

**Council for Trade-Related Aspects
of Intellectual Property Rights**

THE WORK PROGRAMME ON ELECTRONIC COMMERCE

Background Note by the Secretariat

I. INTRODUCTION

1. The Declaration on Global Electronic Commerce, adopted on 20 May 1998 by Ministers at the second session of the Ministerial Conference¹, urged the General Council to establish a comprehensive work programme to examine all trade-related issues relating to global electronic commerce, taking into account the economic, financial, and development needs of developing countries, and to report on the progress of the work programme, with any recommendations for action, to the Third Session.

2. At its meeting on 25 September 1998, the General Council established a Work Programme on Electronic Commerce² for the relevant WTO bodies, namely the Council for Trade in Services, the Council for Trade in Goods, the Council for TRIPS and the Committee for Trade and Development. Further issues may be taken up at the request of Members by any of these bodies. Other WTO bodies shall also inform the General Council of their activities relevant to electronic commerce. The General Council shall play a central role in the whole process and keep the Work Programme under continuous review through a standing item on its agenda. In addition, the General Council shall take up consideration of any trade-related issue of a cross-cutting nature. The General Council will conduct an interim review of progress in the implementation of the Work Programme by 31 March 1999. The four WTO bodies mentioned above shall report or provide information to the General Council by 30 July 1999.

3. Furthermore, the Work Programme provides that, in undertaking their work, the bodies concerned should take into account the work of other intergovernmental organizations. Consideration should be given to possible ways of obtaining information from relevant non-governmental organizations.

4. Paragraph 4.1 of the Work Programme provides that the Council for TRIPS shall examine and report on the intellectual property issues arising in connection with electronic commerce. The issues to be examined shall include:

- protection and enforcement of copyright and related rights;
- protection and enforcement of trademarks;
- new technologies and access to technology.

5. At its meeting of 1 and 2 December 1998, the Council for TRIPS requested the Secretariat to prepare a factual background note examining the provisions of the TRIPS Agreement relevant to

¹ Document WT/MIN(98)/DEC/2.

² Document WT/L/274.

paragraph 4.1 of the Work Programme on Electronic Commerce. Since many of these issues are already under discussion in the World Intellectual Property Organization (WIPO) and other intergovernmental organizations, it was agreed that the note should also provide information on their relevant activities.

6. This note has been prepared in response to the above-mentioned request. It follows the structure of the TRIPS Agreement, although certain related provisions are discussed together even when they appear in different parts of the Agreement. While it can be argued that virtually all of the provisions of the Agreement are relevant to the protection and enforcement of intellectual property rights even in the digital network environment, the discussion focuses on those provisions that appear to be most closely linked with the issues referred to in the Work Programme, with a special emphasis on the issues specifically referred to in paragraph 4.1 of the Programme. The list of relevant issues discussed in this note is not intended to be exhaustive, and new issues are likely to emerge as more experience is gained with trade over communications networks.

7. In the context of examining the relevant provisions of the TRIPS Agreement, certain issues are discussed that arise from the "borderless" nature of the Internet, which relate, *inter alia*, to the application of territorially based laws and regulations to activities carried out on a global network. Some of these issues are specific to intellectual property, such as the criteria for determining which persons are entitled to protection and the notion of country of origin in the area of copyright and related rights, and the application of a number of provisions on trademarks. However, other issues are more general in nature and concern also other areas of law, such as questions about jurisdiction.

8. The final section of this note contains a brief overview of the relevant activities of WIPO and other intergovernmental organizations.

9. As provided in paragraph 1.3 of the Work Programme, the term "electronic commerce" is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means. This note focuses essentially on the implications of such transactions for the protection and enforcement of intellectual property rights. In addition, it discusses how the technology used for electronic commerce can also be used to modernize and improve the efficiency of the management, administration and enforcement of those rights. In accordance with paragraph 1.3 of the Work Programme, this note also considers intellectual property issues relating to the development of the infrastructure for electronic commerce.

II. PREAMBLE

10. The expected growth of electronic commerce is closely linked with the growing importance of intellectual property. Indeed, much of the trade on the Internet and other electronic communications networks involves the selling or licensing of information, cultural products and technology protected by intellectual property rights. For consumers who buy products and services at a distance, it may be increasingly necessary to rely on the reputation attached to trademarks and other distinctive signs. Intellectual property plays an important role also in promoting the development of the infrastructure of communications networks.

11. The general goals of the TRIPS Agreement are contained in the Preamble of the Agreement, which reproduces the basic Uruguay Round negotiating objectives established in the TRIPS area by the 1986 Punta del Este Declaration and the 1988/89 Mid-Term Review. These goals include the reduction of distortions and impediments to international trade, promotion of effective and adequate protection of intellectual property rights, and ensuring that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade. The Preamble also recognizes the underlying public policy objectives of national systems for the protection of intellectual property, including developmental and technological objectives. These goals should be

read in conjunction with Article 7, entitled "Objectives" and Article 8, entitled "Principles", which will be discussed below.

12. The basic notions, principles and objectives of intellectual property have survived over a century of rapid economic, social and technological change. The traditional objectives of the system as reflected in the current international norms, including in the TRIPS Agreement, would appear to remain valid even in "cyberspace". This would suggest that the fulfilment of the obligations of the TRIPS Agreement through its implementation would have an important role in facilitating the development of electronic commerce and the necessary infrastructure.

13. On the other hand, technological and economic developments have often prompted adjustments to existing types of intellectual property rights, and the creation of new types of rights, as well as giving rise to new problems of enforcement. In the course of the Uruguay Round negotiations on the TRIPS Agreement, the main new issues that had arisen by that time in relation to digital technology were addressed, and provisions regulating them were included in the final text of the Agreement. These include copyright protection of computer programs and databases, rental rights in respect of computer programs and phonograms and, in certain situations, cinematographic works, and protection of the layout-designs of integrated circuits.

14. However, the TRIPS negotiations were largely over by December 1991 with the publication of a consolidated text of the Agreement as part of the "Draft Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations", the so-called "Dunkel draft". By that time, the implications of global digital networks for the protection and enforcement of intellectual property rights were not yet an issue before the international community and were, therefore, not specifically addressed in the negotiations. However, given the technologically neutral language used in the TRIPS Agreement, its provisions are generally relevant also in the digital network environment. Since these negotiations, the implications of the exploitation of protected subject-matter for such networks have come to the fore in international discussions. The question that has arisen in this context is whether the norms contained in the TRIPS Agreement provide "effective and adequate protection of intellectual property rights" in respect of the new forms of exploitation made possible by means of interactive digital networks. As indicated in the Work Programme adopted by the General Council, this question appears to arise in particular in respect of the protection and enforcement of copyright and related rights as well as trademarks, issues that will be examined below.

15. Given the global nature of the Internet and other digital networks, a related question that arises is whether differences in the way in which new forms of exploitation of protected subject-matter in the digital network environment are addressed in legislation and case law at the national level may result in increased distortions of and impediments to international trade.

16. While examining some of the new challenges posed by global communications networks to the protection and enforcement of intellectual property rights, we should also bear in mind the great new opportunities such networks provide to facilitate international trade in subject-matter protected by intellectual property rights. For example, the Internet may give consumers a wider choice of information and cultural products protected by copyright and related rights irrespective of their place of residence, and for authors, publishers and producers, it may lower the costs of and barriers to entering the global market. Transaction costs and transaction times are likely to fall rapidly. However, this positive scenario requires that governments and the private sector be able to find and implement a proper mixture of regulatory, contractual and technological measures, and to ensure adequate public awareness of the role of copyright and related rights in the information society.

III. GENERAL PROVISIONS AND BASIC PRINCIPLES

(a) General

17. Like the pre-existing international intellectual property conventions, the TRIPS Agreement is a minimum standards agreement. It leaves Members free to provide more extensive protection of intellectual property in regard to new forms of exploitation of protected subject-matter at the national or international level - whether bilateral, regional, or multilateral, such as in WIPO. This is made clear in *Article 1.1* of the Agreement, which provides that Members may, but shall not be obliged to, implement in their law more extensive protection than is required by the Agreement, provided that such protection does not contravene the provisions of the Agreement. Such protection must be accorded to the nationals of other Members in accordance with *Articles 3, 4 and 5* of the Agreement, which contain the fundamental rules of national and most-favoured-nation treatment.

18. As in the main pre-existing intellectual property conventions, the basic obligation on each Member country is to accord the treatment in regard to the protection of intellectual property provided for under the Agreement to the persons of other Members. *Article 1.3* of the Agreement defines who these persons are. These persons are referred to as "nationals" but include persons, natural or legal, who have a close attachment to other Members without necessarily being nationals. The criteria for determining which persons must thus benefit from the treatment provided for under the Agreement are those laid down for this purpose in the main pre-existing intellectual property conventions of WIPO, applied of course with respect to all WTO Members whether or not they are party to those conventions.³ The application of certain of these criteria in respect of use of works and phonograms on the Internet is discussed below in the section concerning copyright and related rights.

19. The distribution of products protected by copyright, trademarks or other intellectual property rights is often conducted by the right holder, including through licences, on a territorial basis. Such distribution and licensing arrangements are supported in many jurisdictions by laws on the exhaustion of distribution rights which enable right holders to prevent parallel importation of protected products put on the market in other countries. *Article 6* of the TRIPS Agreement provides that, for the purposes of dispute settlement, nothing in the Agreement shall be used to address the issue of the exhaustion of intellectual property rights, provided that the national treatment and most-favoured-nation treatment obligations are complied with.

