

MULTILATERAL TRADE
NEGOTIATIONS
THE URUGUAY ROUND

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Negotiating Group on Trade-related Aspects
of Intellectual Property Rights, including
Trade in Counterfeit Goods

SUBMISSIONS FROM PARTICIPANTS ON TRADE
PROBLEMS ENCOUNTERED IN CONNECTION WITH
INTELLECTUAL PROPERTY RIGHTS

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SUBMISSION BY THE EUROPEAN COMMUNITIES

I. INTRODUCTION AND OVERVIEW

1. In recent years a number of intellectual property issues have emerged as having direct and sometimes important implications for the external trade of the European Community. These issues can be divided into three categories :

- inadequacies in the availability and scope of rights;
- inadequate procedures and remedies for the effective enforcement of such rights as exist;
- and national rules which discriminate against imports in favour of domestic economic activity.

Parts II, III & IV below give examples of each of these categories of problem.

II. INADEQUACIES IN AVAILABILITY AND SCOPE OF RIGHTS

A. (a) Sound and video recordings

2. Although literary, musical and cinematographic works are widely protected, the protection granted may, in some countries, be restricted to nationals only or extended only to works first commercialised in the country. Furthermore, the persons primarily interested in taking action against pirated sound and video recordings may not have been granted a clear legal right of their own on which to base their actions. Rights for producers and performers would improve their ability, as well, incidentally as that of the author, to combat effectively the widespread piracy of their works, productions and recorded performances which has a substantial negative impact on the sales of legitimate recordings in many external markets.

(b) Appellations of origin and geographical indications

3. The protection of appellation of origin and of other geographical indications is of fundamental importance in many areas especially in the field of foodstuffs such as wines and spirits. "Appellation of origin" has been defined at international level in the 1958 Lisbon Agreement for the Protection of Appellations of Origin and their International Registration as follows "appellation of origin means the geographical name of a country, region or locality which serves to designate a product originating therein, the quality and characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors".

The wine and spirits sector is one which is particularly vulnerable to imitation, counterfeit and usurpation. Such unfair trading practices cause serious damage not only to producers who, under appellation of origin regimes, are subject to extremely demanding conditions of production, but also to consumers, who are misled as to the real nature, quality and origin of the products offered. The effects of such practices involve unfair trade, not only in the markets of countries who do not respect appellation of origin but also in third country markets where EC products have to compete with those from such countries.

The protection of appellations of origin and geographical indications is enforced within the European Community by regulation and is also the subject of several international agreements. However, under the Paris Convention, protection is limited in that the only sanction foreseen is possible seizure on importation, since no general civil or criminal law protection has been provided for. Equally the Madrid and Lisbon Agreements, while providing for more extensive protection, suffer from less than widespread membership. Such protection as exists is therefore largely based on national provisions on unfair competition and upon bilateral arrangements offering recognition on a reciprocal basis.

Thus insufficiency of protection for appellations of origin and geographical indications continues to have severe negative effects on the marketing of Community products, particularly in the wines and spirits sectors.

B. (c) Limitations on patentable subject matter

4. Specific exclusions from patentable subject matter, in particular, those relating to food, chemical and pharmaceutical products have exposed Community firms to unfair competition in certain important export markets. The fact that certain countries grant only process, as opposed to product, patents in the chemical sector can give rise to "counterfeiting" which often cannot be the subject of judicial proceedings.

In addition, plant breeders' rights are protected under different systems (specific legislation or patent law) and frequently no protection at all exists.

(d) Inadequate patent term

5. National laws limiting the lifetime of patents to sometimes wholly inadequate periods, such as periods of only 5 years, have likewise had a negative impact on certain exports.

(e) Procedural obstacles to the obtaining of rights

6. Procedural differences and complexities in some contexts make it significantly more difficult for Community firms to obtain protection outside the Community than their competitors experience within the Community. For example, an overly strict interpretation of the requirement of unity of invention not only increases unnecessarily the number of patent applications, thereby slowing down the whole procedure, but it also leads to substantial complications and increased costs. Such procedural differences, since they affect the patent system as a whole, can produce significant distortions, including negative effects on trade in the products concerned.

(f) Compulsory licensing of pharmaceutical patents

7. Compulsory licensing of pharmaceutical patents before products have enjoyed the necessary minimum period of exclusivity in the market have also depressed sales of the patented product and had a negative impact on the recovery of the considerable investment needed to sustain innovation in the pharmaceutical sector. In addition in the case of compulsory licensing the level of royalty obtained is often significantly lower than that which would have been negotiated in the context of contractual licensing. In certain countries compulsory licenses are granted systematically without having regard to whether the invention is worked or not.

