection, created jointly with IBM, may be found at <http://www.hermitagemuseum.org>. See presentation of M. Borisovitch Piotrovski, Director, State Hermitage Museum, First WIPO E-Commerce Conference (September 1999).
559. See background on WIPO's work in the field of intellectual property and traditional knowledge, genetic resources and folklore, available at <http://www.wipo.int/globalissues/tk/index.html>.
560. WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Second Session, Geneva (December 10 to 14, 2001), "Progress Report on the Status of Traditional Knowledge as Prior Art," (Document WIPO/GRTKF/IC/2/6), at p.3 (July 1, 2001); available at <http://www.wipo.int/globalissues/databases/tk/index.html>.
561. Dr. R. A. Mashelkar, "The Role of Intellectual Property in Building Capacity for Innovation for Development," WIPO Panel Discussion at the ECOSOC High-Level Segment on the Role of Information Technology in a Knowledge-Based Economy, United Nations, New York, at p.9 (May 24, 2000).
562. See WIPO/GRTKF/IC/2/6 at paras.89-97.
563. See the Council of Scientific and Industrial Research (CSIR) of India, at <http://www.csir.res.in>.
564. See the WIPO Traditional Knowledge Portal of Online Databases at <http://www.wipo.int/globalissues/databases/tkportal/index.html>.
565. See WIPO/GRTKF/IC/2/6 at paras.114 -118.

CHAPTER VI



VI. DIGITAL DELIVERY OF INTELLECTUAL PROPERTY SERVICES

430. It is clear that developments in digital technologies, and the inter and intranets that they support, have enabled private and public sector enterprises to overhaul their methods for conducting their operations, redefine their services and improve their service delivery. This move toward using digital systems and the Internet to manage work flow, deliver services and provide enhanced access and interconnection to intellectual property information has been embraced by an increasing number of national and regional intellectual property offices. In particular, the intellectual property community is increasingly utilizing these technological advances to better exploit, defend and administer their intellectual property rights. These systems improve not only the procedures through which such rights are acquired and maintained, but increasingly also serve to disseminate information about intellectual property more efficiently and effectively.

431. In common among these initiatives are the issues of integrating new staff with relevant technological expertise, while restructuring existing staff resources; planning for the integration of the new information technology systems; implementing hardware and software platforms, many of which can be costly; addressing security concerns with respect to access, control and exchange of information that become manifest in the digital environment; and reviewing whether the existing policies, procedures, rules and standards must be revised and updated in light of the new electronic methods used.⁵⁶⁶ This Chapter will examine how a number of these offices are employing the new technologies to transform their delivery of services.

432. This Chapter also provides information about the new electronic systems that WIPO is implementing to improve its services. The development of these new systems, as the Director General noted in a message to WIPO's Standing Committee on Information Technologies, "implies a fundamental change in the time-honored way of doing things."⁵⁶⁷ First, the WIPONET is featured, an online global information network providing connectivity and secure communication channels for the digital delivery of services and information in relation to several initiatives that WIPO has already commenced. Secondly, the Chapter reviews progress toward the use of electronic means for the delivery of services under the Patent Cooperation Treaty (PCT), the Madrid Agreement and its Protocol, and the Hague Agreement. These systems have already proven their success at facilitating intellectual property owners' ability to obtain and maintain protection in a large number of countries through a centralized procedure. With the new technologies available, they can now be re-engineered or further developed to profit from the efficiency gains offered by information technology and digital networks.

(i) DEVELOPMENTS IN NATIONAL INTELLECTUAL PROPERTY OFFICES

(a) *Traditional Intellectual Property Office Administration*

433. Traditionally, intellectual property offices throughout the world have administered complex procedures and voluminous workloads in handling the filing and processing of requests for registration of intellectual property rights. These workloads are increasing and the administrative procedures are intensive. For example, when an application for a trademark is filed, its formality is checked and, in certain jurisdictions, examined. Upon examination, examiners are required to make a search. The decision is sent to the applicant. The applicant may appeal the result, and a third party may oppose the grant. Finally, an intellectual property office must ensure that its fees are collected, maintain public records of its files, and archive each dossier.

434. As the relevance of intellectual property increases, so does the number of applications proliferate, as demonstrated by the experience of the various intellectual property offices, described below. Traditional procedures based on paper documentation and manual systems are unsuited to cope with such a demand. As a result, in a pattern common to many intellectual property offices, backlogs have formed and, consequently, examination periods and the delays experienced by consumers have increased proportionally. The paper-based system has been unable to overcome the combined challenges of inefficient administrative methods, rapid flow of documents and the physical need to secure sufficient operating space. Therefore, the intellectual property offices have sought to tackle this problem, and the most efficient gains have been found in utilization of new information technologies.

(b) *Use of New Information Technology Systems in IP Offices*

435. Over the last decades, intellectual property offices have implemented new administrative systems using innovative information technologies in order to solve this growing problem. The advent of the Internet dramatically affected these developments. At the same time, many governments, including the Australian, Canadian and Japanese Governments, have implemented strategic 'e-government' plans, so that electronic filing systems for intellectual property formed part of a national strategy to deliver their services electronically and treat electronic information in the same way as paper information.

436. As part of WIPO's research into the evolving administration of intellectual property services in the digital era, a questionnaire was circulated to a number of intellectual property offices aimed at obtaining the following information:

- (i) How the use of information technology has changed the way in which these offices manage the filing of patents, trademarks and designs;
- (ii) The ways in which these developments have changed or improved the efficiency of the office (e.g. reduced examination period, reduced costs); and,
- (iii) How future technological developments may affect the administration of intellectual property offices in future.

Their responses are summarized below.

(i) *Australia*

437. The Australian Intellectual Property Office (IP Australia) has utilized new information technologies to meet the demand for reduced costs, reductions in the labor-intensive process of paper handling, and effective storage of documents. IP Australia's initiatives in reforming intellectual property administration are part of the Australian Government's On-Line Services Agenda, developed in April 2002 as part of its e-commerce strategy,⁵⁶⁸ which aims to ensure that virtually all government services are available around the clock to all users. New electronic portals have been developed to enable customers to access information relating to intellectual property and conduct business with IP Australia on a 24-hour/7 day per week basis.⁵⁶⁹

438. Users are able to access IP Australia's online systems to search for patents, trademarks and design data, file innovation and standard patent and trademark applications, request examination or amendment of a patent, and submit inquiries and payments. Currently, 50% of its self-filing trademark customers use the online system. IP Australia's E-Forms Project offers significant benefits to the organization and consumers. Data is collected at source, and therefore more accurate and up to date, data entry being reduced or eliminated. 'Intelligent' e-forms automatically validate information entered and prompt the user immediately for corrections or further information, and have thereby reduced the previous error rate by up to 80-90%. Data processing using e-forms is substantially faster than with paper forms, so process cycle times are reduced by up to 50-90%, as well as reducing paper usage and costs.⁵⁷⁰

439. In addition, in March 2002, IP Australia successfully tested a 'business-to-business'(B2B) system for electronic data exchange with several large Australian legal firms, which allowed for electronic application for trademark registration, request for patent examination, and response to patent and trademark examiners' reports, and plans to extend this service in 2002-3. IP Australia, since 1999, has implemented an electronic document and records management system that will make information accessible by means of common access and security models, information organization, metadata and data standards.

(ii) *Canada*

440. The Canadian Intellectual Property Office (CIPO) has invested in the development of various e-services, and aims to provide all its key IP services online by 2004. This project will be integrated with other Canadian Government e-services through a common portal; for example, a client seeking to incorporate a company will be provided information on trademarks and the opportunity to file a trademark application, and a client applying for a research grant will be given information on patents. New developments have improved CIPO administration as follows:

■■■ Scanning - enables electronic images to replace official paper file folders, enabling parallel processing, access and reducing paper storage;

■■■ E-filing – is available for patent, trademarks, copyrights and industrial designs, although e-filing for industrial designs and patents will not be fully automated until at least June 2003. Currently, direct data entry eliminates the need for scanning and formality checks and associated e-payment systems allow faster financial processing.

■■■ Electronic databases - allow copyright documents to be retrieved online instead of by request from the Patent Office. The electronic capture of documents has improved access to search and research material, assisting to improve the quality of decisions, although the decision-making process is still examiner based.

441. CIPO has achieved a two-fold increase in workload with the same amount of personnel, while concurrently reducing personnel in various areas as manual processes have been automated (for example, the Patent Branch typing pool went from 12 to one person). The Cover Page Unit has reduced from eight to three people while processing twice the volume, and the Trademarks Branch was able to reduce its formalities personnel from 10 to six people even while doubling the work volume. In the area of document retrieval and reproduction, CIPO's automation has reduced the requirement of at least one person from the unit.