20. The global nature of the Internet and electronic commerce using it may have implications for territorial arrangements for the distribution of products protected by intellectual property rights. While consumers have long been able to order goods from other countries by means of mail, telefax or telephone, the possibility of ordering goods over the Internet is considerably increasing such commerce. Traditional delivery by mail of products directly to consumers across borders already has implications, given the difficulty of ascertaining territorial rights in respect of such transactions. When the delivery takes place in electronic form over the Internet, the implications may well be greater.

(b) New technologies and access to technology

21. One of the issues mentioned in paragraph 4.1 of the Work Programme concerns new technologies and access to technology. The objectives of promoting the development of new technology and the transfer and dissemination of technology are referred to in *Article 7* of the

³ These are: the Paris Convention for the Protection of Industrial Property, the Stockholm Act of 14 July 1967; the Berne Convention for the Protection of Literary and Artistic Works, the Paris Act of 24 July 1971; the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, adopted at Rome on 26 October 1961 (the Rome Convention); and the Treaty on Intellectual Property in Respect of Integrated Circuits, adopted at Washington on 26 May 1989 (the IPIC Treaty).

Agreement, entitled "Objectives". It says that "the protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations".

22. The protection of intellectual property, in particular of patents, as well as of copyright, layout-designs of integrated circuits, and undisclosed information, plays an important role in promoting the technological development of the infrastructure for electronic communications networks, i.e. the software, hardware and other technology that make up information highways. IPRs provide protection to the results of investment in the development of new information and communications technology, thus giving the incentive and the means to finance research and development aimed at improving such technology.

23. A functioning intellectual property regime facilitates access to technology through transfer of information and communications technology in the form of foreign direct investment, joint ventures and licensing. The objectives of promoting technological innovation and the transfer of technology are usually mutually consistent since right holders are generally more willing to transfer technology voluntarily where a country's IPR system provides effective protection, even though the importance of IPRs varies across different activities and industries. In certain cases such as joint ventures or technology licensing, IPRs in the home market might also increase the willingness of those demanding the technology to acquire it. Thus, IPRs can contribute positively to technology transfer and the development of the communications infrastructure in these situations both from the perspective of the technology supplier and those demanding it. Of course, the protection of IPRs is only one of the factors which affect the transfer of technology.

24. One of the basic objectives of the patent system is to facilitate the dissemination of technological knowledge by encouraging inventors to disclose new technology rather than attempt to keep it secret. The disclosure requirement contained in *Article 29.1* of the Agreement has a number of important consequences for the transfer of and access to technology because the resulting information, which is stored and classified in patent documentation, is accessible to anyone, including to those in countries where a patent has not been sought, and "constitutes the single most valuable and comprehensive source of technology available in the world today".⁴ Communications networks are increasingly used for improving the communication between national, regional and international intellectual property offices (patent and trademark offices), and also between information stored in such offices and persons interested in it. This will facilitate access from anywhere in the world to the valuable and extensive technological information contained in patent documents.⁵ Information technology is also used to improve the efficiency of intellectual property offices in other ways. Such modernization benefits the clients of these offices in the form of better and faster services, including shorter periods in acquiring intellectual property rights.

25. Furthermore, it should be noted that *Article 66.2* of the Agreement requires developed country Members to "provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base".

26. The provisions of the TRIPS Agreement on anti-competitive practices may also be relevant for the transfer of technology. The Agreement recognizes the right of governments to take appropriate measures to address anti-competitive uses of the rights protected by the Agreement,

⁴ WIPO, Background Reading Material on Intellectual Property, WIPO, 1988.

⁵ Some intellectual property offices already exchange information over the Internet. For information on WIPO's work on a global information network and intellectual property information services, see paragraph 91 below.

provided that they are consistent with its other provisions (*Articles 8 and 40.2*). In addition, the Agreement introduces a procedure for consultations and exchange of information among Members to facilitate the control of anti-competitive practices in contractual licences (*Article 40.3 and 40.4*). Among the measures that a Member may take to remedy abusive anti-competitive practices in the area of patents is the grant of a compulsory licence. Where a compulsory licence is granted to remedy a practice determined after judicial or administrative process to be anti-competitive, *Article 31(k)* relaxes several of the conditions normally applicable to the compulsory licensing of patents.

27. The provisions of the TRIPS Agreement relating to anti-competitive practices could come into play in a variety of contexts relating to electronic commerce and the Internet. Potentially anti-competitive uses of intellectual property rights might include, for example, conditioning the sale of IP-protected products on the purchase of other products whether or not subject to IP protection (a form of tied selling). Competition law thinking and practice suggest that the scope for significant market power to arise and, hence, the possibility of anti-competitive abuses, is particularly marked in network situations, where economic actors depend on access to a network, whether physical or electronic. This is due, in part, to the intrinsic tendency in network industries to "lock into" a particular standard, which may have the effect (whether intentional or otherwise) of excluding competing systems and products that are incompatible with the standard. Indeed, issues related to computer systems and networks, typically also involving intellectual property rights, have been a consideration in a number of recent high-profile competition law cases.⁶

IV. STANDARDS CONCERNING THE AVAILABILITY, SCOPE AND USE OF INTELLECTUAL PROPERTY RIGHTS

(a) Copyright and related rights

28. Digital technology has already fundamentally changed the way that works and other protected materials are created, produced and used. It has also led to the emergence of new types of works, notably computer programs and databases.

29. The Internet and other electronic networks provide a new means for the distribution of protected materials. Selling books has become one of the most popular forms of commerce on the Internet, and selling other products such as sound recordings is growing. While many books, CDs or films ordered over the Internet are still delivered by mail, the Internet is increasingly used also as a means of delivering products to customers. This is common as regards news, articles and other commercial and technological information, and a growing share of computer software is sold this way. The number of websites offering music for listening (webradio) or downloading is growing rapidly. Once the capacity of the networks and end-users' equipment allows, communications networks will increasingly provide a vehicle to deliver products such as films and multimedia products directly to homes.

30. However, secure conditions for such distribution are a precondition for these new possibilities to be fully exploited. Copyright owners will be reluctant to put their protected materials on the net as long as they fear that the Internet may lead to uncontrolled dissemination and copying of phonograms⁷, films, computer programs and other protected materials, which will seriously

⁶ A possible example would be the ongoing *Microsoft* case.

⁷ For example, major labels have until now been reluctant to distribute their phonograms over the Internet. However, at a press conference on 15 December 1998, representatives of the international recording industry announced a Secure Digital Music Initiative (SDMI), a framework to work with the technology community to create a voluntary digital music security specification. The open specification is intended to protect copyrighted music in all existing and emerging digital formats and through all delivery channels while giving consumers convenient access to it. The objective is to have a specification completed in time to allow conforming products to be available for sale by the end of 1999. (For more information, see <http://www.riaa.com>.) While the international recording industry has been developing its distribution system,

undermine copyright industries. Also service providers and others involved in the process of making materials available to end users will need clear rules to be able to plan how to develop their services.

31. This section will discuss the TRIPS provisions on copyright and related rights relevant to electronic commerce, and highlight issues that may arise when these provisions are applied to the digital network environment. Some of these issues were also addressed in two new WIPO treaties on copyright matters that were adopted, under the auspices of WIPO, in December 1996, namely the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) (see section VII of this note). Therefore, in the following discussion of the TRIPS provisions in the area of copyright and related rights, as well as in the area of enforcement in section V of this note, reference is made to the provisions of these new treaties and their preparatory work where they provide useful information on how the respective issues were dealt with in that context.

The provisions of the Berne Convention incorporated into the TRIPS Agreement

32. The TRIPS Agreement obliges WTO Members to comply with the substantive obligations of the Paris Act of 1971 of the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention). The traditional principles of international copyright law as contained in the Berne Convention, originally concluded in 1886 and updated through periodic revisions, have proven to be sufficiently flexible to have been able to accommodate new categories of works, and ways of creating and using protected materials in the digital environment. The TRIPS Agreement reinforces the application of the rights contained in the Berne Convention through more effective enforcement, monitoring of compliance with the obligations, and application of the dispute settlement mechanism. In addition to requiring compliance with the basic standards of the Berne Convention in its most recent version, the TRIPS Agreement clarifies or adds certain specific points.

33. *Article 9.1* of the TRIPS Agreement requires Members to comply with the substantive provisions of the Paris Act of 1971 of the Berne Convention, i.e. Articles 1 through 21 of the Berne Convention (1971) and the Appendix thereto. However, Members do not have rights or obligations under the TRIPS Agreement in respect of the rights conferred under *Article 6bis* of that Convention, i.e. the moral rights (the right to claim authorship and to object to any derogatory action in relation to a work, which would be prejudicial to the author's honour or reputation), or of the rights derived therefrom.⁸ The provisions of the Berne Convention referred to deal with questions such as subject-matter to be protected, minimum term of protection, and rights to be conferred and permissible limitations to those rights. In general, these provisions are equally applicable both in the off-line and on-line environment. The following discussion on the Berne provisions incorporated into the TRIPS Agreement is limited to the specific questions that may arise when they are applied to on-line communications.

copies of protected phonograms have increasingly become available for downloading from numerous websites in the so-called MP3 format. MP3 compresses music files to a relatively small size that makes their transmission and storage feasible, but it does not provide any protection against copying. Reportedly, a considerable amount of MP3 downloads are unauthorized.