(g) Computer programmes

8. In some countries the absence of copyright legislation has resulted in developers of computer programmes being denied any possibility of protection of their rights and exposed them to the effects of piracy. In other countries where the infrastructure of basic rights exists, doubts as to whether computer programmes are protected by copyright or an analogous right have given rise to unfair competition through piracy. The problem has become the more serious as the market for "packaged" software has developed with programmes being sold in much the same way as books or recordings.

III. INADEQUATE PROCEDURES AND REMEDIES FOR EFFECTIVE ENFORCEMENT

(a) Counterfeiting of branded goods

9. Despite progress recently made in some national contexts, illicit traffic in goods bearing counterfeit trade marks continues to harm exports of all categories of Community products - not just luxury goods but also, for example, aircraft and helicopter parts, automotive components including tyres and brakes, motor oil and brake fluid, foodstuffs and beverages, fungicides and insecticides, cosmetics, medical equipment and pharmaceutical products. Trade effects come both through unfair substitution for sales of legitimate goods and through damage to their reputation adversely affecting future sales. In the latter case this refers to the lower quality of the counterfeit goods, to the severe health and safety risks for the public posed in many instances by the counterfeit goods and to the fact that when counterfeit is known it awakens suspicions as to the genuineness of articles customarily purchased. All countries (developed or developing) are affected by counterfeiting operation which often involves several countries (production, transit, sales). Even when basic trade mark laws are adequate, trade mark owners frequently have to contend with difficulties such as lack of access to tribunals capable of adjudicating rapidly, arbitrary or discriminatory procedures, unavailability of procedures facilitating proof of infringement, absence or inadequacy of dissuasive criminal sanctions, and the failure of public authorities to take action even in the face of large-scale, blatant infringement activity.

(b) Piracy of books, sound and video recordings

10. Similar difficulties to those experienced in the trade mark field also make it difficult for right holders to take effective action against piracy of books, sound and video recordings as well as computer programmes. These illicit activities have prejudiced the Community's considerable commercial interests in those sectors. In addition, this problem has acquired a new and critical dimension, through the immense advances in the technology of reproduction.

(c) Appellations of origins and geographical indications

11. Again even when basic rights exist on paper, difficulties in enforcing them effectively have permitted European indications to be unfairly appropriated, thereby adversely affecting the market penetration of genuine products having their appellation of geographical origin in the European Community.

(d) Models and Designs

12. Misappropriation of models and designs, particularly of textiles, ceramics, and spare parts for automobiles, aircraft and other machinery has also proved difficult to combat in certain contexts, even where, in principle, rights exist under the relevant local laws.

IV. DISCRIMINATION AGAINST IMPORTED PRODUCTS

(a) Procedural discrimination

13. Where judicial tribunals, remedies and procedures are created which are directed specifically at imported goods, and if the rules applicable in such fora are not only different from those applying in the normal domestic fora, but also more onerous from the point of view of compliance, discrimination against imported goods may well ensue. In addition to the inherently disadvantageous nature of such separate treatment, one practical consequence of such a system is to provide domestic industry with leverage which can enable settlements to be extracted from Community firms involved in such proceedings, which may not be objectively balanced in terms of benefits accruing to the parties.

(b) Preferential treatment of activity on national territory

14. Likewise, rules which discriminate against activity abroad have deprived European inventors of the possibility of obtaining a patent to which they would otherwise be entitled. Worse, they have then had to confront a patent relating to their invention granted to someone else in the state in question. Thus, the refusal to recognize the date of a foreign application in accordance with Article 11(3) of the Patent Cooperation Treaty and the refusal to admit prior inventive activity abroad in the same circumstances as recognition is granted to domestic activity, have both adversely affected the ability of Community firms to develop their commercial activities outside the Community.

V. RELATIVE IMPORTANCE AND DIVERSE CHARACTER OF PROBLEMS

15. The problems listed above are of different relative economic importance and often of divergent character particularly as to the nature of the solutions required.
16. Precise indications of the economic scale of the problems and of their probable impact on international trade are rarely available. This is due to the inherent difficulty of quantifying the impact of many of the problems involved. Although quantification is difficult, there is no doubt as to the scale of the problems. For example, there is no doubt that, taken together, trade mark counterfeiting and other forms of piracy of goods protected by widely recognized rights such as books and sound and video recordings represent a significant share of world trade and inflict considerable damage on a broad range of enterprises. While an exhaustive breakdown of the global value of such damage is not available it can be said, by way of example, that trade in counterfeit branded goods is valued at some 3-6 % of total trade and that pirated sound and video recordings have achieved market shares at levels as high as 80-90 % in certain parts of the world.