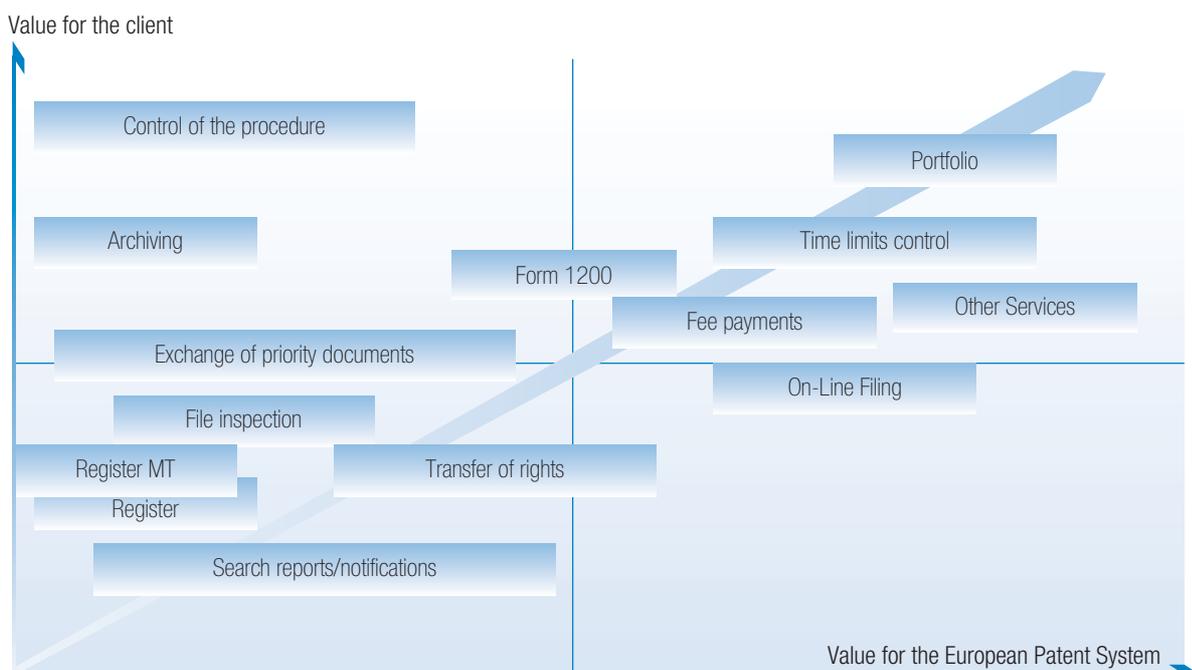
(iii) *European Patent Office*

442. The European Patent Office (EPO) began to utilize information technologies in 1978, when it received its first filing. The EPO has extended the use of these technologies to improve efficiency in different areas: support of publication processes, tools for performing documentation and searches, tools for supporting substantive examination, management information on production and stocks and, in 1998, establishment of an electronic file with a repository of all documents filed or issued during the lifetime of the patent application. In the patent administration area, the administrative support of the search, grant and publication process realized efficiency gains of five to 10%.⁵⁷¹

443. The EPO draws on information technologies for two purposes: to improve Office efficiency, and to enhance value for users of the patent system by focusing on transparency and accessibility. The *epoline*[®] system,⁵⁷² graphically described below, consists of a suite of e-business related information technology products based on Internet technology that change the way the EPO administers applications. Among the products it offers:

- On-line File inspections – the current beta version allows public access to 800,000 applications via the Internet, at a current rate of 1,500 to 2,000 queries per day.
- WebReg – provides secure and confidential access and monitoring of the legal status of applications, at the current rate of 34,000 searches performed by 4,000 clients per week.
- Form 1200 and Online Filing – enables secure filing of applications or request for entry in the regional phase before the office of PCT applications, giving the user instant confirmation that the request contains all required data, and simplifies the task of the Office in terms of initial data capture formal processing.
- Fee payments – enables online access to the deposit account, reducing cash flow.

European Patent Office - *epoline*[®] System

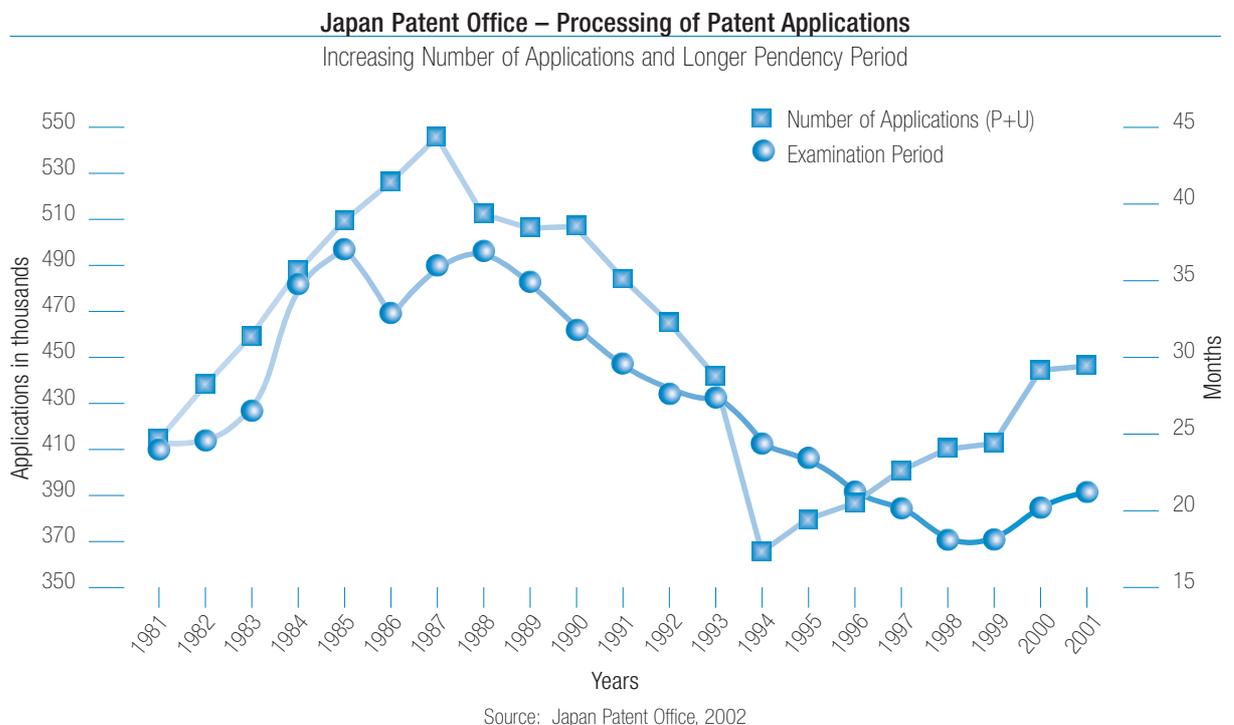


Source: European Patent Office, 2002

(iv) Japan

444. The Japan Patent Office (JPO), as part of the Japanese Government's 'electronic government campaign' first implemented electronic filing in December 1990, and it has dramatically improved its administrative efficiency. While initially the system encompassed only internal communications within the JPO and bilateral communications between applicants and the JPO, the Internet has gradually been incorporated into the JPO's operating systems. Currently, the JPO's use of information technologies includes online e-filing for design, trademark, the entry into national phase of PCT applications, automated formality checks, priority art searches online and online file inspection. The provision of information to users has been upgraded through issues of the Patent Gazettes on CD-ROM. Since 1999, Industrial Property Digital Libraries (IPDL) have been established online that make available some 47 million technical documents with automatic translation facilities that enable the efficient conduct of prior art search and examination. In order to promote corporate office automation and use of its online procedures, the JPO distributed e-filing software to users free of charge in 1998.

445. As a result of these technical innovations, the JPO examination period has been significantly shortened: in 1988, the period from request for examination to the examiner's first action was 37 months and, despite the lack of any substantial increase in examiners, with the introduction of electronic applications in 1994 this period shortened to 25 months, and was further shortened to about 21 months in 2000. The JPO currently processes 2 million procedures a year between the JPO and applicants. Furthermore, the JPO building, the first 'intelligent' central government building, was completed in 1989 to support this paperless system, and the space required to store paper documents has been reduced to 1/150.



446. The JPO uses a unique electronic application document format based on a secure 'integrated services digital network' (ISDN) dialup system, and intends to introduce extensible markup language (XML) format to its electronic documentation in 2003 and e-filing via the Internet in 2005, with requisite adjustments to its infrastructure and security policy. The Office is currently developing new systems conforming to PCT e-filing standards that are expected to be introduced in 2004. The JPO also provides international collaboration and support for computerization initiatives in the offices of developing countries.

(v) The Republic of Korea

447. The Korean Intellectual Property Office (KIPO) initiated an online filing system (KIPOnet) in January 1999. KIPOnet automates the administration of intellectual property rights in a paperless system that includes filing, acceptance, examination, registration, and CD-ROM publication of official gazettes.⁵⁷³ KIPO produced a dedicated application preparation software (KEAPS) to support online filing of applications. Applications are subject to an automated formalities check, before being automatically transferred to KIPO's examination system. A public key infrastructure (PKI) implementation, using electronic signatures and cryptography, is employed to ensure authenticity, security and reliability of online document filing.

448. The KIPOnet has improved the Office's patent administration by eliminating paper transfer and storage of dossiers, and their examination and administration efficiencies have increased by 12.7% and 10%, respectively. KIPOnet has reduced filing expenses by 210,000 Won (approx. US\$175) per 100 pages. The system is expected to reduce Gazette production costs by 70 billion Won (approx. US\$59 million) over the next five years, while eliminating 7,000 cases of carbon copy per year. Further, savings in foreign patent filing expenses of around 400 billion Won (approx. US\$340 million) are anticipated over the next decade. For users, the KIPOnet disseminates patent information free of charge.