⁸ Digital technology provides new ways of manipulating works in a potentially derogatory way. The possibility of making such modifications available to the public on the Internet does not appear to affect the underlining legal questions involved. However, the differences in national standards on moral rights may have some implications when works in an altered form are used on the Internet, given that the relevant acts in respect of such works may occur in multiple jurisdictions. In this respect, the problems that may arise are similar to those that relate to the differences in national standards on economic rights (see the discussion in paragraph 69) or in the way the right holders of works are determined (see the discussion in paragraphs 46-49).

Definition of publication and the notion of country of origin

34. *Articles 3 and 4 of the Berne Convention*, as incorporated into the TRIPS Agreement by means of a reference in Article 1.3 of the Agreement⁹, define which persons must benefit from the treatment provided for under the Agreement. The two main criteria of eligibility for protection are that (a) the author is a national or a resident of a WTO Member, or that (b) the work of the author was first published in a WTO Member, or simultaneously in a non-Member country and a WTO Member (Articles 3(1)(a) and (b) of the Berne Convention, respectively). A work is considered as having been published simultaneously in several countries if it has been published in two or more countries within 30 days of its first publication (Article 3(4) of the Berne Convention).¹⁰ The expression "published works" is defined as "works published with the consent of their authors, whatever may be the means of manufacture of the copies, provided that the availability of such copies has been such as to satisfy the reasonable requirements of the public, having regard to the nature of the work" (Article 3(3) of the Berne Convention).¹¹

35. A question that has arisen in respect of the application of this definition of publication in the network environment is whether posting a work on a website constitutes a publication within the meaning of Article 3(3), and, if so, in which country or countries should the first publication or simultaneous publication be considered to have taken place. This is relevant for determining whether a work, posted on a website, of an author who is not a national or resident of a WTO Member, would meet the criterion of eligibility for protection under Article 3(1)(b) of the Berne Convention (criterion of publication) as incorporated into the TRIPS Agreement.

36. The definition of publication and its interpretation may also have implications for whether member countries of the Berne Convention have to apply the minimum standards under the Convention to specific works. This is because authors are required to enjoy, in respect of works for which they are protected under the Convention, national treatment and the rights specially granted by the Convention in countries of the Berne Union other than the country of origin (*Article 5(1) of the Berne Convention*). The notion of "country of origin" is defined in *Article 5(4) of the Berne Convention*. It provides that the "country of origin" is considered to be "in the case of works first published in a country of the Union, that country; in the case of works published simultaneously in several countries of the Union which grant different terms of protection, the country whose legislation grants the shortest term of protection" (subparagraph (a) of Article 5(4) of the Berne Convention).¹² In examining the implications of these provisions under the TRIPS Agreement, it would be necessary to take into account also the provisions of Article 1.3 of the Agreement.

37. Other situations where the interpretation of the notions of "publication" and "country of origin" may affect the available protection include the duration of protection (comparison of terms of protection under *Article 7(8) of the Berne Convention* as incorporated into the TRIPS Agreement) and the extent to which Members are obliged to protect works that exist at the time that a Member starts to apply the provisions of the TRIPS Agreement (*Article 18(1) of the Berne Convention*¹³ as incorporated into the TRIPS Agreement).^{14,15}

⁹ As regards Article 1.3 of the TRIPS Agreement, see section II of this note.

¹⁰ Article 4 of the Berne Convention contains certain additional criteria of eligibility.

¹¹ In addition, Article 3(3) provides that "the performance of a dramatic, dramatico-musical, cinematographic or musical work, the public recitation of a literary work, the communication by wire or the broadcasting of literary or artistic works, the exhibition of a work of art and the construction of a work of architecture shall not constitute publication".

¹² Subparagraphs (b) and (c) of Article 5(4) contain additional criteria for determining the country of origin in certain situations.

¹³ Article 18(1) of the Berne Convention as incorporated into the TRIPS Agreement contains the so-called rule of retroactivity. It requires a Member to apply the Agreement to all works which, at the moment it starts to apply its provisions, have not yet fallen into the public domain in the country of origin through the

38. The interpretation of the notion of publication may also have implications for determining which producers of phonograms and performers are eligible for protection under the TRIPS Agreement. One of the three criteria of eligibility for protection applicable to producers of phonograms is the criterion of publication, i.e. whether the phonogram was first published in another WTO Member (*Article 5(1)(c) of the Rome Convention* as incorporated into the TRIPS Agreement by means of a reference in Article 1.3 of the Agreement).¹⁶ One of the three criteria applicable to performers is whether "the performance is incorporated in a phonogram which is protected under Article 5 of [the Rome] Convention" (*Article 4(b) of the Rome Convention* similarly incorporated into the TRIPS Agreement).¹⁷

expiry of the term of protection. Paragraphs 2 and 3 of that Article contain certain further conditions and provisions on the application of that principle. It should be noted that the application of Article 18 of the Berne Convention is extended also to the rights of performers and producers of phonograms in phonograms that exist at the time that a Member starts to apply the provisions of the TRIPS Agreement (Articles 14.6 and 70.2 of the Agreement).

¹⁴ Under national legislation, the notion of publication may be used also for other purposes, such as the applicability of some limitations to exclusive rights. For such purposes, the notion of publication may be defined differently.

¹⁵ The issue of the notion of publication and its implications was taken up in the Basic Proposal for the Substantive Provisions of the Treaty on Certain Questions concerning the Protection of Literary and Artistic Works to be considered by the WIPO Diplomatic Conference in December 1996 (WIPO document CRNR/DC/4). While it was argued that "the provisions of Article 3(3) of the Berne Convention may be applied quite satisfactorily to new forms of electronic publication" (paragraph 3.05 of the attached Memorandum Prepared by the Chairman of the Committees of Experts), a clarification was proposed in order to exclude any uncertainty in this regard (paragraph 3.07 of the Memorandum). The proposal was also designed to clarify the place of publication and the country of origin. The proposed draft Article 3 read as follows: "(1) When literary or artistic works are made available to the public by wire or wireless means in such a way that members of the public may access these works from a place and at a time individually chosen by them, so that copies of these works are available, Contracting Parties shall, under the conditions specified in Article 3(3) of the Berne Convention, consider such works to be published works. (2) When applying Article 5(4) of the Berne Convention, Contracting Parties shall consider works referred to in paragraph (1) of the present Article to be published in the Contracting Party where the necessary arrangements have been made for availability of these works to members of the public." The Conference did not take any action on this matter, and the draft provision was not included in the final text of the WCT.

¹⁶ Paragraphs 2 and 3 of Article 5 of the Rome Convention contain additional provisions on simultaneous publication and the power to exclude certain criteria.

¹⁷ Cf. the definition of "publication" in 2(e) of the WPPT, which mostly corresponds to the definition of publication in Article 3(d) of the Rome Convention, except that it adds a consent requirement, i.e. a fixed performance of a phonogram cannot be considered published without the consent of the relevant right holder. The Basic Proposal for the Substantive Provisions of the Treaty for the Protection of the Rights of Performers and Producers of Phonograms to be considered by the Diplomatic Conference (WIPO document CRNR/DC/5) contained a draft Article 2(e)(ii) with additional language to take into account publication of fixed performances and phonograms by interactive on-demand transmissions. As in the case of the WCT, the Conference did not include it in the final text of the WPPT. However, paragraph (4) of Article 15 of the WPPT provides that, for the purposes of that Article, which concerns the right to remuneration for broadcasting and communication to the public, "phonograms made available to the public 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 shall be considered as if they had been published for commercial purposes."

Right of reproduction

39. *Article 9.1 of the Berne Convention* as incorporated into the TRIPS Agreement provides that "authors of literary and artistic works protected by this Convention shall have the exclusive right of authorizing the reproduction of these works", and makes it clear that this right covers reproduction "in any manner or form".¹⁸ In addition, *Articles 11 and 14.4* of the TRIPS Agreement provide for rental rights in respect of computer programs and phonograms and, in certain situations, cinematographic works, given that uncontrolled rental of such works, whether in digital or analogue form, may lead to widespread unauthorized copying.

40. The right of reproduction is the very essence of copyright both in the off-line and on-line environment. Works and other protected material embodied on digital media such as diskettes, CDs, and CD-ROMs have become increasingly vulnerable to piracy, given the ease and diminishing costs of digital copying, and the fact that digital information can be copied and transmitted over and over again without any loss of quality. The production and distribution through traditional means of pirated sound recordings, films, software and other protected materials continues to be a major challenge for the copyright industries. The new on-line environment involves risks of new forms of piracy where websites offer protected materials for downloading without the authorization of or any remuneration to the right holders. Initial unauthorized transmission of protected materials may be combined with traditional forms of piracy at the recipient's end. Therefore, the reproduction right and its effective enforcement are essential also in the new digital network environment.

41. The transmission of works and other protected materials over the Internet or other electronic communications networks may involve a number of reproductions at various stages of the distribution chain. The first stage is the uploading of protected content into the host server at the point of transmission, and the final stage often involves downloading of that content by the end-user. The process of transmitting the content between these two points normally involves several intermediate and/or transient copies made by service providers. How to deal with such intermediate and transient reproductions has been a difficult issue in international discussions, in particular between the content and service providers. These discussions have concerned the questions of to what extent transient reproductions are or should be included in the scope of the reproduction right, and, to the extent they are included in the scope of that right, what type of limitations to that right should be applied in respect of such reproductions.¹⁹ A related question concerns what is the most effective point of control and enforcement of the reproduction and other rights and the liability of intermediary service providers.²⁰

42. The above considerations concerning the reproduction right as provided in Article 9(1) of the Berne Convention and its implications for electronic commerce are generally relevant also in respect of the protection of related rights. *Article 14.1* provides that in respect of a fixation of their performance on a phonogram, performers shall have the possibility of preventing the fixation of their unfixed performance and the reproduction of such fixation when undertaken without their authorization. *Article 14.2* of the TRIPS Agreement provides that producers of phonograms shall

¹⁸ The Diplomatic Conference held in December 1996 adopted the following Agreed Statement concerning Article 1(4) of the WCT, which incorporates by reference the substantive obligations of the Berne Convention: "The reproduction right, as set out in Article 9 of the Berne Convention, 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 Article 9 of the Berne Convention."