SUBMISSION BY JAPAN

A list of problems/cases caused by insufficient/inadequate protection of intellectual property rights which could constitute impediments to legitimate trade

1. Problems resulting from discrepancies in national IPR laws
 - (1) insufficient protection of intellectual property rights in the following areas
 - (a) patents
 - (b) trademarks
 - (c) design
 - (d) copyright
 - (2) excessive/discriminative protection of intellectual property rights
 - (3) problems in international trade of intellectual property rights (problems of licensing)
 - (a) government restrictions
 - (b) unjust exercise of the rights by their holders
 - (4) restrictions on foreigners' patent rights for the purpose of protecting homemade technologies
2. Problems concerning enforcement of intellectual property rights
 - (a) insufficient domestic enforcement
 - (b) insufficient border control measures
 - (c) inadequate border control measures
 - (d) an inadequate system of international collaboration for enforcement

1. Problems resulting from discrepancies in national IPR laws
 - (1) insufficient protection of intellectual property rights
 - (a) patents
 - (i) non-existence of the patent system - exceptions from patent protection

Inventions made by Japanese enterprises are used freely by third parties due to the impossibility of their protection by patents. Problems of "unpatentable subjects" (exceptions from patent protection) are especially serious, as there are many countries which do not grant any patents at all or grant patents only for the manufacturing process in such fields as chemicals, pharmaceuticals, etc. which require a vast amount of funds for research and development.

- (ii) insufficient term of the protection period

In many countries, the usual terms of patents for inventions are set in the range of 15 to 20 years, but there are some developing countries which prescribe especially short terms for patents. In such countries profits from research and development could not be properly retrieved within the duration of a patent.

(iii) non-voluntary licence articles, patent
forfeiture articles

1) As the criteria for issuing non-voluntary licences by the reason of non-working of invention provided for in the previous act of the Paris Convention were more lenient than in the Stockholm Act of the Paris Convention, some members of the previous Acts have not provided adequate patent protection by comparison to the members of the recent revised convention.

For example:

1 According to the Stockholm Act of the Paris Convention, it is prohibited to forfeit patents upon the reason of non-working within the period of 6 years after the filing date of patent application or 5 years after the date of patent grant whichever period terminates later. By contrast, in a certain member country of the Hague Act of the Convention, patents can be forfeited only after 4 years from the patent grant. Further, in this country, forfeiture can be carried out immediately without issuance of non-voluntary licences.

2 Even when the environment of the actual locale is not suited for the operation of factories, etc. and importation serves well the

needs of the region, there are cases in which these conditions are not accepted as legitimate reasons for justifying the non-working, and non-voluntary licences are issued.

(Note: Many countries consider importation of patented items combined with non-commercialization domestically of inventions to be non-working and issue non-voluntary licences unless there is a legitimate reason.)

Further, the criteria for non-working vary among countries, and the procedures for issuing non-voluntary licences sometimes lack transparency.

2) With regard to non-voluntary licences issued for reasons other than non-working, e.g. for public welfare, the criteria for its issuance are set by domestic laws of respective countries. Consequently, there are some countries in which non-voluntary licences are issued almost automatically to a third party even when the patent holder is practising the invention within the country.

(b) trademarks

(i) deficiencies in protection of prominent foreign trademarks

In certain countries, well-known trademarks of foreign enterprises which are recognized widely among dealers and consumers are often used by third parties without any restriction. As a consequence, the trademarks often become common names, and their

registrations for renewal of the term are rejected. Further, there is a fact that in these countries trademarks and trade names which are identical or similar to prominent foreign trademarks are being registered without regard to the foreign trademark owners.

(ii) In countries, where no examination system exists, exercise of the right is sometimes impeded by the lack of clarity in the validity of the right.

There are also problems as to the trademarks of Japanese enterprises being registered by a third party without permission of the enterprises.

(iii) Insufficient length of period for renewal

When commercialization is delayed in countries where the period till the first renewal of the right is as short as 5 years, renewal is denied and the trademark right is lost in some cases.