449. In 2002, KIPO will expand its automation to its entire administration, including registration, trial, and opposition. With a view to future technological developments and harmonization in the international intellectual property system, KIPO is developing a more advanced information strategic plan to be operational by 2005.

(vi) *United States of America*

450. The United States Patent and Trademark Office (USPTO) has introduced electronic document systems to handle the more than 6,000 patent and trademark applications it receives each week, to reduce costs, to tackle a filing backlog and increase customer service.⁵⁷⁴ The Trademark Electronic Filing System (TEAS) was deployed in October 1998 and, since that time, over 150,000 applications have been electronically filed, representing about 30% of all filings.⁵⁷⁵ The electronic-filing system provides flexible user-friendly filing for applicants, with automated formality checks, and ensures more accurate database records in the Office. The TEAS is accompanied by a Trademark Data Entry and Update System (TRADEUPS) to capture character based trademark data elements, the Trademark In-House Publication System (TIPS) which creates the official Gazette and related products, and the Trademark Application and Registration Retrieval System (TARR) which allows users to access trademark application information. The USPTO relies on the Patent Application Location and Monitoring (PALM) system for electronic workflow management of patent and design applications.

451. For the future, the USPTO is moving ahead toward the development of an electronic file management system for trademarks and plans to begin implementation of e-Government operations in October 2003. Mr. Jim Rogan, Under Secretary of Commerce for Intellectual Property and Director of the USPTO, has emphasized his commitment to transforming the agency's trademark operation from a paper-based process to a fully electronic one.⁵⁷⁶ The USPTO plans an operational system to process patent applications electronically, including electronic image capture of all incoming and outgoing paper documents, for implementation by October 2004. In addition, it is planned to implement a Trademark Information System in order to eliminate the paper-working files that are still created from the electronic files.⁵⁷⁷ Plans are to provide a fully electronic filing, examination and issuance procedure, accompanied by a program of public awareness and training of the legal community.

(ii) **WIPO SERVICES**

452. The following portion of this Chapter describes developments with respect to four WIPO services that utilize digital technologies:

- (a) *WIPONET*
- (b) *The PCT Treaty and Procedure*
- (c) *The Madrid Agreement and Electronic Systems*
- (d) *The Hague Agreement and Electronic Systems*

(a) *WIPONET*

453. In March 1998, WIPO's Member States approved the establishment of a program, WIPONET, to put in place a global information network for Intellectual Property Offices.⁵⁷⁸ The goal of WIPONET is to support the deployment of adequate local infrastructure in Intellectual Property Offices, with special attention to those in developing countries, providing the necessary software and hardware that would allow these offices to connect to the Internet and to benefit from certain communication and information services. In conjunction with the deployment of the network, WIPO would provide technical expertise and assistance in areas of legal advice, infrastructure development, capacity building and training.

454. The idea behind this program was that all Offices in the world should be given access to electronic means of communication, intellectual property information and WIPO's information collections. As part of this program, WIPONET would also provide secure access to sensitive intellectual property data. The network is planned to connect 320 Intellectual Property Offices in 178 countries and will be based largely on existing worldwide communication infrastructures. Its implementation will introduce

greater efficiencies in the operations of the Intellectual Property Offices through the use of information technology and the possibility to use services provided by WIPONET itself, such as secure e-mail, list servers, web hosting and file transfer services and discussion groups on intellectual property topics.

455. WIPONET will equip some 154 Intellectual Property Offices that do not have Internet access with basic connectivity and core services. The services include virus scanning, e-mail, data exchange (for routine and confidential data), mailing lists and web hosting. WIPONET will also function as a portal for other WIPO-provided systems, including its Intellectual Property Digital Libraries (IPDLs). A key feature of WIPONET is its ability to provide for secure end-to-end transmission of confidential intellectual property data, which will facilitate the use of WIPO's international registration services for patents, trademarks and designs.

456. As a project, WIPONET project consists of two major components: (i) the establishment of a central facility, the WIPONET CENTER and the deployment of network services at WIPO's headquarters in Geneva, and (ii) the provision of Internet connectivity and computer equipment to Intellectual Property Offices of WIPO Member States, which are not yet online. WIPONET's implementation was planned in two main phases, the first of which began deployment in January 2001:

■ ■ ■ Phase I focuses mainly on setting up the Project's infrastructure at the International Bureau, establishing basic connectivity for those Member States with no Internet access and providing basic services. The approach to the development and installation of the physical aspect of the project is designed to support the needs for a network infrastructure that is both scalable and sustainable (i.e., that can be enlarged in size and supported as the needs change over time). In addition, during the deployment of Phase 1, connectivity will be provided to a nominated Intellectual Property office in those countries (approximately 66) which presently do not have Internet connectivity.

■ ■ ■ Phase 2 will cover deployment to the remaining nominated Intellectual Property Offices (approximately 88) not yet connected to the Internet, in Member States where Internet connectivity exists.

(i) *The WIPONET KIT*

457. The deployment of the WIPONET KIT (basic computer hardware, software, training and reliable Internet connectivity) has now been finalized in 48 offices of the 154 identified. This kit will enable the concerned Intellectual Property Offices to access the Internet and the WIPONET CENTER, as well as the services provided by the latter. The Intellectual Property Offices receiving the WIPONET KIT will also be able to take advantage of:

■ ■ ■ WIPO sponsored allocation of 360 hours of dial-up Internet access per year;

■ ■ ■ Secure communications over the public Internet;

■ ■ ■ Electronic mail, file transfer facilities, and other inter-office collaborative tools, together with managed support for these tools; and

■ ■ ■ Web hosting and support services: for Certain Intellectual Property Offices, centralized 'virtual' hosting will be made available. This means that for offices lacking the necessary technical capabilities, it will be possible to locate their systems on the computer servers of WIPONET, until these web services can be migrated to the local office servers upon acquisition of the technical capabilities by local personnel.

■ ■ ■ Help Desk services: WIPONET provides telephone and e-mail based support and help desk services to intellectual property offices.

(ii) *Future Development of WIPONET*

458. In its initial phase, WIPONET will only support activities that are undertaken between Intellectual Property Offices, as well as those between Intellectual Property Offices and the International Bureau. However, with the further evolution of technology systems, business models and intellectual property standards, WIPONET will serve also other purposes, including:

■ ■ ■ Electronic filing of applications for patents under the Patent Cooperation Treaty;

■ ■ ■ Electronic filing of applications for Trademarks under the Madrid System for the International Registration of Marks;

■ ■ ■ Electronic filing of industrial designs under the Hague System for the International Deposit of Industrial Designs;

■ ■ ■ Access to the Intellectual Property Digital Libraries (IPDLs) currently hosted by WIPO, with retrieval and display facilities for various intellectual property data collections. These collections include Hague, Madrid, PCT and JOPAL (non-patent reference) data;

■ ■ ■ Electronic exchange of administrative information under the global protection systems administered by WIPO, namely the Patent Cooperation Treaty, the Madrid Agreement and its Protocol, and the Hague agreement;

■ ■ ■ Distance learning systems managed by the WIPO Worldwide Academy designed to promote a better understanding of the intellectual property system and to assist and expedite human resource development in WIPO Member States.

459. WIPONET and WIPO's intellectual property services, now available on line, such as IPDLs, and those that will be available in the future, such as PCT-SAFE, provide a unique opportunity to prevent the widening of the gap between developed and developing countries in the access to and use of network-based systems. In the short term, this will be the most visible and immediate benefit of the system.

460. For this benefit to be realized, it is fundamental that the digital libraries to which WIPONET gives access are properly and timely updated. Moreover, it is necessary that the technology that underlies the system be kept up to date and that the facilities provided by the systems, hosted in different countries, are harmonized to the maximum extent. This task is clearly within WIPO's responsibility and that of the Offices that provide the digital libraries and similar network-based systems that are to be accessed via WIPONET. There is, however, a second aspect, which falls under the responsibility of the countries using the system. There is a strong need for skilled information and communication technology experts to make WIPONET successful and sustainable in the long term. While WIPONET foresees, in its deployment, a training program aimed at the development of the skills necessary for its use, skills and capabilities will need to be developed locally in order to sustain the future development of the system.

(b) *The PCT Treaty and Procedure*

461. The Patent Cooperation Treaty (PCT) is a multilateral treaty administered by WIPO that was concluded in Washington in 1970 and entered into force in 1978.⁵⁷⁹ The PCT facilitates the obtaining of protection for inventions where such protection is sought in any or all of the PCT Contracting States. It provides for the filing of one single patent application ("the international application"), with effect in several States, up to the total of those that have signed the Treaty (currently 115 States), instead of filing several separate national and/or regional patent applications.

462. At the present time, an international application may include designations for regional patents in respect of States party to any of the following regional patent treaties: the Protocol on Patents and Industrial Designs within the framework of the African Regional Industrial Property Organization (ARIPO), the Eurasian Patent Convention, the European Patent Convention, and the Agreement establishing the African Intellectual Property Organization (OAPI).

463. This first phase of the process is known as the "International Phase", and it is followed by the "National Phase". The PCT does not eliminate the necessity of prosecuting the international application in the national phase of processing before the national or regional Offices, but it does facilitate such prosecution thanks to the procedures carried out on the international application during the international phase.