¹⁹ The Basic Proposal for the Substantive Provisions of the Treaty on Certain Questions concerning the Protection of Literary and Artistic Works to be considered by the Diplomatic Conference (WIPO document CRNR/DC/4) contained a proposal to clarify the scope of the reproduction right and permissible exceptions in regard of temporary reproductions (draft Article 7). The Conference did not include the text in the final version of the WCT. However, see the Agreed Statement adopted by the Conference referred to in footnote 18.

²⁰ The issue of liability of intermediaries will be discussed in section V of this note on enforcement.

enjoy the right to authorize or prohibit reproduction of their phonograms, and makes it clear that this right covers both "direct" and "indirect" reproduction. *Article 14.3* provides that broadcasting organizations shall have the right to prohibit the fixation and the reproduction of fixations of broadcasts when undertaken without their authorization.²¹

Right of communication

43. As regards the act of transmission as such, the right that is particularly relevant is the right of communication. The Berne Convention contains a number of provisions, which have been incorporated into the TRIPS Agreement, that regulate this right.²² A question that has been discussed at the international level is whether these provisions concerning the right of communication adequately respond to the needs related to interactive on-line communications or whether clarifications or adaptations are necessary. This question was also raised in the course of the preparation of the WCT. The following provision was included in Article 8 of the final text of the WCT, entitled "Right of Communication to the Public":

"Without prejudice to the provisions of Articles 11(1)(ii), 11*bis*(1)(i) and (ii), 11*ter*(1)(ii), 14(1)(ii) and 14*bis*(1) of the Berne Convention, authors of literary and artistic works shall enjoy the exclusive right of authorizing any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them."

44. In addition to putting the right of communication into a single provision, the provision contains two elements. First, it extends the right of communication to all categories of works. Second, it clarifies the application of the right in respect of interactive on-demand communications by confirming that the relevant acts of communication include cases where members of the public may have access to the works at different places and at different times.²³

45. Under the TRIPS Agreement, performers must have the possibility of preventing the communication to the public of their live performance when undertaken without their authorization (Article 14.1 of the TRIPS Agreement). Article 10 of the WPPT provides performers "the exclusive right of authorizing the making available to the public of their performances fixed in phonograms, by

²¹ Articles 7 and 11 of the WPPT provide that performers and producers of phonograms shall enjoy the exclusive right of authorizing the direct or indirect reproduction of their performances fixed in phonograms, in any manner or form. The Conference adopted the following Agreed Statement: "The reproduction right, as set out in Articles 7 and 11, and the exceptions permitted thereunder through Article 16, fully apply in the digital environment, in particular to the use of performances and phonograms in digital form. It is understood that the storage of a protected performance or phonogram in digital form in an electronic medium constitutes a reproduction within the meaning of these Articles."

²² *Article 11(1)(ii) of the Berne Convention* provides that authors of dramatic, dramatico-musical and musical works shall enjoy the exclusive right of authorizing any communication to the public of the performance of their works. Similarly, authors of literary works enjoy the exclusive right of authorizing any communication to the public of the recitation of their works (*Article 11*ter*(1)(ii)*). *Article 14(1)(ii)* provides authors of literary or artistic works the exclusive right of authorizing the public performance and communication to the public by wire of the works adapted or reproduced by means of cinematography, and *Article 14*bis*(1)* grants the same right to the owner of copyright in a cinematographic work. *Article 11*bis*(1)(i) and (ii)* provides that authors of literary and artistic works shall enjoy the exclusive right of authorizing (i) the broadcasting of their works or the communication thereof to the public by any other means of wireless diffusion of signs, sounds or images; and (ii) any communication to the public by wire or by rebroadcasting of the broadcast of the work, when this communication is made by an organization other than the original one.

²³ As regards the scope of this right in respect of intermediaries who provide physical facilities for communication without actively initiating it, the Conference adopted the following Agreed Statement: "It 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."

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." A similar right is granted in Article 14 of the WPPT to the producers of phonograms in respect of their phonograms.

Right holder

46. Differences at the national level concerning the definition of the person in whom copyrights are initially vested may have implications for the international circulation of works. Such implications may be reduced by means of contractual transfers of rights between the persons concerned, for example so as to cause the same person to be the right holder in different countries or to otherwise clarify the situation. However, there may be cases where such contractual transfers may not have been effected or where, under the principles of private international law, such transfers would not necessarily be recognized in each jurisdiction concerned.

47. The question of who should be considered the right holder of a work and eligible to institute infringement proceedings is addressed in a number of provisions of the Berne Convention as incorporated into the TRIPS Agreement. These provisions provide some guidance on the initial ownership and transfer of copyright. For example, a basic presumption contained in *Article 15(1) of the Berne Convention* provides that, "in 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".²⁴ *Article 14bis of the Berne Convention* contains special provisions on cinematographic works. Paragraph 2(a) of that Article provides that "ownership of copyright in a cinematographic work shall be a matter for legislation in the country where protection is claimed".²⁵ To the extent that the provisions of the Agreement do not provide specific norms on the choice of law, the rules of private international law may provide additional guidance in the choice of law applicable to licensing contracts.

48. During the final phases of the Uruguay Round negotiations, the issue of seeking further clarification of these matters was raised. At that time, it was suggested that it be clarified in the text of the Agreement that the ownership of rights and benefits should be determined in accordance with the contractual relationships among the natural and legal persons involved, and that the provisions regarding transfers of such rights and benefits in the national legislation should not be applied so as to upset the legitimate contractual expectations of the persons involved except where such transfers were manifestly incompatible with *ordre public*. However, as agreement was not reached on this matter, no text was incorporated into the final version of the TRIPS Agreement.

49. As the above discussion indicates, the implications of the differences in national laws determining the original author and treating transfers of right have been discussed already in relation to the traditional forms of circulating protected materials. However, the fact that a single act of putting a protected work on the Internet makes it available simultaneously in all jurisdictions throughout the world may increase the potential implications of such differences. In this regard, a question that is being discussed is whether the existing rules of public and private international law concerning the choice of law in respect of the initial ownership of copyright and its transfer provide a sufficient basis for resolving issues related to the use of works on global electronic networks, or whether additional clarifications are needed.²⁶

²⁴ Article 15 of the Berne Convention contains additional rules on cinematographic works, anonymous and pseudonymous works, and certain unpublished works.

²⁵ Article 14bis contains additional provisions on the rights of certain contributors.

²⁶ These issues were addressed recently at a meeting of the Group of Consultants organized under the WIPO programme on Intellectual Property Rights Beyond Territoriality discussed in paragraph 89 below.

Protected subject-matter

50. As was noted above, digital technology has led to the emergence of new types of works, notably computer programs and databases. Given that they are usually made available in digital form, they are well suited to being traded over digital networks. The expression "literary and artistic works" is defined in *Article 2 of the Berne Convention* as incorporated into the TRIPS Agreement to include "every production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression".²⁷ *Article 10.1* of the TRIPS Agreement confirms that computer programs, whether in source or object code, must be protected as literary works, and *Article 10.2* recognizes that copyright protection covers databases and other compilations of data or other material, which by reason of the selection or arrangement of their contents constitute intellectual creations.

51. Articles 4 and 5 of the WCT contain corresponding provisions concerning computer programs and databases.²⁸ In the course of the preparation of the Diplomatic Conference that adopted the WCT, it was discussed whether there was a need to supplement copyright protection of databases by providing additional protection to economically valuable elements of databases that require the investment of considerable human, technical and financial resources but may not benefit from copyright protection. While the Conference did not take any action on the draft treaty on this matter submitted for its consideration²⁹, the delegations participating in the Conference recognized that databases are a vital element in the development of a global information infrastructure, and expressed their interest in examining further the possible implications and benefits of such additional protection at the international level.³⁰ This examination is under way under the auspices of WIPO.³¹

Limitations

52. A number of the provisions of the Berne Convention incorporated into the TRIPS Agreement allow Members to provide, in their national laws, limitations and exceptions to authors' rights. *Article 13* of the TRIPS Agreement provides that Members must confine limitations or exceptions to exclusive rights to certain special cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder. *Article 14.6* allows Members to provide for conditions, limitations, exceptions and reservations in relation to the rights of performers, producers of phonograms and broadcasting organizations to the extent permitted by the Rome Convention. In the digital network environment, the question has been raised as to whether adjustments may be needed to existing limitations taking into account the special nature of digital reproduction and communications technology consistently with the criteria contained in Article 13 of the TRIPS Agreement.³²

²⁷ In addition, the Article contains an open-ended list of examples of different types of works.

²⁸ The Conference adopted Agreed Statements concerning these two provisions according to which they are "on a par with the relevant provisions of the TRIPS Agreement".

