Patents, Industrial Designs and Layout-Designs (Topographies) of Integrated Circuits*

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Touching upon the provisions mentioned in the TRIPS Agreement and provisions of the key international intellectual property conventions including the Paris Convention (1967), the Berne Convention (1971), and the Treaty on Intellectual Property in Respect of Integrated Circuits (1989), paper discusses the additional new obligations set out in the TRIPS Agreement. Particularly, standards concerning the availability, scope and use of patents, industrial designs and layout-designs (topographies) of integrated circuits are described in detail.

The TRIPS Agreement, Part II, sets out minimum standards of protection for the following forms of intellectual property\(^1\): copyright and related rights, trademarks, geographical indications, industrial designs, patents, layout-designs (topographies) of integrated circuits, and protection of undisclosed information.

The Agreement sets out the subject matter which is protectable, including rights conferred and exceptions to those rights, as well as specific minimum provisions on duration, coverage and criteria for protection. The Agreement also addresses licensing and assignment conditions for some of these rights (e.g., patents and trademarks) and, in addition, addresses the control of anti-competitive practices in contractual licences.

**Intellectual Property Rights under the TRIPS Agreement**

**Intellectual Property Conventions and TRIPS Obligations**

The TRIPS Agreement requires Members to comply with the substantive provisions of

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\(^1\) Article 1.2 of the TRIPS Agreement defines "intellectual property" for the purpose of the Agreement.
the key international intellectual conventions including the Paris Convention (1967)\(^2\) and the Berne Convention (1971)\(^3\), whether or not they are members of those conventions. Further, in regard to integrated circuit layout-designs (topographies), Members are required to provide protection in accordance with some of the provisions of the Treaty on Intellectual Property in Respect of Integrated Circuits\(^4\).

The Agreement supplements, or adds to, the obligations set out in the aforementioned conventions and treaty. Thus, for example, the TRIPS Agreement requires Members to provide for rental rights in the areas of "at least" computer programs and cinematographic works\(^5\). The Agreement also requires Members to provide protection for plant varieties either by patents or by an effective *sui generis* system\(^6\), or by any combination thereof.

Therefore, in order to comply with the requirements of the TRIPS Agreement when implementing their national systems of intellectual property protection, Members would have to comply with both the substantive provisions of the above mentioned conventions and treaty as well as with the additional new obligations set out in the Agreement itself.

### Standards Concerning the Availability, Scope and Use of Patents, Industrial Designs and Layout-Designs (Topographies) of Integrated Circuits

#### Patents

As mentioned earlier, the TRIPS Agreement requires Members to comply with the substantive provisions of the Paris Convention (1967)\(^7\) as well as with the provisions specifically set out in the Agreement itself. Thus, for example, the following provisions of the Paris Convention (1967) are relevant\(^8\):

- national treatment (Article 2 and 3)
- right of priority (Article 4)
- independence of patents obtained for the same invention in different countries (Article 4 bis)
- period of grace for the payment of fees for maintenance of rights; restoration (Article 5 bis);
- importation of products manufactured by a process patent in the importing country (Article 5 quarter).

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\(^2\) Article 2.1 of the Agreement reads: "In respect of Parts II, III and IV of this Agreement, Members shall comply with Articles 1-12 and 9 of the Paris Convention (1967)."

\(^3\) Article 9.1 of the TRIPS Agreement reads: "Members shall comply with Articles 1-21 and the Appendix of the Berne Convention (1971). However, Members shall not have rights or obligations under this Agreement in respect of the rights conferred under Article 6 bis of that Convention or of the rights derived therefrom."

\(^4\) Article 35 of the TRIPS Agreement reads: "Members agree to provide protection to the layout-designs (topographies) of integrated circuits (hereinafter referred to as "layout-designs") in accordance with Article 2-7 (other than paragraph 3 of Article 6), Article 12 and paragraph 3 of Article 16 of the Treaty on Intellectual Property in Respect of Integrated Circuits...".