464. During the international phase, the formalities check, the international search and (optionally) the international preliminary examination are carried out, as well as the automatic deferral of national processing that is entailed. The international search produces a Search Report (a listing of published documents that might affect the patentability of the invention claimed in the application), and, if requested, the preliminary examination produces a Preliminary Examination Report (applying the results of the international search to internationally accepted criteria for patentability). Both reports will be sent to the applicant and to the (national or regional) patent offices of the designated States, and the search report will be published by WIPO. After receiving the report(s), the applicant has time and a better basis for deciding whether and in what countries to further pursue the application, and this streamlines for him/her the procedures and reduces the costs.

(i) *Electronic Filing and Processing of PCT Applications*

465. Currently, the vast majority of data still arrives at WIPO on paper and, although this is less common, may then also be exchanged at a later date on paper between patent offices. Due to the massive amount of applications received and processed, WIPO has determined that the move towards full electronic processing of patent data from start to finish is an important priority. The shift to an electronic environment will enable WIPO to offer the possibility to PCT applicants to use new technologies and networked access, and to assist PCT offices and authorities in processing efficiently PCT applications. Therefore, WIPO is adapting the PCT information systems to enable the filing, processing, storage and dissemination of international applications, related documents and the data they contain in electronic form.

466. The needs of the PCT are different from those used by other industries engaged in e-commerce. The electronic filing system, which is being developed for the PCT, must take into account the specific needs of the patent community, and, at the same time, use to the maximum extent possible the existing technology. A system for electronic filing of patents will continue to ensure adequate protection of applicant's rights and lead to reductions in costs associated with processing and publication of the application.

(ii) *The Goals of the PCT-SAFE Project*

467. The PCT Secure Applications Filed Electronically (PCT-SAFE) project has two goals:

- A. Adopt a standard for the electronic filing and processing of international PCT applications, and
- B. Develop a system for the electronic filing of international applications.

These goals can be further described as:

- A. Adoption of standards and identification/resolution of legal issues:
 - ■ ■ create uniformity of application and availability for all offices in all situations;
 - ■ ■ establish rules and standards regarding the authentication of applicant and office that replace the actual hardcopy signature; and
 - ■ ■ use standards consistent with those generally accepted in electronic commerce and agreed by member States.
- B. Development of a system for the electronic filing of international applications:
 - ■ ■ develop a system that meets WIPO's broader automation activities;
 - ■ ■ enable offices to file electronically;
 - ■ ■ facilitate public confidence in the integrity and reliability of electronic records kept under the system;
 - ■ ■ provide the platforms for a fast reliable and more efficient means of communication between the community of applicants, national offices, the public and WIPO; and
 - ■ ■ promote solutions that are cost and complexity conscious, keeping in mind the variety of applicants who use the system.

(iii) *Electronic Filing Standards*

468. To provide the PCT with an electronic filing system, one of the first necessary steps was to establish a legal framework and technical standards for electronic filing and processing of applications. In fact, the information contained in the paper-form applications needs to be processed in order to be entered into the information system of the receiving Office. The processing of this data entails the data capture of procedural data (names, addresses, fee data, title of invention, etc) and application data (abstract, description, claims and drawings). The later data often involves costly data processing, capture and storage. It happens regularly that the same data is processed several times, because all the offices that transform paper information into electronic data use different computer systems, processes and software, but more importantly (or critically) they all use different methods of tagging shared data.

469. Therefore, a real need existed to standardize data exchange, especially for international applications, between the applicant and patent offices, and patent office to patent office. WIPO has, with the close cooperation of Member States and

interested parties, commenced development, from 2001, a suite of legal rules, regulations and Document Type Definitions for the electronic filing and processing of international applications. The goal of a general harmonization was met in 2001 with the publication of the legal framework and technical standard necessary to enable the implementation of electronic filing and processing of international applications.

470. The process of establishing the legal framework and the technical standards required five rounds of consultations, held under rules of the PCT Treaty, with receiving Offices, International Searching Authorities, International Preliminary Examining Authorities and designated and elected Offices, as well as consultations with organizations representing users of the PCT system. A succession of drafts was presented to the parties for revisions and comments and, finally, an agreed set of decisions were taken and translated into modifications of the Administrative Instructions under the Patent Cooperation Treaty (PCT), made under Rule 89.2(b) of the Regulations under the PCT, that were published in the PCT Gazette in Special Issue No. S-04/2001 on December 27, 2001, and came into effect on January 7, 2002.⁵⁸⁰

471. Since the legal framework and technical standards came into effect, on January 7, 2002, any PCT receiving Office having the necessary technical systems in place is able to decide to accept the filing of international applications in electronic form in accordance with Part 7 and Annex F. The receiving Office must notify, under the provisions of Section 710, the International Bureau of its requirements, and any such notification must then be promptly published by the International Bureau in the PCT Gazette. Details of those requirements are available on WIPO's website and in the PCT Applicant's Guide.⁵⁸¹

(iv) *Development of the system*

472. Steps are now being taken to realize the second goal, the development of the system to support the electronic filing of applications and related documents. Progress towards the development of this system, which is expected to be operational in December 2003, has been steady. The project officially commenced on January 1, 2002.

473. The PCT-SAFE project is divided into step 1 (PCT-SAFE Pilot) and step 2 (PCT-SAFE Implementation). The Pilot includes the finalization and entry into force of the contents of Part 7 and Annex F, which has been achieved, enabling receiving Offices with the necessary technical capacity to receive international applications in electronic form; the commencement of a prototyping iteration; a pilot program for an early version of the system that will enable the receipt from September 2002 by the International Bureau as receiving Office (RO/IB) of international applications in paper form, with parallel electronic submission. During the pilot, the new procedure will apply only to international applications filed with WIPO and to applicants specifically registered for the participation in the pilot and this will also imply a reduced filing fee. Upon conclusion of the pilot, the legal framework and the technical standards, along with the PCT-SAFE developments, will have been tested and modified to a level of maturity where it will be possible to begin electronic filing at the RO/IB, at which point the electronically filed application becomes the legal copy and paper is used at a secondary level.

474. During the PCT-SAFE Implementation step, the International Bureau as a receiving office will commence to receive applications in electronic form (March 2003); the Receiving Office (RO) server software will be made available to receiving Offices other than the RO/IB (summer 2003); finally, the release of the enterprise version of PCT-SAFE will be done in late 2003. The system design and planning is being tailored to integrate with the automation of the International Bureau and the Receiving Office /International Bureau stages of the IMPACT (Information Management for the Patent Cooperation Treaty) Project.

(v) *PCT-Easy*

475. The PCT-EASY is a sort of ancestor to the future PCT-SAFE. PCT-EASY stands for Patent Cooperation Treaty Electronic Application System, and a software that facilitates the preparation of international applications in electronic form. It was first released in 1999, and currently over 35% of all PCT filings are prepared using this software.

476. The current PCT-EASY version provides for the input of certain parts of an application, namely of a Request form module providing for the input and validation of Request form data and the attachment of the abstract in electronic form; a printout of a PCT computer generated Request form, replacing the existing PCT/RO/101 form for the purposes of PCT-EASY filing; and the possibility to copy the PCT-EASY Request form data file and attached abstract to diskette for submission in electronic form. However, the entire application must still be in paper form, which is the legal copy. In the near future, it will be possible to file PCT applications in electronic form, using an extended PCT-EASY software, that is, the Step 1 of the PCT-SAFE Project will use an extended PCT-EASY software that will enable the electronic filing.

477. PCT-EASY is available in all PCT publication languages: Chinese, English, French, German, Japanese, Russian and Spanish. This software can be downloaded from the Internet or obtained from the PCT-EASY Help Desk as a CD-ROM installation. Today, the International Bureau grants a CHF 200 fee reduction for applications prepared using PCT-EASY, and, in turn, benefits from reduced data input, faster formalities examination and other processing, as the request form data is in electronic format with minimal formal defects. As of January 1, 2002, 66 receiving Offices in the world have notified WIPO that they are prepared to accept the filing of international applications containing requests in PCT-EASY format together with PCT-EASY diskettes.

(vi) *The Automation of the PCT operations: IMPACT project*

478. WIPO has engaged in the renovation and implementation of systems that automate the entire operations related to the filing of applications for patents. If, at the front-end, the applicant will, in the near future, be given the possibility to file electronically an application from a remote location (as described in the preceding section of this Survey), in the background there will be a complex system to handle the application from the filing onwards. This system is being implemented at WIPO by a project named IMPACT (Information Management for the Patent Cooperation Treaty), and is aimed at automating PCT operations.

479. The project was launched in 1998 by the Assemblies of the Member States of WIPO, with the goal, as mentioned above, to fully automate the PCT operations, in order to modernize, and make more efficient and cost effective, these operations at the International Bureau, in particular with regard to the filing, receipt, processing, storage, publication and dissemination of international applications and related documents and data. A second objective is to further facilitate the use of the PCT system by, and to further improve services offered to, applicants, receiving Offices, International Searching Authorities, International Preliminary Examining Authorities, designated/elected Offices and, to a certain extent, the general public.