²⁹ See the Basic Proposal for the Substantive Provisions of the Treaty on Intellectual Property in Respect of Databases to be considered by the Diplomatic Conference (WIPO document CRNR/DC/6), which provided the maker of a database the right to authorize or prohibit the extraction or utilization of all or a substantial part of the contents of a database (see draft Articles 2 and 3 of the Proposal).

³⁰ See the Recommendation concerning Databases, adopted by the Diplomatic Conference on 20 December 1996 (WIPO document CRNR/DC/100).

³¹ See section VII of this note.

³² Article 10 of the WCT on limitations and exceptions contains provisions similar to Article 13 of the TRIPS Agreement. The Conference adopted an Agreed Statement, which provides that "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 was also agreed that this

Collective management

53. Electronic commerce of works and other protected subject-matter creates new challenges and provides new opportunities for the ways rights clearance is organized. An issue that has been discussed in this context concerns the role of collective management of copyright and related rights. A number of rights provided under the TRIPS Agreement and other treaties on copyright or related rights are frequently exercised through collective management organizations on behalf of right holders, in particular in situations where the use involves vast numbers of works, right holders and users, or where the scope of a right is reduced to a right of remuneration. On the one hand, digital networks make new forms of exploitation of vast numbers of works and other protected subject-matter possible in a way that may call for increased cooperation among the right holders in managing their rights. Also users may desire simple ways to clear rights in large repertoires of works. On the other hand, the same technology may make individual licensing and distribution of revenue feasible in situations where until now collective arrangements have been necessary. New technology may also provide new options for right holders, such as the use of rights clearance centres that provide users with a single point to clear rights, and at the same time allow right holders to set prices and other conditions for the use of their works or other material individually. Rights clearance may also be combined with the actual delivery of protected content to the users. Such new services may be facilitated by the use of electronic rights management information, which is discussed in paragraph 76 below.

(b) Trademarks

54. The protection of trademarks and other distinctive signs aims to stimulate and ensure fair competition between producers and to protect consumers by enabling them to make informed choices between various goods and services. In electronic commerce, trademarks and other distinctive signs are essential for suppliers of goods and services in establishing their presence on the global network. For consumers who buy products and services at a distance, it may be increasingly necessary to rely on the reputation attached to trademarks and other distinctive signs, as they do not have an opportunity to establish a personal contact with the seller of those products, or to inspect the products and services before buying them.

55. *Article 15.1* of the TRIPS Agreement provides that any sign, or any combination of signs, capable of distinguishing the goods and services of one undertaking from those of other undertakings, must be capable of constituting a trademark. In order to obtain protection, a company generally files for the registration of a trademark in each country in which it operates.³³ Registration is made in respect of specified goods or services.

56. Members may make registrability depend on use (*Article 15.2*), and require use to maintain registration (*Article 19*). The question that may arise as regards the application of these provisions is under what conditions does the use of a trademark on the Internet satisfy such requirements, and when so, in which countries.

57. The TRIPS Agreement requires that the owner of a registered trademark have an exclusive right to prevent others from using in the course of trade identical or similar signs for goods or services which are identical or similar to those in respect of which the trademark is registered, if such use would result in a likelihood of confusion (*Article 16.1*). In this respect, the question that has arisen is

statement is applicable *mutatis mutandis* to Article 16 of the WPPT, which contains similar provisions in respect of the rights of performers and producers of phonograms.

³³ Certain countries have a common system for the protection of trademarks or a common procedure for the filing and registration of trademarks. The Madrid Agreement concerning the International Registration of Marks and the Protocol thereto provide for the international application of registration of trademarks at the International Bureau of WIPO.

under what conditions and in which jurisdiction(s) might the use of a sign on the Internet constitute an infringement of a registered trademark, and whether the current territorially based system of registration of trademarks is sufficient for the emerging borderless electronic marketplace. Identical or similar signs registered as trademarks for identical goods or services may be owned by different persons in different countries; thus, even in respect of identical goods or services, the use of such trademarks on the Internet by one or more of the right owners may lead to conflicts.

58. *Article 6bis of the Paris Convention* as incorporated into the TRIPS Agreement³⁴ and paragraphs 2 and 3 of Article 16 of the TRIPS Agreement contain additional obligations in respect of well-known marks: the registration of a mark must be refused or cancelled, and its use must be prohibited, if it conflicts with a well-known mark. In determining whether a trademark is well-known, Members must 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. In addition to the question of what constitutes use of a trademark for the purposes of these provisions, questions may arise in respect of determining when and in which jurisdiction(s) a trademark is considered well-known, e.g. as a result of promotion of a trademark on the Internet.

59. Over time, case law is likely to develop concerning the above-mentioned issues. The question that has arisen is whether the existing national and international norms are adequate to address these issues in a consistent manner, or whether adaptations to the protection of trademarks are called for at the national and/or international level.³⁵

60. A specific issue that has received much attention concerns the relationship between trademarks and Internet domain names.³⁶ Some of the problems stem from the fact that under each top-level domain name there can be only one of each particular second-level domain name, which is usually allocated on a first-come, first-served basis within each top-level domain name. On the other hand, the same trademarks may co-exist with different owners in different categories of products or services, and in different territories. In addition, there have been problems such as "warehousing" of second-level domain names corresponding to well-known trademarks for the purpose of selling them to trademark owners (also referred to as "cybersquatting"). At the same time, domain names have acquired importance as business identifiers, and easily memorable domain names have themselves become commercially valuable assets, akin to intellectual property. One of the questions that has arisen is under what circumstances and under which jurisdiction(s) the use of a domain name that is identical or similar to a trademark may constitute a trademark infringement, and what remedies should

³⁴ Article 2 of the TRIPS Agreement provides that, in respect of Parts II, III and IV of the Agreement, Members shall comply with Articles 1 through 12, and Article 19, of the Paris Convention (1967).

³⁵ Information on the work of the WIPO Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications concerning the issues arising from the use of trademarks on the Internet can be found in paragraph 85 below.

³⁶ Domain names are part of the Internet addressing system, which consists of two elements. Each computer has its Internet Protocol address, a numeric identifier that looks very much like a telephone number. These numeric identifiers are paired with domain names, user-friendly substitutes for numeric identifiers. A domain name typed into a computer is automatically converted into the corresponding numeric identifier. For example, the WTO's website can be found at <http://www.wto.org>. The domain name must have at least two parts: a top-level domain name (TLD), in this case ".org", and a second-level domain name (SLD), in this example "wto". Anyone from any country can register in the main generic TLDs (gTLDs), currently .com, .org, and .net. The most popular of them is .com, which is reserved for commercial entities. Four other gTLDs are reserved for entities meeting certain criteria. Two-letter country code TLDs (ccTLDs), which use the ISO 3166 country codes (e.g. ".ch" for Switzerland), are usually reserved for entities in a given country, even though some of them do not contain restrictions on entities who may register in them. Functionally, domain names registered in gTLDs and ccTLDs provide the same connectivity.

be available for the trademark holder.³⁷ Conflicts between trademarks and domain names have brought to the fore also the more general question, not limited to intellectual property, of how best to develop the domain name system.³⁸

(c) Other intellectual property rights

61. While paragraph 4.1 of the Work Programme refers specifically to the protection and enforcement of copyright and related rights and trademarks, it should be borne in mind that similar issues as discussed above may arise, even though not to the same degree, also in respect of other intellectual property rights, when subject-matter protected by these rights is traded over or otherwise used on the Internet.

62. The questions that were discussed above in the context of trademarks may in certain situations be relevant for the protection of other distinctive signs. As regards *geographical indications*, the TRIPS Agreement requires that interested parties must have the legal means to prevent the use of indications which mislead the public as to the geographical origin of the good, and use which constitutes an act of unfair competition (*Article 22*). Additional protection is provided for geographical indications for wines and spirits (*Article 23*). Also here the question may arise under what conditions and in which jurisdiction(s) does the use of a geographical indication on the Internet constitute an infringement. *Article 24* contains a number of exceptions to the protection of geographical indications. For example, a Member is not obliged to bring a geographical indication under protection where it has become in its territory a generic term for describing the product in question (paragraph 6). Measures to implement the provisions on geographical indications shall not prejudice prior trademark rights that have been acquired in good faith (paragraph 5). Under certain circumstances, continued use of a geographical indication for wines or spirits may be allowed on a scale and nature as before (paragraph 4). Questions may arise on whether and to what extent such territorially based exceptions may be used to justify the use of a geographical indication on global electronic communications networks, such as the Internet.

63. Some of the issues related to the differences in national legal systems concerning the standards of protection and ownership of rights may in certain situations have implications when subject-matter protected by other intellectual property rights is traded over a network. For example, *industrial designs* can be exchanged that way, although in examining the possible relationship of such transactions to the provisions of the TRIPS Agreement one would need to consider to what extent the TRIPS minimum rights under *Article 26* would come into play when an industrial design which is not embodied in an article is transmitted over the Internet. A Member may choose to meet its obligations under *Article 25.2* in respect of textile designs through its copyright law, or otherwise to apply its copyright law to works of applied art and industrial designs and models (*Article 2(7) of the Berne Convention* as incorporated into the TRIPS Agreement). In that case, the use of designs protected by copyright on the Internet raises questions similar to those discussed above in respect of other

³⁷ WIPO has undertaken an international process to develop recommendations concerning the intellectual property issues associated with Internet domain names, including dispute resolution. This process is discussed in paragraph 86 below.