(iv) Inadequate system of opposition to registration

There is a certain country whose systems are such that an application for registration of a trademark is considered abandoned when an opposition is raised against the registration, unless the applicant reaches an agreement of reconciliation with the opponent or raises a suit of revocation of the opposition within a year. In that country, obtaining trademarks is extremely difficult.

(v) In a certain country, in order for a holder of a trademark to let another party use the trademark, he must register the user, but the process of examination for registration is delayed. In such cases, as licensee is not registered, the user does not procure legal permission to make use of the trademark although licensed by the trademark holder. This means that the trademark is considered to be at a state of "non-use" and thus cannot take any action against an infringer.

(c) Design

(i) In countries where there is no system of protection of design, measures cannot be taken against unlawful design-copying.

(ii) In countries having no examination system, the validity of the right is often obscure, and exercising the right is hindered as a result.

(d) Copyright protection

International protection of the copyright and neighbouring right is provided according to the standard set in such international conventions as the Berne Convention and Universal Copyright Convention. These copyright conventions provide quite detailed account of the minimum standard for required protection. Therefore, the priority in the question of copyright protection should be given to

expediting the process of accession to these conventions and to consolidating domestic laws and enforcing law effectively in each country. The question of the standards for providing protection and problems associated with it should be sought thereafter.

(i) Institutional problems

Existence of non-parties to the copyright conventions

Only 76 countries participate in the Berne Convention, and 78 participate in the Universal Copyright Convention (among them, Japan, F.R. Germany, U.K., France, etc., participate in both conventions, so 102 countries in total (avoiding repetition) are members of the conventions). As there are still a number of non-member countries, expediting their participation is the first issue to be dealt with.

Existence of non-participants to the phonogram protection convention

39 countries including Japan, U.K., U.S.A., France participate in the Convention for the Protection of Producers against Unauthorized Duplication of their Phonograms (adopted in 1971), but there are still a number of non-member countries. This convention obliges the parties to protect phonogram producers of foreign nationality

against production, importation and distribution of unauthorized copies of phonograms. It is an effective means for prevention of pirates editions, and participation in this convention is, therefore, to be promoted.

(ii) Concrete problems

Problems of pirates editions of phonograms

There is a fact that pirates editions of Japanese phonograms are produced and distributed in some countries. At the same time pirates editions of phonograms of Western European and North American countries are produced in some countries and are imported to Japan; as a result, phonogram producers who have legal permission for duplication are negatively affected in terms of sales.

Note: These are problems arising from the fact that there are still many non-parties to the copyright conventions and the phonogram convention. In addition, it is not clear whether the copyright conventions are enforced properly and effectively in some member countries.

- Computer programs

There are countries which still have not given a guarantee for legal protection for computer programs.

(2) Excessive/discriminative protection of intellectual property rights

There is a case where a patent system may lead to discriminative treatment of foreigners in patent-obtaining process and an impediment to free competition through excessive/unstable protection of intellectual property rights. This could not only be unfavorable for promoting stable activities of intellectual creativity and ensuring technological development but may also lead to impediments to expanding production and international trade.

(a) Problems of the first to invent rule

In a country where the first to invent rule is adopted, there occurs such problems as the patent system permits the claim of the date of invention only when the invention has been made in that country, and for an invention made abroad, only the claim of the date of file is permitted. In addition, under this system, the Convention priority is not approved for matters other than those described in the claims of the patent application even if they are described in the specifications of the patent application in the first country. The first inventor in a foreign country could thus be discriminated against.

(b) Problems of the duration of the patent term

Under the patent system which starts the duration of the patent from the date of grant, and no limit is set

from the date of filing, when the procedure for acquiring a patent is delayed by some reason, an exclusive use of the invention could be exercised after a considerable length of time from the date of invention or filing. As a consequence, this could create a problematic situation where an invention which is already widely used becomes exclusively protected. In the case in which the restriction on timing for actions which applicants are allowed to take is rather lenient, the grant date can be intentionally delayed by the applicant, and this may lead to an aggravation of the above tendency.

(c) Problems of non-existence of a publication system

Where no 18-month publication system exists, the procedures taken between the date of file and the date of grant remain secret, so a bona-fide third party may start using his own invention without knowing that the same invention is in the process of examination. This system could hamper the commercial activities of third parties on the occasion of patent issuance.

(d) Problems of relief procedures concerning defects in the patent right

Since interventions in the procedures to re-examine/correct defects of the patent rights are permitted to patent holders only, but not to third parties, arguments between concerned parties cannot be fully developed, and solutions from such arguments tend to be in favor of the patent holders.