480. The gain in efficiency will ensure that the International Bureau has the capability to handle the ever-growing number of applications per year (e.g., the year 2001 increase over year 2000 was of 12.3%). In addition, the growing number of States adhering to the Treaty will presumably cause a further growth in applications per year. The implementation of the new system has important implications for WIPO: it will result in a redesigning of working methods and procedures for the Office of the PCT and a more flexible organizational structure, that will allow for innovative new functions and services to be introduced and developed, to the benefit of all users of the PCT system.

481. The Project has been planned in three phases: Phase I is called COR (Communication on Request); Phase 2, is called IB (International Bureau); and Phase 3 is IB/RO (International Bureau as a Receiving Office).

482. During Phase I, the IMPACT Communication System is developed, a new automated system for the communication by the International Bureau of certain PCT-related documents to designated/elected Offices. This system will allow the designated/elected Offices to view documents online, to download them or print them out, to submit online orders for documents and, finally, to have ordered documents delivered to their Office in electronic form (on CD/DVD or by E-mail), by fax or in paper form. The documents that will be handled by the new system are all related to PCT applications: Pamphlets (published international applications, including international search reports), Priority Documents, International Preliminary Examination Reports (IPERs), English translations of IPERs (elected Offices only), Declarations under PCT Rule 4.17, International Application Status Form (IASF) containing complete bibliographic data (certain data for elected Offices only).

483. Phase 2, the IB Phase, will result in the further automation of PCT operations at the International Bureau. An electronic document management system for handling the increasing number of international applications will be introduced and the internal work processes of the PCT Operations Department will be automated. The IMPACT development team for IB has been established, with around 15 software engineers, and the design and development of the system has started.

484. Finally, Phase 3 (RO/IB) will build on the functionality developed during the IB Phase in order to automate the operations in the PCT Receiving Office Section of the International Bureau.

485. Achieving the goal of automating PCT operations will generate enormous benefits for both WIPO and users of the PCT system: WIPO's operations will be more efficient and scalable to the ever increasing numbers in PCT applications, and applicants will enjoy a fast and efficient service, as well as reduced filing fees.

486. The International Patent Classification, commonly referred to as the IPC, is based on a treaty administered by WIPO. This treaty is the Strasbourg Agreement Concerning the International Patent Classification, which was concluded in 1971 and entered into force in 1975, and currently has 53 States party.⁵⁸² However, the industrial property offices of more than 100 States, four regional offices and the International Bureau of WIPO under the Patent Cooperation Treaty (PCT) actually use the IPC.

487. The Strasbourg Agreement provides for a common classification for patents for invention including published patent applications, inventors' certificates, utility models and utility certificates (hereinafter referred to as "patent documents"). The Classification was developed to provide a means for obtaining an internationally uniform classification of patent documents, and has, as its primary purpose, the establishment of an effective search tool for the retrieval of patent documents by patent offices and other users, in order to establish the novelty and evaluate the inventive step (including the assessment of technical advance and useful results or utility) of patent applications. In addition, it serves as:

- an instrument for the orderly arrangement of patent documents in order to facilitate access to the technological and legal information contained therein;
- a basis for selective dissemination of information to all users of patent information;
- a basis for investigating the state of the art in given fields of technology; and
- a basis for the preparation of industrial property statistics which, in turn, permit the assessment of technological development in various areas.

488. The text of the first edition of the Classification was established pursuant to the provisions of the European Convention on the International Classification of Patents for Invention of 1954. The Classification is periodically revised in order to improve the system and to take account of technical developments: a new edition is published every five years. Currently, the Classification is in its seventh edition (having entered into force on January 1, 2000), and it divides technology into eight sections with approximately 69,000 subdivisions. The revision is carried out by the IPC Committee of Experts set under the Strasbourg Agreement. All States party to the Agreement are members of the Committee of Experts.

489. The IPC exists in two authentic versions, English and French, which are published by WIPO. Complete texts of the IPC are also prepared and published in other languages. For example, the sixth edition of the IPC has been published in Chinese, Czech, German, Hungarian, Japanese, Korean, Polish, Russian and Spanish, by the respective industrial property offices.

490. In 1999, a process was launched to reform the IPC with a view to creating a reformed international patent classification system for the new millennium, including an accommodation of the IPC to the electronic age. The reform intends to introduce fundamental changes in the structure, methods of the revision and use of the Classification. Under the strategic plan for the development of the IPC, the architecture of the reformed IPC will consist of a two-level structure. The core level will serve the patent information needs of small patent offices, especially in developing countries, as well as the general public. The advanced level is designed to accommodate the information needs of large patent offices, such as International Searching Authorities under the PCT.

491. The initial phase of this reform was accomplished with the help of the International Patent Classification *bis* (IBIS) project which provided an adequate information technology infrastructure on which the longer term reform of the IPC could be based.

492. The continued reform of the IPC is currently being carried out with the help of the CLAIMS project, which will further advance the automation of the IPC. CLAIMS covers technical areas such as automated categorization (pre-classification and re-classification) of patent documents, computer-aided translation of IPC, in particular of the advanced level of IPC, enrichment and extension of the IBIS functions, and computer-aided training related to the use of IPC. Its main objectives are to support the industrial property offices of the Member States in the classification of their patent collections and to provide tools for sharing the results of re-classification done by large offices. The latter objective will be achieved through a Master Classification Database which will contain the classification (and application/publication/priority number) data of all the patent documents published anywhere in the world.

493. To achieve the two main goals of CLAIMS, the project must meet the following intermediate objectives:

- (i) Establish a master classification database in cooperation with the European Patent Office (EPO);
- (ii) Test tools for automatic categorization of patent documents, in particular the classification and re-classification of patent documents;
- (iii) Develop a self-learning system to support training for use of the reformed IPC;
- (iv) Implement a server-based computer-aided translation system, to support the translation of the advanced level of the reformed IPC; and
- (v) Integrate the abovementioned services into the IBIS system.

494. The result of the project will be an enhanced public availability of patent related information. CLAIMS will provide for improved access to the patent documentation for small/medium-sized and developing countries, and will make the IPC more available in various languages. Additionally, it will help decrease the workload related to the classification of patent documents.

(c) *The Madrid Agreement and Electronic Systems*

(i) *The Madrid Procedure*

495. The system of international registration of marks under the Madrid Agreement and Protocol (Madrid System) makes it possible to seek and obtain protection for a trademark simultaneously in a large number of countries by the filing of a single international application.⁵⁸³ The system enables the international registration of a mark by persons or businesses with the prescribed connection to a Contracting Party of the Madrid Agreement or its Protocol, once the mark has first been applied for (in the case of the Protocol) or registered (in the case of the Agreement and the Protocol) in the trademark office of that Contracting Party (the "office of origin"). An application for international registration must designate those Contracting Parties in which the mark is to be protected; others may be designated subsequently.

496. An application for an international registration is presented to WIPO's International Bureau through the office of origin. When an application complies with the applicable requirements, the mark is recorded in WIPO's International Register and published in the WIPO Gazette of International Marks. WIPO also notifies the trademark Office of each of the Contracting Parties in which protection has been requested, each Office has the right to refuse protection within the time limit specified in the Agreement (12 months) or Protocol (12 or 18 months). Unless a refusal is notified to WIPO within the applicable time limit, the protection of the mark in each designated Contracting Party is the same as if it had been registered by the office there. An international registration is subject to renewal every 10 years on payment of the prescribed fees.

(ii) *The Madrid System's Paperless Office*

497. The Common Regulations under the Madrid Agreement and its Protocol allow the International Register to be kept in electronic form.⁵⁸⁴ WIPO has developed information technology systems - a combination of software tools and electronic databases - to enable staff of the International Bureau and the users of the Madrid System to benefit from new efficiencies. WIPO now processes all international applications, subsequent designations, and all actions related thereto in a "paperless" environment. Paper documents are scanned and indexed immediately upon receipt by WIPO. The subsequent processing of the documents is based on their facsimile images which are accessible from computer workstations. From beginning to end, the facsimile images of the documents are under the control of an electronic process management system until processing is complete, the relevant data being entered in the (electronic) International Register. At this point, the facsimile image of each document is permanently archived to an optical storage device. During 2001, 23,985 international applications, 6432 subsequent designations, 91,285 decisions relating to a refusal of protection by the Office of a designated Contracting Party, 6504 renewals of international registrations and 46,792 requests to record changes in the International Register were handled in this way.

(iii) *Electronic Communications*

498. The rules of the Madrid System also allow for electronic communications between WIPO's International Bureau and the Offices of the Contracting Parties.⁵⁸⁵ The International Bureau has established, in cooperation with various interested Offices, a

standard for electronic communication based on XML (Extensible Markup Language) techniques. The resulting electronic communication standard is known as the MECA (Madrid Electronic Communication) system. In November 2002, 22 Offices (namely Australia, Austria, Benelux, Croatia, Cuba, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Japan, Norway, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom) were accessing official notifications in electronic form, while two Offices (Australia and Switzerland) also transmitted international applications and all other requests for recording in the International Register by electronic means. The challenge for WIPO is to persuade as many Offices as possible to establish electronic communication with the International Bureau, with the ultimate aim of reducing operating costs and offering Madrid System users a service that is speedier and still more cost-effective.