³⁸ The United States Department of Commerce published on 5 June 1998 a Statement of Policy on "Management of Internet Names and Addresses" ("White Paper"), which calls for the establishment of a not-for-profit entity for the technical management of the domain name system (available at the US National Telecommunications and Information Administration website at <http://www.ntia.doc.gov>). Since the publication of the White Paper, a new non-profit corporation, the Internet Corporation for Assigned Names and Numbers (ICANN) was formed (see the ICANN's website at <http://www.icann.org>). The US Department of Commerce and the ICANN agreed on 25 November 1998 to jointly develop the mechanisms and procedures necessary to transition management responsibility for DNS functions to a private-sector not-for-profit entity (the Memorandum of Understanding between the US Department of Commerce and the ICANN is available at the NTIA website at <http://www.ntia.doc.gov>).

categories of works. Also the national and most-favoured-nation treatment obligations may have implications in such situations.

64. In the area of *patents*, similar issues may arise to the extent that acts that infringe the rights conferred to the patent owner under *Article 28* can take place over an electronic network. A specific question that has arisen in the area of patents concerns the disclosure of technical information on the Internet and its impact on patentability under *Article 27.1*.³⁹ A right holder of a *layout-design of an integrated circuit* must have an exclusive right to authorize at least the reproduction and distribution for commercial purposes of such a design (*Article 6(1) of the IPIC Treaty* as incorporated into the TRIPS Agreement, and *Article 36* of the TRIPS Agreement). These provisions may have legal implications when layout-designs are transmitted over digital networks. The electronic network environment poses new challenges for safeguarding *trade secrets*. The provisions of *Article 39.2* would appear to apply to the new possible ways of acquiring or otherwise infringing trade secrets in such an environment.

65. As was mentioned above, the Work Programme on Electronic Commerce includes the consideration of issues relating to the development of the infrastructure for electronic commerce. The protection of intellectual property rights, in particular patents, as well as copyright, layout-designs of integrated circuits, and undisclosed information plays an important role in facilitating the generation of new technology used for building the physical infrastructure for electronic networks and the development of software for such an infrastructure. The role of patents and other intellectual property rights in the generation of new technologies, and access to and transfer of technology is discussed above in the third section of this note.

V. ENFORCEMENT OF INTELLECTUAL PROPERTY RIGHTS

66. The provisions on enforcement of intellectual property rights are contained in *Part III* of the Agreement. *Article 41.1* requires Members to ensure that enforcement procedures as specified in this Part are available under their law so as to permit effective action against any act of infringement of intellectual property rights covered by the Agreement, including expeditious remedies to prevent infringements and remedies which constitute a deterrent to further infringements. The provisions on enforcement are not specific to infringements in any particular technological environment. Consequently, nothing in Part III suggests that these provisions would not be applicable to the new forms of intellectual property infringements in the digital network environment covered by the Agreement, although certain provisions, in particular those on special requirements related to border measures, do not appear to be capable of application to on-line distribution. Therefore, the competent authorities will need the appropriate powers, as well as the required expertise, to enforce IPRs in this environment. The speed and geographical scope of damage that illegal activities can cause, for example to holders of copyrights and related rights, emphasize the need for expeditious remedies, including injunctions ordered as part of a final decision or on an interim basis, to prevent infringements from occurring.

67. On the one hand, the use of new information and communications technologies may be helpful in modernizing judicial procedures consistently with the objectives referred to in *Article 41*, in particular by making them more rapid and less complicated and costly. Communications networks could be used to reduce some procedural burdens on parties, such as those related to mandatory personal appearances referred to in *Article 42*. On the other hand, these technologies may also create new challenges for the application of these procedures. In the work of the WTO, attention has been drawn to the application of the provisions on gathering evidence, in particular to those of *Article 50.2*, on infringements involving digital reproduction, given the ease and speed with which evidence can be

³⁹ Information on the work of the WIPO Standing Committee on the Law of Patents on this issue can be found in paragraph 88 below.

destroyed. It is possible that the digital network environment may give rise to similar difficulties in gathering evidence on a possible infringement.

68. Intellectual property has traditionally been regulated, administered and enforced on a territorial basis. The "borderless" nature of the Internet may raise difficulties in determining the appropriate *jurisdiction* in respect of activities carried out on a global network.⁴⁰ On the whole the TRIPS Agreement is silent on this issue, although it appears to have been drafted on the presumption that the right to take action should be available in the jurisdiction where the infringing act takes place. *Articles 44.1 and 50.1* of the Agreement contain explicit references to this effect.

69. As regards the choice of law applicable to copyright infringements, guidance is given in *Article 5(2) of the Berne Convention* as incorporated into the TRIPS Agreement, which provides 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". A characteristic feature of the Internet is that, once a work is put on the network in one country, it can be accessed anywhere in the world. This has led to discussions on the choice of law to be applied to a work posted on a website. Under traditional copyright concepts applied to the exploitation of works embodied in hard copies, the applicable law would appear to be that of the jurisdiction in which an act falling under copyright takes place. However, the problem that has been seen in this approach when applied to the Internet is that posting a work on a website makes that work available worldwide, potentially giving rise to the application of the laws of all jurisdictions in which the work can be accessed and liability under them. It has been argued that it would be preferable to apply only one law to such exploitation of a work, the law of the jurisdiction from which the transmission originates. On the other hand, this approach has been seen as having an obvious limitation in that the relevant acts leading to worldwide exploitation of a work could be governed by the law of a country with low standards of protection. In recent discussions, attempts have been made to strike a balance between these considerations.⁴¹

70. Similar questions may arise in respect of trademarks, for example when an owner of a trademark uses his or her trademark legally on a website, which can be accessed from another country where an identical trademark has been registered by another person for identical goods.

⁴⁰ This is a general question that is not limited to the protection and enforcement of intellectual property, but concerns also other areas such as defamation, obscenity, gambling and other contents and activities considered illegal in one or more jurisdictions, consumer protection, and validity and enforceability of commercial contracts and obligations.

⁴¹ The issue of choice of law applicable to the communication to the public by satellite broadcasting was addressed in the preparatory work that led to the adoption of the WCT in December 1996. In its memorandum for the first session of the Committee of Experts on a Possible Protocol to the Berne Convention, the International Bureau of WIPO proposed that the question of which national law was applicable to direct broadcasting by satellite should be settled in favour of the law of the country from which a signal was emitted towards the satellite. In keeping with, *inter alia*, the rule in Article 5(2) of the Berne Convention, it was also proposed that the law of the country or countries where the satellite signal was normally receivable should be applied in two specific cases: first, where the law of the country of emission did not protect the right of broadcasting or where that law allowed broadcasting under non-voluntary licences, and, second, where the right of broadcasting was held by different persons in the country of emission and the countries where the signal was normally receivable (paragraph 142 of WIPO document BCP/CE/I/3, dated 8 October 1991). The Committee had mixed reactions to this proposal, and a great majority favoured application, without qualification, of the law of the country from which the signal was emitted towards the satellite (paragraph 89 of a memorandum prepared by the International Bureau for the fourth session of the said Committee contained in document BCP/CE/IV/2, dated 5 October 1994). At the fifth session of the Committee, held in September 1995, the Chairman of the Committee noted that the question of applicable law was becoming a more general issue and did not concern only satellite broadcasting any more. He was of the opinion that the issue would be taken up again later in a broader context, perhaps in the context of the "digital agenda". The Committee agreed not to pursue the matter further at that point (paragraph 84 of the report of the fifth session contained in document BCP/CE/V/9-INR/CE/IV/8).

71. A related question is what remedies should be available if subject-matter posted on a website is considered to infringe intellectual property rights, in particular when the transmission originates from another jurisdiction. For example, should injunctive relief be available in respect of a transmission that originates from another jurisdiction and, if so, would such an injunction be enforced by the authorities of that country? Or should damages be calculated on the basis of injury in the country where the action against the infringement was taken or on a worldwide basis?

72. Even though questions concerning jurisdiction and related matters have already arisen in the context of traditional ways of exploiting intellectual property, such questions are likely to become more common given the global reach of the Internet. The question appears to be whether the existing rules of public and private international law, including international treaties relating to mutual recognition and enforcement of judgements, adequately address these types of situations, or whether additional clarifications are needed.⁴²

73. An issue that has been widely discussed is the *liability of service providers* in respect of the transmission and storage of material initiated by others. While this issue concerns any potentially illegal activities that may occur on the digital network environment, it has been much debated in the area of copyright and related rights. In the course of a normal process of transmission of protected content, a number of temporary reproductions of that content may be produced by service providers. These intermediaries may have only limited knowledge about the information they transmit or store, as well as limited ability to control or monitor such information. The question that has arisen is to what extent service providers, who act as intermediaries transmitting or storing potentially infringing content, are or should be held liable for such content and, if so, what remedies should be available.⁴³

74. In the context of the provisions of the TRIPS Agreement, this question appears to have two main dimensions. The first is what activities of service providers might be covered by the substantive standards of protection under the Agreement. In this respect, reference is made to the discussion above concerning the standards of protection. To the extent that any of such activities are covered by these standards, taking into account the availability of any exceptions, it would then be a matter for an examination of what enforcement procedures and remedies might be relevant in respect of any potentially infringing activities. Possible remedies that have been referred to in this context include injunctions as provided under *Article 44* and damages as provided under *Article 45*. These provisions require Members to provide judicial authorities with the authority to order injunctions or damages, but they leave Members free to exclude from the scope of such authority acts of innocent infringement, i.e. cases where the infringer acted without knowing or having reasonable grounds to know that he or she was engaged in infringing activity.⁴⁴

75. While digital reproduction and communication technologies create new risks of piracy, they also provide possible technical solutions to many problems faced by holders of copyright and related rights. *Technological measures* that can be used to facilitate the protection of copyright and related rights include copy protection (limiting the number of copies that can be made from an original reproduction), encryption (controlling access to on-line, satellite or other services) and watermarking

⁴² These issues are being addressed under the WIPO programme on Intellectual Property Rights Beyond Territoriality discussed in paragraph 89 below. Specific issues relating to the interface between the global domain name system and territorially administered intellectual property rights systems are addressed in the Interim Report of the WIPO Internet Domain Name Process referred to in paragraph 86 below.