(3) Problems in international trade (licensing) of intellectual property rights

(a) Restrictions imposed by the government

For the purpose of protecting domestic industries, a certain number of governments put licensing of intellectual property rights under their authorization, and lay down various restrictions on licensing agreements made between enterprises of industrialized countries and ones of the countries in question.

- 1) restrictions on the rates of royalties
- 2) permission of trademark licensing only upon the condition of technological transfer
- 3) no case of approval for licensing foreign trademarks in joint ventures with foreign companies
- 4) contracts obliging the licensor to bear the responsibility in case of infringement of the patent of a third party
- 5) restrictions on the duration of licence for know-how
- 6) renewal of contracts only upon the condition of an offer of improved technologies
- 7) obligation of granting patents to the licensee without compensation after the termination of the licensing agreements even before the expiration of the term of the patents

(b) Unjust exercise of the rights by their holders

Enterprises of the industrialized countries sometimes demand, in licensing, unjust terms of agreement which is deemed to exceed the scope of their intellectual property rights.

e.g.: Licensing agreements including countries for which patents have not been granted; contracts which are tied-in with non-patented articles.

(4) Restrictions on foreigners' patent rights aiming at protection of homemade technologies

There is a country which, for protecting and promoting newly developed domestic technologies, restricts by law for a certain period production, sales and importation of products which are identical or similar to the products related to the new technologies in question. According to the measures based on such law, not only are foreign enterprises which hold patents for articles related to the new technologies unable to exercise their patent right, but no one except for enterprises of that country is able to produce, sell, or import such products.

2. Problems concerning inadequate enforcement of intellectual property rights against trade in infringing goods

(a) Insufficient domestic enforcement

In certain countries, production and sales of commodities infringing upon intellectual property rights are not controlled effectively for reasons such as

sanctions against production and sales of such commodities are not sufficient or the procedures for requesting supervision is complicated. In such countries the market for the genuine commodities is restrained as a result.

(b) Insufficient enforcement measures at border

The problem is about the same as the one concerning domestic enforcement, but further, due to the fact that trilateral trade of commodities infringing upon intellectual property rights is rampant, problems resulting from insufficiency of border control against importation of infringing commodities have become serious. In particular, trade of commodities infringing on intellectual property rights, which are exported to countries in the Middle East, Europe, America, and Africa from or via certain countries in Asia, has been growing and has been impeding to the trade of the genuine commodities.

(c) Inadequate enforcement measures at border

Some of border control measures against IPR-infringing goods could put respondents (foreign enterprises) in a disadvantageous position, which often leads to problematic situation that companies which fear prohibition of import are compelled to make disadvantageous licence agreement with complainant. Such control measures could be obstacles to legitimate trade.

The following could constitute such a case,

- a) The period of investigation and reply is limited.
- b) Remedies for damages caused by erroneous measures taken against non-infringing goods are absent.
- c) Examination for the border control is not suspended even when the patent upon which the complaint is based is pending in a re-examination procedure before the patent office or a trial for invalidation before the court
- d) The order of exclusion from entry is not lifted for a substantial time, thus restriction on importation being extended, even when the violation ceases to exist
- e) The respondents are not permitted to make a counterclaim against the complainant's infringements of the respondent's patent.

Border control measures could include exclusion from entry of products other than those of the respondents. This could cause a problem that such products are prohibited to import without any investigation.

- (d) An inadequate system of international collaboration for enforcement
 - (i) There have been cases in which dead-copy product and its trademark labels are manufactured and exported separately and then combined after they

reach the country of destination. There are also cases of manufacturing unfinished products in a country where a patent is held, which do not constitute infringement of the patent right, and then exporting them to a country, where a patent is not held, and assembling them to make complete products.

(ii) Practices which do not fall under the category of infringement of the trademark right but which cause misunderstanding and confusion about the source of goods are difficult to control at the border.

For example, goods which do not have any or have different trademarks but which have the same package or the same user's manual as the one of the genuine item have been circulating internationally. Measures against their distribution are often inadequate as it is difficult to control them at the border or to find them in the countries of origin or of transit.

(iii) Trade of products manufactured upon infringement of the process patent

Infringement of the process patent is difficult to discover or to prove even in the homeland. The case is more troublesome when the infringer resides in a foreign country, and, as a result, the control over infringing commodities has been insufficient.