(iv) *Electronic Publication*

499. For the benefit of the users of the Madrid System, the International Bureau also issues various information products relating to the international registration of marks. The WIPO Gazette of International Marks, which is published every two weeks in paper form, is also published on CD-ROM on a four-weekly basis, thus enabling the searching of the Gazette by electronic means. The CD-ROM publication is cumulative over a calendar year, with the last CD-ROM published for a given year providing an annual index relating to the Gazette. The Gazette shows various events (new international registrations, subsequent designations, refusals, changes, renewals etc.) as they occur, as opposed to the state of the International Register at the given moment.

500. ROMARIN, a CD-ROM publication that contains data relating to all international registrations in force, is issued on the same four-weekly basis as the CD-ROM version of the WIPO Gazette. ROMARIN reflects the state of the International Register at a given moment. The ROMARIN CD-ROM includes a search engine enabling sophisticated searching of both bibliographic and image data. Subscribers to ROMARIN may also download from the Internet daily or weekly updates of changes made in the International Register but not yet included on the CD-ROM, thus ensuring that they have access to the most up-to-date information.

501. Data concerning all international registrations currently in force, as well as international applications and subsequent designations received but not yet recorded, are also made available for searching in electronic form on the Internet through the Madrid Express as part of the Industrial Property Digital Library (IPDL), at <http://ipdl.wipo.int>. Madrid Express is updated daily. In July 1998, the International Bureau launched an Internet-based data dissemination service, where all 'raw' data extracted from the International Register of marks for routine purposes such as publication and notification, are made available for downloading free of charge to anyone who wishes to do so. The data disseminated includes both bibliographic and image data (figurative elements of marks).

(d) *The Hague Agreement and Electronic Systems*

(i) *The Hague Procedure*

502. The Hague Agreement⁵⁸⁶ allows persons or companies in a State party to the Agreement to obtain industrial design protection in a number of countries through a simple and inexpensive procedure: a single "international" deposit, in one language, upon payment of a single set of fees. Unlike the Madrid System, an international deposit may be filed directly by the applicant with WIPO, and the international deposit does not require a previous national registration or filing.

503. Once an industrial design is the subject of an international deposit, it enjoys, in each State concerned, the same protection as is generally conferred on industrial designs by the law of that State, unless protection is expressly refused by a national office.⁵⁸⁷ The international deposit is thus equivalent to a national right in terms of its scope of protection and enforcement. At the same time, the international deposit facilitates the maintenance of protection: there is a single deposit to renew and one simple procedure for recording any changes (e.g., in ownership or address).⁵⁸⁸

504. Where an international deposit is received and complies with applicable requirements, the deposit is recorded in the International Register and published in the International Designs Bulletin, which serves the dual purpose of informing third parties as well as constituting the official notification to member countries of the Hague Union. An international deposit under the 1934 Act enjoys protection for an initial period of five years followed by a second period of ten years, resulting in a maximum period of protection of fifteen years. International deposits under the 1960 Act enjoy an initial period of protection of five years followed by supplementary periods of five years, resulting in a period equal to that afforded national deposits under the law of the Contracting Party concerned.

(ii) *Electronic Processing of Hague Deposits and Changes to the International Register*

505. WIPO uses computer technologies to process international deposits under the Hague System, as well as requests for subsequent changes in the International Register of Industrial Designs. In fact, the same computer platform that is used to process requests under the Madrid System is also used for the Hague System, with the exception that internal processing under the Hague System continues to be paper-based. Nevertheless, the processing of international deposits is undertaken in an efficient computerized environment to the benefit of Hague System users.

(iii) *Electronic Publication*

506. In March 1999, the International Bureau started publishing its International Designs Bulletin on CD-ROM. The CD-ROM is a monthly cumulative publication and contains bibliographic and image data relating to international deposits under the 1960 Act. Data concerning these deposits are available on line through Hague Express at <http://ipdl.wipo.int>; this database is updated monthly with each edition of the Bulletin. The paper version of the International Designs Bulletin was discontinued in 2002.

566. See, for example, the treatment of various strategic, management and technical considerations discussed in "Information Technology Strategic Implementation Plan," WIPO Standing Committee on Information Technologies, Document SCIT/4/2 (September 24, 1999) at <http://www.wipo.int/scit/en/meeting/4/2.pdf>.
567. See Message from the Director General, SCIT/4/2 (1999).
568. See Government On-Line: The Commonwealth Government's Strategy, at p.5 (April 2000), at <http://www.govonline.gov.au/>.
569. The online portal for IP Access, with links to IP Australia's online services for transactions, is at <http://www.ipaccess.gov.au>.
570. Source; Shana Corporation, at <http://www.shana.com>.
571. See also the EPO's presentation paper at <http://patentagenda.wipo.int/meetings/2002/presentations/bambridge.pdf>.
572. See <http://www.epoline.org>.
573. See <http://eportal.kipo.go.kr:8581/home/portal/ehtml/kiponet/eNetA01.html>.
574. See Brian Krebs, "Patent Office Battles Paper Tiger," Newsbytes, at <http://www.washingtonpost.com>, (May 9, 2002).
575. See the USPTO Trademark Electronic Application System (TEAS), at <http://www.uspto.gov/teas>.
576. See "Under Secretary Rogan Stresses e-Commerce in INTA Keynote," News@USPTO (May 20, 2002).
577. The USPTO will utilize private sector business expertise to provide new software and technology, see Margaret Kane, "Patent Office Gets E-Filing Help," CNET News, (June 18, 2002).
578. For further updated information about WIPONET, see http://www.wipo.int/it/en/index.html?wipo_content_frame=/it/en/projects/wiponet.htm.
579. The Patent Cooperation Treaty is available at <http://www.wipo.int/treaties/registration/index.html>.
580. These modifications have added a new Part 7 and a new Annex F to the Administrative Instructions containing, respectively, the legal framework and technical standard necessary to enable the implementation of electronic filing and processing of international applications under the PCT, as provided for by Rule 89bis.1. The standards have been published in the PCT Gazette - Special Issue S-04/2001, on December 27, 2001. The PCT and Regulations are available at <http://www.wipo.int/treaties/registration/pct/index.html>.
581. The PCT Applicant's Guide, PCT Gazette and related documentation is available at <http://www.wipo.int/pct/en/index.html>.
582. The Strasbourg Agreement is available at <http://www.wipo.int/treaties/classification/index.html>.
583. The Madrid System for the international registration of marks is governed by two treaties: The Madrid Agreement Concerning the International Registration of Marks, which dates from 1891, and the Protocol Relating to the Madrid Agreement, which came into operation on April 1, 1996. As of March 2002, there were 70 Contracting Parties to the Agreement or the Protocol or both. Information on the Madrid System, including texts of the Madrid Agreement, Protocol and Common Regulations, is available at <http://www.wipo.int/madrid/en/index.html>.
584. Rule 1(xxiv) of the Common Regulations under the Madrid Agreement and the Protocol provides that "International Register" means the collection of data maintained by the International Bureau, irrespective of the medium in which such data are stored.
585. Section 11 of the Administrative Instructions for the Application of the Madrid Agreement and Protocol provides that, where an Office so desires, communications between that Office and the International Bureau shall be by electronic means in a way agreed upon between the International Bureau and the Office concerned.
586. The Hague Agreement Concerning the International Deposit of Industrial Designs was signed in 1925 and entered into force in 1928, and was subsequently revised several times, in particular, in 1934 and 1960. An international deposit filed under the Hague Agreement today may, depending on the particular case, be governed by the 1934 or the 1960 Act. There are currently 29 member States party to one or both Acts. A new Act of the Hague Agreement was adopted on July 2, 1999, at a diplomatic conference held in Geneva. It is intended to make the procedures under the Hague system more responsive to the needs of users while incorporating certain provisions to accommodate the needs of examining offices. The Geneva Act of the Agreement is not yet in force; it will enter into force following ratification or accession by six countries, of which at least three must have more than a specified minimum level of activity in the field of industrial designs protection. The Hague Agreement is available at <http://www.wipo.int/treaties/registration/hague/index.html>.
587. Under the 1960 Act, each designated State has six months to notify a refusal of protection. Where no refusal is notified by a designated State within that time limit, the international deposit enjoys protection in that designated State.
588. Given the advantages of the Hague System, it is not surprising that international deposits have been increasing progressively to about 4,000 deposits a year. Nevertheless, the system is still underutilized, considering the large number of industrial designs being created and used around the world. Hence the conclusion of the Geneva Act mentioned above should serve to facilitate use of the system.

CHAPTER VII



VII. THE WIPO DIGITAL AGENDA

507. WIPO is, through its Member States, the Organization responsible for the development of a framework for the promotion and protection of intellectual property at the international level. In this era of rapid technological development, which relies heavily on the intellectual property system as a means of safeguarding the benefits resulting from those advancements, the mission of the Organization has become all the more important.

508. In September 1999, at WIPO's first International Conference on Electronic Commerce and Intellectual Property, the Director General of WIPO highlighted the Organization's focus on developments in information technology and the protection of intellectual property on the Internet by his announcement of the WIPO Digital Agenda, a plan of action for the Organization that was subsequently adopted by its Member States at their General Assembly held during the same month. The Agenda serves as a high-level overview of the areas in which the Organization anticipates it might be called upon to take action in the digital arena over the next several years. The Agenda's ten points, as they were announced by the Director General in September 1999, are set forth below.