⁴³ The issue of liability of intermediaries has been addressed in some recent initiatives at the national level. For example, the United States Digital Millennium Copyright Act, signed into law on 28 October 1998, limits the liability of service providers, under specified conditions, to certain forms of injunctive relief in respect of certain common activities involving the transmission or storage of material initiated by a person other than the service provider. The conditions include that the service provider complies with a "notice and take down" procedure that allows the right holder to notify it of allegedly infringing material residing on its system and require it to take down or disable access to such material after receiving such notice.

⁴⁴ Articles 44.1 and 45.1 of the Agreement.

(indicating the original source of material, which can be used in tracking down piracy). The effective operation of such solutions may require that legislators provide adequate legal protection and effective legal remedies against the circumvention of the technological measures that are used by the holders of copyright and related rights to protect their rights. Given that this issue was not yet widely discussed at the time of the negotiations that led to the conclusion of the Agreement, it was not raised in the negotiations and no specific provisions concerning technological measures were taken into the TRIPS Agreement. However, the more recent WCT and WPPT recognize the role that technological measures used by right holders have in facilitating effective protection. The provisions of these treaties that are designed to ensure the effectiveness of such measures are discussed in paragraph 83 of section VII of this note.

76. Electronic *rights management information* can be attached by holders of copyright and related rights to digital copies of works and other material. Such information may e.g. identify the work, its authors, other right holders, and the terms and conditions of use of the work. Such information can be utilized in electronic copyright management systems operated by right holders or by third parties such as collective management organizations to improve access to licences and protected materials, which in turn facilitates compliance with intellectual property norms. Electronic rights management information and systems may enable collective management organizations to improve the services they provide both to right holders and users of protected materials, and make individual licensing and distribution of revenue feasible in areas where the vast numbers of works, right holders and users have until now made collective arrangements necessary. However, in order to ensure the proper functioning of copyright management systems, electronic rights management information may need to be protected against unauthorized removal or alteration. While the TRIPS Agreement does not address the issue of rights management information, the WCT and WPPT contain provisions intended to ensure the integrity of such information. These provisions are discussed below in paragraph 83 of section VII of this note.⁴⁵

77. WTO Members have agreed to cooperate with each other with a view to eliminating international trade in goods infringing intellectual property rights (*Article 69*). The global reach of the Internet and other digital networks underlines the need for international cooperation in the area of enforcement. Experience in the fight against traditional forms of piracy and counterfeiting, and increased cooperation between agencies responsible for enforcement, will help to prepare for action against new forms of on-line piracy and counterfeiting. Databases and digital networks can be used to improve the efficiency of enforcement agencies, and they provide new means to detect pirated and counterfeit goods and to rapidly exchange information between agencies responsible for enforcement within a country and between agencies in different countries as well as with the private sector.⁴⁶

VI. ACQUISITION AND MAINTENANCE OF INTELLECTUAL PROPERTY RIGHTS

78. While the TRIPS Agreement does not deal in detail with procedural questions concerning acquisition and maintenance of intellectual property rights, *Part IV* of the Agreement contains some general rules on these matters, the purpose of which is to ensure that unnecessary procedural

⁴⁵ See also information on WIPO's work on copyright, related rights and digital technology in paragraph 90 below.

⁴⁶ For example, the Customs Administrations of six member States of the European Union, together with the European Commission and a number of industrial partners, are working towards implementing a "Multimedia System for Customs" (MUSYC) to assist the work of customs officers, providing them with automated references and expertise when and where it is required. The scope of the MUSYC project encompasses the relationship between right holders and the customs administrations (including the provision of multimedia information on products and known fakes), the detection of counterfeited goods at customs offices, the exchange of valuable and timely information between administrations of different countries and the integration of the MUSYC system in the operational procedures and information systems of the customs administrations. More information on the MUSYC project can be found at <http://www2.echo.lu/telematics/admin/musyc.html>.

difficulties in acquiring or maintaining intellectual property rights are not employed to impair the protection required by the Agreement. These rules allow Members to require, as a condition of the acquisition or maintenance of rights related to trademarks, geographical indications, industrial designs, patents and layout-designs, compliance with reasonable procedures and formalities (*Article 62.1*). Where the acquisition of an intellectual property right is subject to the right being granted or registered, the procedures must permit the granting or registration of the right within a reasonable period of time so as to avoid unwarranted curtailment of the period of protection (*Article 62.2*). Procedures concerning the acquisition or maintenance of intellectual property rights and, where a Member's law provides for such procedures, administrative revocation and *inter partes* procedures such as opposition, revocation and cancellation, must be governed by the general principles concerning decisions and review set out in paragraphs 2 and 3 of Article 41 of the Agreement (*Article 62.4*) relating, *inter alia*, to speed and cost of procedures.

79. Information and communications technology can be used for achieving the objectives of Part IV of the Agreement by improving the efficiency of intellectual property offices. New technologies allow, for example, electronic filing of patent applications and their electronic processing. Such modernization of the administration of intellectual property rights benefits the clients of these offices in the form of better and faster services, including shorter periods in acquiring intellectual property rights. As discussed in paragraph 24 above, communications networks are increasingly used also to facilitate access to patent documents and other information stored in intellectual property offices by persons interested in them.⁴⁷ Communications networks can also be used to speed up and make more efficient private transactions involving licensing or acquirement of intellectual property rights.

VII. RELEVANT ACTIVITIES OF WIPO AND OTHER INTERGOVERNMENTAL ORGANIZATIONS

(a) WIPO

80. WIPO has a number of programmes and activities that concern electronic commerce. The Council for TRIPS was informed of these activities by a representative of WIPO at its meeting of 1 and 2 December 1998.⁴⁸ WIPO is also making information on its activities relevant to electronic commerce available on its website.⁴⁹ The following review focuses on those activities of WIPO that relate to the issues discussed above in this note.

81. As was noted above in paragraph 31, two important new treaties on copyright matters were adopted under the auspices of WIPO in December 1996, namely the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT).⁵⁰ The WIPO programme on the

⁴⁷ For example, the Japanese Patent Office has been promoting a Paperless Project since 1984 as a way of dealing with the gigantic amount of data stored as information relating to applications and technical information. The Paperless System is designed to computerize operations from filing applications to examination and distribution of patent information to the public. In 1996, 67 per cent of applications were filed on-line, 29 per cent on diskettes, and 4 per cent on paper. For more information, see the Japanese Patent Office website at <http://www.jpo-miti.go.jp>. For information on WIPO's work on a global information network and intellectual property information services, see paragraph 91 below.

⁴⁸ See paragraph 107 of the minutes of the meeting circulated in document IP/C/M/21.

⁴⁹ A website supporting the organization and conduct of regional consultations and an international conference on intellectual property and electronic commerce is currently under construction by WIPO, and can be accessed at <http://ecommerce.wipo.int>. A special website for the WIPO Internet Domain Name Process can be found at <http://wipo2.wipo.int>. These two websites can also be accessed through the WIPO main website at <http://www.wipo.int> by clicking "Electronic Commerce" or "Internet Domain Names", respectively.

⁵⁰ The texts of the treaties can be accessed through WIPO's website on electronic commerce at <http://ecommerce.wipo.int>, which also contains the documents of the Diplomatic Conference on Certain

implementation of the WCT and WPPT is directed at the promotion of the implementation of these two treaties. The treaties enter into force three months after 30 instruments of ratification or accession by states have been deposited with the Director General of WIPO.⁵¹ These new instruments are self-standing treaties, which build on the Berne and Rome Conventions and the TRIPS Agreement⁵², but in some respects go further. The implementation of these new treaties will facilitate the creation of a secure and predictable legal environment that will foster the development of electronic commerce involving on-line distribution of materials protected by copyright and related rights.

82. The main improvements that relate to the use of works and phonograms on the Internet and other interactive digital networks concern the right of communication, circumvention of technological measures and integrity of rights management information. Authors, performers and phonogram producers enjoy an exclusive right of authorizing the communication or making available to the public their protected material, by wire or wireless means, in such a way that members of the public may access it from a place and at a time individually chosen by them. These rights cover, for example, on-demand delivery of works over the Internet (Article 8 of the WCT, and Articles 10 and 14 of the WPPT).⁵³

83. The treaties recognize the role that technological measures used by right holders have in facilitating effective protection. In order to ensure the effectiveness of such measures, contracting parties to the treaties must provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors, performers or producers of phonograms in connection with the exercise of their rights, and that restrict acts, in respect of their protected material, which are not authorized by the right holders concerned or permitted by law (Article 11 of the WCT and Article 18 WPPT). Individual licensing and collective management of protected materials can be facilitated by electronic rights management information that can be attached to digital copies of works and other material. The treaties require contracting parties to provide adequate and effective legal remedies against any person, who, without authority, removes or alters such information or distributes copies of protected material knowing that such information has been removed or altered without authority, and knows or, with respect to civil remedies, has reasonable grounds to know that it will induce, enable, facilitate or conceal an infringement of any right covered by the treaties (Article 12 of the WCT and Article 19 of the WPPT).