SUBMISSION BY THE UNITED STATESIntroduction

Inadequate and ineffective protection for intellectual property rights is a significant and growing nontariff barrier to trade in goods and services. The investment required for the creation, development, and marketing of high-technology products and services is enormous. The creation and distribution of new works of authorship including books, periodicals, audio and video works, television programming and computer software is similarly complex, expensive, and time-consuming. The ability to attract the capital required to support such creativity increasingly depends upon the availability of a global market in which the creator can market his products. The exclusive rights provided by intellectual property laws enable the owner of such property to penetrate markets and establish a foothold for the sale and distribution of new products and services. The lack of adequate and effective intellectual property laws upon which trade in such products is based removes export markets and deprives investors around the world from recouping their costs in creating and bringing these new products to the market place. In addition, the lack of adequate and effective protection for intellectual property negatively affects sales in the home market and in third country markets.

Adequate international standards for patent protection do not exist. Countries may, fully consistent with the limited obligations of international conventions, deny patent protection for technologies including pharmaceuticals, agricultural chemicals, alloys, foodstuffs, and even agricultural machinery. In other countries where patent protection does exist for such technologies, it is often limited to protection for the process of manufacture, leaving others free to deprive the inventor of his rightful rewards by devising noninfringing processes for making the true invention -- the new product. Patent terms in many countries are less than 15 years and some even as short as seven.

Some countries provide limited protection for audio and video recordings and cable transmissions. The problem has been exacerbated by new technologies which have made the copying of sound recordings, motion pictures, and computer software quick and inexpensive.

Some countries do not have effective systems for registering and recording rights in trademarks. Other countries do not provide protection for service marks, an increasingly important area as trade in services continues to grow. High tariffs and import barriers frequently make it difficult to maintain trademark rights in countries, inviting pirates to fill the void.

Cutting across all forms of intellectual property is the problem of inadequate enforcement. Penalties for infringement of intellectual property rights are too small. Piracy and counterfeiting occur because the costs of engaging in such activities, despite the fines and penalties occasionally levied, enable the infringer to conduct a profitable business. The lack of an effective means to obtain evidence to prove infringement frustrates intellectual property owners in their efforts to enforce their rights.

The following sections provide a very brief summary of the inadequacies in the intellectual property laws and the enforcement procedures encountered abroad by U.S. companies. While some of these problems are more serious than others, they all constitute barriers to legitimate trade in protected goods and services.

Estimating the negative trade effect of the unauthorized copying or use of copyrighted works is quite difficult, but an industry group representing major U.S. copyright interests, the International Intellectual Property Alliance (IIPA), estimated in 1985 that its industries lose over \$1.3 billion annually as a result of failure to provide adequate and effective protection to U.S. copyrighted works in ten selected foreign markets. U.S. video cassette interests report that they lose \$350 million annually to pirates in just one developed country market not covered by the IIPA survey and that foreign markets both developed and developing are from 20-100 percent comprised of pirated material.

In regard to the failure of some countries to provide adequate and effective patent or trademark protection, in 1985 the National Agricultural Chemicals Association estimated that losses to its member companies due to intellectual property infringement were approximately \$150-300 million annually. The International Chamber of Commerce estimates that counterfeiting now accounts for almost 2 percent of world trade, or around \$70 billion.

I. DISCREPANCIES IN INTELLECTUAL PROPERTY RIGHTS LAWS

A. Coverage

Subject matter coverage in intellectual property laws differs around the world. For instance, some countries do not protect the following:

- food stuffs, chemicals or pharmaceuticals, or limit protection to processes only;
- cosmetics, agricultural machinery, fertilizers, metal alloys, microorganisms, plant varieties, animal varieties, anticontaminant equipment or processes, atomic energy or nuclear-related inventions, computer software, methods for treatment of the human/animal body; and
- designs of integrated circuits.

U.S. pharmaceutical, agricultural chemical and other chemical firms in particular find that patent protection is weak or ineffective in many countries. For example, only process patents, which are usually not as effective for protecting a product as a product patent, may be obtained for pharmaceutical and chemical compounds in many developing and newly industrialized countries. U.S. firms estimate that lost local and export sales due to this significant inadequacy in national laws can amount to as much as \$25 million annually for a single market.

For process patents, some countries require inclusion of scientifically unnecessary but legally limiting process parameters such as the temperature or pressure at which a chemical reaction occurs, which makes it easy for a pirate to avoid infringing a process patent.

In the copyright area, the lack of protection for sound recordings, cable retransmissions of copyrighted works and computer software also result in major distortions of trade. U.S. software companies lose a total of \$125 million annually in four selected markets. United States copyright interests lose \$25 million annually in one country that does not protect cable retransmissions of copyrighted works. U.S. sound recording companies lose \$90 million annually in just two countries and \$170 million in lost exports from one of those countries.