1. Broaden the participation of developing countries through the use of WIPONET and other means for
 - ■ ■ access to IP information
 - ■ ■ participation in global policy formulation
 - ■ ■ opportunities to use their IP assets in eCommerce.
2. Entry into force of the WCT and the WPPT before December 2001.
3. Promote adjustment of the international legislative framework to facilitate e-commerce through
 - ■ ■ the extension of the principles of the WCT and WPPT to audiovisual works
 - ■ ■ the adaptation of broadcasters' rights to the digital era
 - ■ ■ progress towards a possible international instrument on the protection of databases.
4. Implement the recommendations of the Report of the WIPO Internet Domain Name Process and pursue the achievement of compatibility between identifiers in the real and virtual worlds through the establishment of rules for mutual respect and the elimination of contradictions between the domain name system and intellectual property rights.
5. Develop appropriate principles with the aim of establishing, at the appropriate time at the international level, rules for determining the circumstances of intellectual property liability of Online Service Providers (OSPs) which are compatible and workable within a framework of general liability rules for OSPs.
6. Promote adjustment of the institutional framework for facilitating the exploitation of intellectual property in the public interest in a global economy and on a global medium through administrative coordination and, where desired by users, the implementation of practical systems in respect of
 - ■ ■ the interoperability and interconnection of electronic copyright management systems and the metadata of such systems
 - ■ ■ the online licensing of the digital expression of cultural heritage
 - ■ ■ the online administration of IP disputes.
7. Introduce online procedures for the filing and administration of international applications for the PCT, the Madrid System and the Hague System at the earliest possible date.
8. Study and, where appropriate, respond in a timely and effective manner to the need for practical measures designed to improve the management of cultural and other digital assets at the international level by, for example, investigating the desirability and efficacy of
 - ■ ■ model procedures and forms for global licensing of digital assets
 - ■ ■ the notarization of electronic documents

■■■ the introduction of a procedure for the certification of websites for compliance with appropriate intellectual property standards and procedures.

9. Study any other emerging intellectual property issues related to electronic commerce and, where appropriate, develop norms in relation to such issues.

10. Coordinate with other international organizations in the formulation of appropriate international positions on horizontal issues affecting IP, in particular

■■■ the validity of electronic contracts
■■■ jurisdiction.

509. Three years having passed since the adoption of the Digital Agenda, it is timely to provide a report on the status of activities at WIPO in relation to those topics where significant developments have occurred. Most of the topics covered in the following paragraphs are elaborated upon in greater detail in other portions of this paper.

Broaden the participation of developing countries through the use of WIPONET and other means for access to IP information, participation in global policy formulation and opportunities to use their IP assets in e-commerce.

510. The goal of WIPONET is to interconnect 320 intellectual property offices located in 178 countries. The implementation of the network, which will be based largely on existing worldwide communication infrastructures, is expected to introduce greater efficiencies into the operations of the intellectual property system through increased use of information technology. Specifically with a view to assisting developing countries, WIPONET will equip some 154 intellectual property offices that do not have Internet access with basic connectivity and core services.

511. Deployment of WIPONET started in January 2001 with the establishment at WIPO's Headquarters in Geneva of a central facility, the WIPONET CENTER. In parallel, the deployment of the WIPONET KIT (basic computer hardware, software, training and reliable Internet connectivity) started and has been delivered to some 48 offices of the 154 identified. This kit will enable those intellectual property offices which are not yet online to be given access to the Internet and to the WIPONET CENTER, as well as to the services offered by the latter.

Entry into force of the WCT and the WPPT before December 2001.

512. The WCT entered into force on March 6, 2002 and the WPPT on May 20, 2002, each after having been acceded to or ratified by 30 countries. At the time of publication of this paper, several additional countries have acceded or ratified the treaties with the total number of accessions or ratifications now standing at 38 for the WCT and 38 for the WPPT. It is notable that the countries that have adhered to the treaties include both developing and developed countries.⁵⁸⁹ The entry into force of the treaties is considered a major historical achievement in terms of the international copyright system. With a view to the future, WIPO is committed to working towards the broadest possible adherence to the treaties around the world, so that the norms which they embody may become universally accepted, as well as to their proper implementation in national legislation.

Promote adjustment of the international legislative framework to facilitate e-commerce through the extension of the principles of the WCT and WPPT to audiovisual works, the adaptation of broadcasters' rights to the digital era and progress towards a possible international instrument on the protection of databases.

513. A WIPO Diplomatic Conference on the protection of audiovisual performances was held in December 2000. While an understanding was reached on most substantive issues, the question of international recognition of transfers of rights was not resolved, which prevented the parties from adopting a treaty on the subject matter. The issue, however, remains on WIPO's agenda and efforts are being made to bridge the remaining differences and to find possible ways for an evolution in the negotiations.

514. Concerning the rights of broadcasting organizations, discussions are ongoing at WIPO with a view to a possible international instrument on a broad range of issues, including the object, nature and scope of possible protection, as well as its beneficiaries.

515. With regard to the protection of non-original databases, the latest developments include the commissioning and receipt by WIPO of a number of studies on the economic impact of international database protection on developing countries and countries

in transition, as well as on Latin American and Caribbean countries. It is expected that discussions at WIPO on the principle of protecting non-original databases, as well as on the form that such protection might take, will need to continue for some time before an agreement can be reached.

Implement the recommendations of the Report of the WIPO Internet Domain Name Process and pursue the achievement of compatibility between identifiers in the real and virtual worlds through the establishment of rules for mutual respect and the elimination of contradictions between the domain name system and intellectual property rights.

516. The principal recommendations of the Report of the first WIPO Internet Domain Name Process were implemented through the adoption by the Internet Corporation for Assigned Names and Numbers (ICANN) of the Uniform Domain Name Dispute Resolution Policy (UDRP) on August 26, 1999. This procedure, which entered into operation in December 1999, provides holders of trademark rights with an administrative mechanism for the efficient resolution of disputes arising out of the bad faith registration and use by third parties of Internet domain names corresponding to those trademark rights. The UDRP now applies to disputes in the gTLDs *.com*, *.net*, and *.org*, the new gTLDs *.aero*, *.biz*, *.coop*, *.info*, *.museum*, *.name*, and *.pro*, and those ccTLDs that have adopted the Policy on a voluntary basis.

517. Since its entry into force, the UDRP has become widely regarded as the primary means of combating trademark cybersquatting in the gTLDs, with approximately 8,000 cases filed under the procedure. Of those, more than 4,500 have been filed with the WIPO Arbitration and Mediation Center, the procedure's leading dispute resolution service provider.

518. While the focus of the UDRP is to protect trademarks against their abusive registration as domain names, it became clear, already at the time the first WIPO Internet Domain Name Process was conducted in 1998, that identifiers other than trademarks also were the subject of abuse in the DNS. In order to address these outstanding problems, the WIPO Member States requested the Organization to conduct the Second WIPO Internet Domain Name Process, which was launched in the summer of 2000 and covered issues arising from the bad faith, abusive, misleading or unfair registration or use, as domain names, of:

- international nonproprietary names (INNs) for pharmaceutical substances;
- names of international intergovernmental organizations (IGOs);
- personal names;
- geographical indications, indications of source and geographical terms; and
- trade names.

519. The final Report of the Second WIPO Process, titled "The Recognition of Rights and the Use of Names in the Internet Domain Name System," was published on September 3, 2001, and submitted to WIPO's Member States and the Internet community (available at <http://wipo2.wipo.int/process2/report>). A decision was taken by the WIPO Member States at their Assemblies in September 2001 to subject the Report to a comprehensive analysis by the WIPO Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications. After holding two special sessions for this purpose, the Standing Committee formulated recommendations that were considered by the WIPO General Assembly at its meeting from September 23 to October 1, 2002.

520. The WIPO General Assembly reached decisions on the issues addressed in the Second WIPO Internet Domain Name Process, on the basis of each of the recommendations of the SCT, as follows:

- it adopted the recommendation with respect to INNs, that no particular form of protection of INNs would be recommended in the DNS at this time, but that WIPO, together with the World Health Organization (WHO), would continue to monitor the situation and, where necessary, bring any important developments in this area to the notice of Member States;
- it adopted the recommendation with respect to trade names, that Member States should keep this issue under review and raise it for further discussion if the situation so required;
- it adopted the recommendation with respect to personal names, that no action is recommended in this area;
- it adopted the recommendation with respect to geographical indications, that this issue be reverted to the regular session of the SCT to decide how to address the issue of the protection of geographical indications in the DNS;

■■■ it adopted the recommendation with respect to the names and acronyms of IGOs, that the UDRP should be amended to allow complaints to be filed by international organizations under certain circumstances, while taking into account the privileges and immunities of these intergovernmental organizations under international law. In addition, the General Assembly instructed the Secretariat to transmit this recommendation to the Internet Corporation for Assigned Names and Numbers (ICANN). The Delegation of the United States of America dissociated itself from this decision; and

■■■ concerning the recommendation with respect to country names (the SCT had noted that most Member State Delegations favored some form of protection for country names against registration or use by persons unconnected with the constitutional authorities of the country in question), it noted that all Delegations supported the recommendation, with the exception of Australia, Canada and the United States of America. It noted, however, that a number of issues regarding the modalities of protection of country names in the DNS warranted further discussion,⁵⁹⁰ and decided that these discussions should be continued in the SCT with a view to reaching a final position.