84. The WPPT does not cover the rights of performers in the audiovisual fixations of their performances. The Diplomatic Conference of December 1996 adopted a resolution calling for further preparatory work on a protocol to the WPPT concerning audiovisual performances.⁵⁴ The WIPO programme on the *protection of audiovisual performances* is aimed at the adoption of new international norms concerning the rights of performers in respect of audiovisual performances. This issue was latest discussed at the first session of the WIPO Standing Committee on Copyright and Related Rights held from 2 to 10 November 1998. The Diplomatic Conference of December 1996 also adopted a recommendation on databases that recognized that databases are a vital element in the development of a global information infrastructure, and expressed an interest in examining further the

Copyright and Neighbouring Rights Questions, held in Geneva from 2 to 20 December 1996, a list of signatories and ratifications of the treaties, and other information on the treaties.

⁵¹ The treaties were open for signature until the end of 1996. There are 51 signatories to the WCT and 50 signatories to the WPPT. At present, six countries have ratified the WCT and four countries the WPPT.

⁵² For example, the WCT incorporates by reference the substantive obligations of the Paris Act 1971 of the Berne Convention, and contains provisions on, *inter alia*, the scope of copyright protection, protection of computer programs and compilations of data, and limitations and exceptions that follow closely the corresponding provisions of the TRIPS Agreement. The provision on the general obligations in the area of enforcement follows the language of Article 41.1 of the TRIPS Agreement, but the WCT does not contain detailed provisions in that area.

⁵³ See also the discussion on the right of communication in paragraphs 43-45 above.

⁵⁴ See the Resolution concerning Audiovisual Performances adopted by the Diplomatic Conference on 20 December 1996 (WIPO document CRNR/DC/99).

possible implications and benefits of a *sui generis* system of protection of databases at the international level.⁵⁵ The WIPO programme on the *protection of databases* is concerned with the possibility of protection of databases, at the international level, beyond the protection provided for original databases by copyright. This issue was also discussed at the first session of the Committee. The third substantive issue discussed at the first session of the Committee concerned the protection of broadcasting organizations. The WIPO programme on the *protection of the rights of broadcasting organizations* is directed at the updating of international norms relating to the rights of broadcasting organizations.⁵⁶ The Committee, at its second session scheduled for 4 to 11 May 1999, will continue its work concerning the preparation of a protocol or a separate treaty on audiovisual performances, the issue of harmonization of the protection of databases, and the preparation of a treaty on the protection of the rights of broadcasting organizations.

85. The WIPO Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications is examining the *issues arising from the use of trademarks on the Internet*. The Committee discussed these issues at its first session held from 13 to 17 July 1998, and decided that they should be included on the agenda for its next session with highest priority. In preparation for that session, the International Bureau of WIPO would prepare a study, with the help of consultants, on the following two questions, for discussion by the Committee: (i) How can a relationship be determined between a sign or mark that is used on the Internet and particular goods or services? and (ii) How can a relationship be determined between a sign or mark that is used on the Internet and a particular country or territory?⁵⁷

86. WIPO has undertaken an international process to develop recommendations concerning the *intellectual property issues associated with Internet domain names*, including dispute resolution. An Interim Report on "The Management of Internet Names and Addresses: Intellectual Property Issues" was published on 23 December 1998.⁵⁸ The Interim Report contains draft recommendations which have resulted from an ongoing process of international consultations. All interested parties have been invited to submit comments on the Interim Report and the draft recommendations contained therein. WIPO's final recommendations will be reported to its member States and presented to the Internet Corporation for Assigned Names and Numbers (ICANN)⁵⁹ in a final report in March 1999.

87. The recommendations contained in the Interim Report are aimed at minimizing and resolving domain name disputes which have arisen worldwide as a result of the tension between intellectual property law, especially trademarks, and domain names. The Interim Report makes recommendations with respect to the following four topics: (i) best practices designed to minimize conflicts arising out of domain name registrations; (ii) the need for uniform dispute resolution procedures; (iii) protection for famous and well-known marks; and (iv) the impact of adding new top-level domains on intellectual property.

88. The WIPO Standing Committee on the Law of Patents is examining issues related to the disclosure of technical information on the Internet and its impact on patentability. The Committee discussed the matter at its first session held from 15 to 19 June 1998, and decided that the International Bureau should collect information from the existing literature on this subject for presentation at the next session, and that this issue should be placed on the agenda for discussion at

⁵⁵ See the discussion in paragraph 51 above.

⁵⁶ For the Committee's recommendations on the future work on these three issues, see paragraph 204 of the report of the meeting circulated in WIPO document SCCR/1/9.

⁵⁷ Paragraph 27 of the report of the meeting circulated in WIPO document SCT/1/6.

⁵⁸ The Interim Report is available at WIPO's Internet Domain Name Process website at <http://wipo2.wipo.int>.

⁵⁹ For information on the ICANN, see footnote 38 above.

that session, in particular with respect to whether the issue should be broadened to include related issues such as infringement of patents through use of the Internet.⁶⁰

89. The challenges to the intellectual property system that are raised by the global nature of digital networks are addressed under the programme on *intellectual property rights beyond territoriality*. A Group of Consultants on the Private International Law Aspects of the Protection of Works and Objects of Related Rights Transmitted Through Global Digital Networks met in Geneva from 16 to 18 December 1998. The presentations made at this meeting and a summary of the discussions are being made available by the International Bureau of WIPO.

90. The programme on *copyright, related rights and digital technology* covers a variety of topics relating to the impact of digital technology on copyright and related rights, including electronic management systems and the management of copyright and related rights in the digital environment. The first session of an Advisory Committee on Management of Copyright and Related Rights in Global Information Networks was held in Geneva on 14 and 15 December 1998. The presentations made at this meeting and a summary of the discussions are being made available by the International Bureau.

91. The programme on *global information network and intellectual property information services* is broadly concerned with infrastructure for the electronic delivery of intellectual property services. WIPO is preparing to establish a worldwide network infrastructure that makes available, through public networks, intellectual property information to the public and also provides sufficient telecommunication capacities and security mechanisms to allow intellectual property offices to access information useful for grant and registration activities. In this context, WIPO intends to support the deployment of information technology infrastructure in intellectual property offices, with special support to offices in developing countries, assisting them in developing the necessary infrastructure and in training for use of the system.

92. WIPO is preparing three regional consultation meetings on intellectual property and electronic commerce, which are planned to take place in Africa, Asia and Latin America in 1999, in order to generate greater awareness of the ways in which electronic commerce is affecting intellectual property and to assist in formulating a timely and swift response to those issues. These meetings are to be followed by a major international conference in Geneva from 14 to 16 September 1999. The Conference will address the impact of electronic commerce on intellectual property and will include plenary sessions on general developments in electronic commerce, the technology supporting it, the business opportunities created by these activities, and their implications for intellectual property. There will also be workshops on intellectual property issues in the affected industries, such as the music publishing and film industries. The various areas of WIPO's work programme associated with electronic commerce, such as Internet domain names, the WCT and the WPPT, work on a protocol to the WPPT on audiovisual works, the use of trademarks on the Internet and the use of electronic commerce tools in the delivery of intellectual property services will also be discussed. An issues paper will be published in order to define more clearly the impact of electronic commerce on the intellectual property system. The paper will seek to identify and examine the major policy challenges posed to the intellectual property system by electronic commerce and the ways in which the WIPO programme is addressing, or could in the future address, those challenges.

(b) Other intergovernmental organizations

93. A number of other intergovernmental organizations have activities related to electronic commerce. The Secretariat of the Organization for Economic Co-operation and Development (OECD) prepared recently a comprehensive "Report on International and Regional Bodies: Activities and Initiatives in Electronic Commerce" for the OECD Ministerial Conference "A Borderless World:

⁶⁰ Paragraph 13 of the Summary by the Chair, contained in WIPO document SCP/1/6.

Realising the Potential of Global Electronic Commerce", held in Ottawa from 7 to 9 October.⁶¹ The report sets out the key contributions to the current framework for global electronic commerce (instruments, agreements, reports, etc.), and outlines current and possible future work programmes of the international and regional bodies concerned. The OECD itself is addressing issues related to electronic commerce through several of its committees and working parties. Issues covered include among others taxation, consumer and privacy protection, cryptography, authentication and certification of transactions, as well as access and infrastructure questions.

94. Many of the activities referred to in the above-mentioned documents may be of interest also in respect of trade in goods and services protected by intellectual property rights, such as activities related to commercial law. However, in general these activities do not address specifically the protection and enforcement of intellectual property rights. The above-mentioned OECD survey, which is based on the contributions of the organizations concerned, mentions, *inter alia*, the following activities that concern intellectual property. The International Labour Organization (ILO) monitors the impact of digitalization on the protection of the rights, performances, works and remuneration of performers and journalists. The United Nations Educational, Scientific and Cultural Organization (UNESCO) organizes international and regional meetings on the protection of intellectual property rights in the digital environment. The World Bank is hosting TechNet seminars and discussion groups on promoting and strengthening IPR protection in developing countries. The United Nations Conference on Trade and Development (UNCTAD) will work, in cooperation with WIPO, to develop awareness and understanding of IP issues in developing countries.

⁶¹ OECD document SG/EC(98)10/FINAL. This and other documents from the OECD Ministerial Conference can be found at <http://www.oecd.org/dsti/sti/it/ec>.