B. Duration of Intellectual Property Rights

The terms of protection in many countries are not sufficient to provide a reasonable opportunity for recovery of an inventor's original investment, in the case of a patented product, or for a creator to benefit sufficiently from his work in the case of a copyrighted work.

Some countries do not even have patent, copyright or trademark laws. Others offer short terms of protection which allow pirates to exploit the patent holder's rights for a pharmaceutical product within a ten or even a five-year period. In the case of pharmaceutical or chemical patents, required testing may take up much of the term of patent protection and the patent owner is left with a severely limited period of exclusivity. U.S. pharmaceutical companies report that, in one country, the limited patent term together with the lack of product protection for pharmaceuticals costs them from \$50-100 million annually.

Under U.S. law, a patent runs 17 years from its date of issuance; European Patent Office-granted patents run 20 years from their filing dates. Both provide a period of exclusive rights during which the patent owner can exploit the product or process covered by the claims or license others to do so and recover process development and product investment costs.

Similarly, in some countries a copyright owner's rights are limited to 20 years. In the United States and in many other countries all copyrightable works, including computer software, are afforded a full term of protection of life plus 50 years (or in the case of a "work made for hire" 75 years from publication or 100 years from creation, whichever is shorter).

C. Scope of Exclusive Rights

Many countries put limitations on the rights that are offered. For example, certain countries do not allow:

- o patents for new uses of known products or compounds;
- o patents for chemical compounds or compositions. Patents are sometimes issued for the latter but not the former.
- o trademarks for single ingredient pharmaceutical products and chemical preparations.

At least one country does not allow companies to register trademarks for single ingredient pharmaceutical products and chemical preparations. Furthermore, although method of use claims in patent applications are in theory allowable in some countries, authorities do not issue patents on this basis.

D. Compulsory Licensing Laws

Under most national laws, the government can issue compulsory licenses because a patent is not being "worked"; in other words, the patented product is not being produced or the patented process used in the country. Article 5A of the Paris Convention limits the freedom of countries to provide for compulsory licenses for failure to work. Such licenses must be nonexclusive and cannot be issued prior to 4 years from filing of the patent or 3 years from issuance, whichever is later.

The Convention also specifies that applications for compulsory licenses must be refused if the patent owner gives "legitimate reasons" for failure to work. Countries not members of the Paris Convention are under no obligation to observe these limits in the issuance of compulsory licenses for failure to work.

Some countries issue compulsory licenses while at the same time excluding the foreign patent holder from importing goods covered by the patent. This can be particularly burdensome when the country also controls investments, so the foreign patentee is unable to establish a subsidiary in the country to produce its products.

Compulsory licensing provisions allow a foreign government to legally revoke the patent holder's exclusive rights to produce the licensed product. U.S. pharmaceutical manufacturers find that some countries allow compulsory licensing two years after the patent is granted. Other countries' laws actively foster compulsory licensing agreements and allow for a patent to lapse after two years from issue. This is far short of the minimum requirements set by the Paris Convention.

In at least one country, compulsory licenses are sometimes issued to local nationals despite local working by multinationals. Once a compulsory license is issued, this country may close the border to imports to further hamper the operations of the foreign-owned company and patent holder.

International copyright conventions provide for certain limited area where compulsory licensing of certain works is permitted. Problems have arisen when countries attempt to go beyond these limits. Compulsory licensing is generally not a problem in the trademark area.

E. Enforcement Procedures

Even in countries possessing laws that enable firms to acquire intellectual property rights, a serious trade barrier exists if enforcement of those rights is unavailable or unreasonably difficult. Trade barriers involving enforcement fall into at least three categories: lack of access to a country's courts or administrative procedures; lack of provisions in a country's laws to obtain evidence to build a case; and inadequate penalties to discourage intellectual property right infringement.

Access to judicial remedies often suffers from the lack of "discovery" or some other means for obtaining evidence. Because the burden of proof is on the intellectual property owner, this makes it impossible to prove that infringement has occurred. This is especially acute where only process protection is provided in a country's patent laws. The plaintiff in these cases is often not able to prove that his patented process was the one used in making a product. In such cases, the burden of proof should be shifted so that it is the defendant's responsibility to prove that the patented process was not used in making the product. The United States is

considering legislation to shift the burden of proof to the defendant in process patent cases.