521. At the request of its Member States, WIPO also established the WIPO ccTLD Program, which aims to enhance the protection of intellectual property in the ccTLDs through cooperation with their administrators. As part of this Program, WIPO has provided advice and assistance to administrators of ccTLDs on the management of intellectual property issues in their domains through: (1) the publication of the WIPO ccTLD Best Practices for the Prevention and Resolution of Intellectual Property Disputes (a voluntary set of minimum standards for intellectual property protection in the ccTLDs, available at <http://ecommerce.wipo.int/domains/cclds/bestpractices/index.html>), (2) counseling ccTLD administrators who seek intellectual property advice from WIPO, and (3) advising ccTLD administrators on the conduct of national consultations that draw inspiration from the first and Second WIPO Internet Domain Name Processes.

522. As a result of the WIPO ccTLD Program, alternative dispute resolution (the UDRP in particular) has increasingly gained ground in the ccTLDs. To date, 28 administrators of ccTLDs have retained the WIPO Arbitration and Mediation Center as dispute resolution service provider on the basis of the UDRP or a variation thereof.⁵⁹¹

Develop appropriate principles with the aim of establishing, at the appropriate time at the international level, rules for determining the circumstances of intellectual property liability of Online Service Providers (OSPs) which are compatible and workable within a framework of general liability rules for OSPs.

523. A Workshop on OSP liability was organized by WIPO on December 9 and 10, 1999, to explore the issues concerned. Particular attention was devoted to the notice and takedown provisions of the United States Digital Millennium Copyright Act, one year after its enactment, as well as to the views from OSPs, telecommunications industries and the recording industry on the practice of notice and take-down agreements in Europe. The enormous challenges posed by Internet piracy of copyrighted materials, the difficulties which the Internet posed for the traditional mechanisms of rights enforcement and the positive experiences gained with existing notice and takedown systems in certain jurisdictions, as well as the success of other alternative means of enforcing intellectual property rights on the Internet, such as the UDRP, may point toward future developments in this area.

Promote adjustment of the institutional framework for facilitating the exploitation of intellectual property in the public interest in a global economy and on a global medium through administrative coordination and, where desired by users, the implementation of practical systems in respect of (1) the interoperability and interconnection of electronic copyright management systems and the metadata of such systems, (2) the online licensing of the digital expression of cultural heritage, and (3) the online administration of IP disputes.

524. Technical protection measures and digital rights management systems are regarded by rightsholders as key elements of their response to the challenges posed by the Internet for the exploitation of their rights. These systems hold the promise not only of achieving greater respect for the rights concerned in the online environment, but also of facilitating access to online material. Over the last several years, there has been a veritable explosion in the development of digital rights management systems for managing content in the music, audiovisual and publishing industries. Since the publication of the WIPO Digital Agenda, WIPO has liaised with a number of rights management systems providers and other interested parties with a view to exploring the potential for providing appropriate support, as a neutral third party, to the development of interoperability between them.

525. With regard to the online licensing of the digital expressions of cultural heritage, WIPO has provided intellectual property advice to several cultural heritage institutions located in countries that are members of the Organization, with a particular focus on the Arab region. WIPO also has commissioned a study by the International Intellectual Property Institute on the subject matter, published in 2001, and entitled "Managing Museum Digital Assets: A Resource Guide For Museums."

526. In part as a result of WIPO's Internet Domain Name Processes and the activities of the WIPO Arbitration and Mediation Center in the area of domain name disputes, the use of online procedures for resolving disputes arising in the networked environment is now much more widely accepted than it was at the time of publication of the WIPO Digital Agenda. This is illustrated by the fact that such procedures increasingly are relied upon in other Internet-based industries, such as, for instance, application service providers⁵⁹² and keyword providers.⁵⁹³

Introduce online procedures for the filing and administration of international applications for the PCT, the Madrid System and the Hague System at the earliest possible date.

527. The introduction of online procedures for the filing and administration of international applications under the PCT consists of two projects: PCT-SAFE (Secure Applications Filed Electronically), which focuses on enabling the electronic filing of applications, and IMPACT (Information Management for Patent Cooperation Treaty), devoted to automating the processing of applications from their filing onwards.

528. PCT-SAFE has two goals, namely the introduction of a common standard for data exchange between the applicant, patent offices and the WIPO Secretariat, and the development of an information technology platform to support the filing of electronic applications and related documents. After consultations with all interested parties, including users of the PCT, agreement was reached at the end of 2001 on a Standard for the Electronic Filing and Processing of International Applications, which has come into effect in early 2002. Since that date, any PCT receiving Office having the necessary technical systems in place is able to decide to accept the filing of international applications in electronic form.

529. IMPACT was launched in 1998 by the Assemblies of the Member States of WIPO, with the goal to fully automate the PCT operations, in order to modernize, and make more efficient and cost effective, these operations at the WIPO Secretariat, in particular with regard to the filing, receipt, processing, storage, publication and dissemination of international applications and related documents and data. The Project has been planned in three phases: Phase 1 is called COR, Communication on Request; Phase 2, is called IB, International Bureau, and Phase 3 is IB/RO, International Bureau as a Receiving Office. During Phase 1, the IMPACT Communication System is developed, a new automated system for the communication by the Secretariat of certain PCT-related documents to designated/elected Offices. Phase 2, the IB Phase, will result in the further automation of PCT operations at the WIPO Secretariat. An electronic document management system for handling the increasing number of international applications will be introduced and the internal work processes of the PCT Operations Department will be automated. Finally, Phase 3 (RO/IB) will build on the functionality developed during the IB Phase in order to automate the operations in the PCT Receiving Office Section of the WIPO Secretariat.

530. The processing by the WIPO Secretariat of international applications filed under the Madrid System and, to a lesser degree, those under the Hague Systems, have been supported by information technology systems for many years.⁵⁹⁴ Since the publication of the Digital Agenda, there has been a steady increase in the number of Member States involved in the use of the electronic means supporting the procedures of the Madrid System. Under these procedures, the Secretariat is currently making available notification data and images electronically to the Offices of 23 Member States.⁵⁹⁵ In 1996, there were some 10 Member States receiving such data electronically. Further, the national Offices of two Member States are using the same electronic standard also for transmitting data to the Secretariat in the context of the Madrid procedures, i.e. Australia and Switzerland. In the course of 2002, the Benelux Office will commence doing so as well.

Coordinate with other international organizations in the formulation of appropriate international positions on horizontal issues affecting IP, in particular the validity of electronic contracts and jurisdiction.

531. Significant efforts have been made during the last several years to reach agreement on an international instrument on jurisdiction and enforcement of judgments, particularly in the framework of the Hague Conference on Private International Law, through negotiations on the draft Convention on Jurisdiction and Enforcement of Judgements in Civil and Commercial Matters. The possible inclusion of provisions regarding intellectual property in the draft convention has been the subject of much discussion. In January 2001, WIPO organized a Forum on Private International Law and Intellectual Property,⁵⁹⁶ focusing not only on questions of jurisdiction and enforcement of judgments, but on a broader range of private international law topics concerned with intellectual property, including questions of applicable law, in order to provide its Member States and the international intellectual property community with an opportunity to hear from prominent thinkers in the field and to exchange views on the subject matter. The Forum was a first step in the process of identifying possible intellectual property-specific issues for international cooperation in the sphere of private international law.

589. Among the developing countries that have ratified or acceded to the WCT and/or WPPT are Albania, Argentina, Belarus, Bulgaria, Burkina Faso, Chile, Colombia, Costa Rica, Croatia, Czech Republic, Ecuador, El Salvador, Gabon, Georgia, Guinea, Honduras, Hungary, Indonesia, Jamaica, Kyrgyzstan, Latvia, Lithuania, Mali, Mexico, Mongolia, Panama, Paraguay, Peru, Philippines, Republic of Moldova, Romania, Saint Lucia, Senegal, Slovakia, Slovenia and Ukraine.
590. These issues concern, in particular: (1) the list to be relied upon to identify the names of countries which would benefit from the protection envisaged; (2) the extension of the deadline for the notification to the Secretariat of names by which countries are commonly known; and (3) how to deal with acquired rights.
591. The ccTLDs in question are .AC (Ascension Island), .AE (United Arab Emirates), .AG (Antigua & Barbuda), .AS (American Samoa), .AU (Australia), .BS (Bahamas), .BZ (Belize), .CC (Cocos Islands), .CY (Cyprus), .EC (Ecuador), .FJ (Fiji), .GT (Guatemala), .LA (Lao People's Democratic Republic), .MD (Republic of Moldova), .MX (Mexico), .NA (Namibia), .NU (Niue), .PA (Panama), .PH (Philippines), .PN (Pitcairn Island), .RO (Romania), .SC (Seychelles), .SH (St. Helena), .TT (Trinidad and Tobago), .TV (Tuvalu), .UG (Uganda), .VE (Venezuela) and .WS (Western Samoa).
592. See <http://arbiter.wipo.int/asp/disputes/index.html>.
593. See <http://arbiter.wipo.int/keywords/index.html>.
594. For a more detailed description of the technology systems in question, see paras.494 -505.
595. The Member States in question are: Australia, Austria, Benelux (Belgium, Luxembourg and the Netherlands), Cuba, the Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Japan, Norway, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.
596. For the program and papers of this Forum, see http://www.wipo.int/news/en/index.html?wipo_content_frame=/news/en/conferences.html.



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