Additionally, penalties for intellectual property rights infringement in many countries simply are not high enough to discourage copying. Minor fines are viewed merely as a cost of doing business. Coupled with the difficulties of developing a case, low penalties act to encourage infringing activities by reducing the risk of legal action that, even if successful, has only minor consequences.

Monetary penalties and jail sentences for convicted infringers vary widely, but are insufficient in most cases to act as a deterrent. Most often infringers are made to pay only a minimal fine and imprisonment is rare. For example, in one country, those found guilty of violating a copyright owner's rights can be fined as little as equivalent to from US\$182 to US\$1,820, with no provision for imprisonment. Another country only imposes a fine of equivalent to between US\$13 and US\$135 for first time copyright infringers. Repeat offenders may be imprisoned for no more than three months and fined only about equivalent to US\$400.

While criminal penalties in many countries are either non-existent or inadequate for discouraging the infringement of intellectual property rights, the same is also true of civil remedies. In many countries injunctive relief or a similar court order to stop an infringing act is often not available. Adequate civil damages for infringement also are not available in many countries.

F. The Inadequacy of Intellectual Property Protection with Regard to Changing Circumstances and New Technologies

In some instances, intellectual property laws have not kept up with the rapid pace of technological innovation. As a result, the scope of protection afforded new technologies and new forms of authorship can vary from country to country. Current areas of concern because of uncertain and inadequate coverage under intellectual property and other laws include protection for computer software, semiconductor chips and mask works, and biotechnologies.

The lack of agreed forms and terms for protection in these areas can discourage innovation, limit the dissemination of new

technologies, particularly the export of products where protection is weak, and increase the likelihood of piracy with all its attendant trade distortions.

• Computer Software

Over the past few years there has developed an international consensus that computer software should be protected by copyright law. WIPO-sponsored meetings of experts on the appropriate form of protection for computer software helped to build the consensus. U.S. copyright law was amended in 1980 to clarify that computer programs are literary works protected by copyright. Many other countries also have amended their copyright laws to protect computer software or support this protection through the interpretation of existing legal provisions or court decisions. There is at least one country that actively opposes copyright protection for software, however.

• Semiconductor Chips

Appropriate protection for semiconductor chips and mask works is still being discussed internationally. The WIPO has held three meetings of experts to discuss what form of protection is warranted and is considering a draft treaty detailing protection for designs of integrated circuits. Semiconductor chips and mask works are protected by the United States under the Semiconductor Chip Protection Act of 1984 which provides ten years of protection for the works of U.S. nationals and the works of foreign nationals under certain circumstances. Other developed countries have adopted or are considering similar legislation. Most developing and newly industrialized countries are, at most, only beginning to consider whether to provide protection to semiconductor chips and mask works.

• Biotechnology

While industrial uses for microorganisms are growing enormously, life forms engineered by man are generally excluded from patent protection, particularly by the newly industrialized countries. The U.S. Supreme Court, in 1980, held that living microorganisms are patentable subject matter, and the practice at the U.S. Patent and Trademark Office is to accord widespread protection for biotechnology. On April 3,

1987 the U.S. Patent and Trademark Office ruled that animals may be patentable if they are manmade.

The two international conventions specifically concerned with biotechnology --the Budapest Convention and the International Convention for the Protection of New Varieties of Plants (UPOV)-- are not widely adhered to. The WIPO is considering the protection of biotechnological inventions and this may lead to more widespread patent protection in this area. UPOV is also developing a new treaty that will provide greater rights to plant breeders.

CONCLUSION

The foregoing indicates that deficiencies in protection of intellectual property rights distort trade in goods and services and reduce the value of concessions negotiated in previous rounds of trade negotiations. The main problems identified by U.S. companies include: 1) total lack of patent, trademark or copyright laws; 2) narrow scope of protection under intellectual property laws resulting in failure to protect entire categories of products or works; 3) terms of protection that are too short to permit an innovator time to test a product, market it and achieve an adequate return on investment; 4) misuse of compulsory licensing programs, especially for patents; 5) inadequate and ineffective enforcement provisions; and 6) the inability of intellectual property laws and regulations to keep pace with technological innovations.

The GATT Articles do not address the distortions of trade and impairment of concessions that arise from inadequate and ineffective protection of intellectual property rights. The negotiating group should, therefore, adopt additional disciplines in an Agreement on protection and enforcement of intellectual property rights. To that end, the United States intends to table texts that propose measures to improve protection and enforcement of patents, trademarks, trade dress, copyrights, mask works, and trade secrets.