\(^5\) Article 11 of the TRIPS Agreement

\(^6\) Article 27.3(b) of the TRIPS Agreement

\(^7\) Article 2.1 of the TRIPS Agreement

\(^8\) Refer to the Paris Convention (1967) for a full listing of relevant provisions.
(a) Patentable Subject Matter

The TRIPS Agreement states, in Article 27, that: "Patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application."9

Further, patents must be available and patent rights enjoyable "without discrimination as to the place of invention, field of technology and whether products are imported or locally produced". This requirement is subject to provisions dealing with:

1) exclusions from patentability (Article 27.2 and 3);

2) transitional delays for developing country Members to extend product patent protection (Article 65.4);

3) transitional provisions for pharmaceutical and agricultural chemical products (Article 70.8 and .9);

4) Members may exclude from patentability inventions in accordance with:

Article 27.2:

To protect *ordre public* or morality including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by public law, and

Article 27.3:

1) diagnostic, therapeutic and surgical methods for the treatment of humans or animals;

2) plants and animals other than microorganisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes.10

Finally, Article 27.3(b), as mentioned earlier, requires Members to provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by a combination thereof.

(b) Rights Conferred

Article 28.1 of the TRIPS Agreement provides that a patent shall confer on the owner the following exclusive rights:

1) where the subject matter is a product: the right to prevent unauthorized third parties from making, using, offering for sale, selling, or importing the product; and

2) where the subject matter is a process: the right to prevent unauthorized third parties from: (a) using a process, and (b) using, offering for sale, selling, or importing at least the product obtained directly from that process.

The patent also confers on the owner the right to assign, or transfer by succession, the patent, and to conclude licensing contracts.

Article 30 of the Agreement allows Members to provide limited exceptions to the exclusive rights conferred by a patent. Such exceptions must not unreasonably conflict with a normal exploitation of the patent and must not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.

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9 The Agreement states that "...the terms "inventive step" and "capable of industrial application" may be deemed by a Member to be synonymous with the terms "non-obvious" and "useful" respectively".

10 The Agreement provides for the review of this exclusion (Article 27.3 (b)) on 1 January 1999.
(c) Conditions on Patent Applicant
In return for the rights conferred by a patent on the patentee, the TRIPS Agreement calls for Members to impose certain conditions upon the applicant for patent. Thus, Members:

1) must require the applicant for a patent to disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art;
2) may require the applicant to indicate the best mode for carrying out the invention known to the inventor; and
3) may require an applicant to provide information concerning corresponding foreign applications and grants.

(d) Other Uses Without Authorization of the Right Holder (Government Use and Compulsory Licensing)

Article 31 of the TRIPS Agreement sets out a series of explicit provisions which must be respected by a Member where the domestic law of the Member allows for other use of the subject matter of a patent without the authorization of the patent owner. Such use would include use by the government or third parties authorized by the government.

These provisions deal with a broad range of conditions, including (among others): conditions governing such use, including efforts to be made to attempt to achieve voluntary licensing; exceptions to the requirement to attempt to achieve voluntary agreement for such use; scope, duration, non-exclusivity and non-assignability; remuneration of the right holder, and judicial review of such use and remuneration. The Article also deals with Members’ obligations where there is a need to correct anti-competitive practices; and circumstances where use is authorized to permit the exploitation of a patent that cannot be exploited without infringement of another patent.

(e) Term of Protection

The term of protection shall be for a minimum of 20 years counted from the filing date. It is understood that Members which do not have a system of original grant may provide that the term of protection shall be computed from the filing date in the system of original grant.11

(f) Process Patent: Burden of Proof

Article 34 of the TRIPS Agreement deals with the burden of proof for the purpose of civil proceedings in respect of the infringement of a process patent. In such case, the Member shall provide, in at least one of the following circumstances, that any identical product, when produced without the consent of the patent owner shall, in the absence of proof to the contrary, be deemed to have been obtained by the patented process:

1) If the product obtained by the patented process is new;
2) If there is a substantial likelihood that the identical product was made by the process and the owner of the patent has been unable through reasonable efforts to determine the process actually used.

Industrial Designs

As is the case with regard to patents, Members of the TRIPS Agreement must, under Article 2.1, comply with the substantive pro-

11 Article 33 of the TRIPS Agreement, including footnote 8.
visions of the Paris Convention (1967) whether or not they are also members of the Paris Union. Thus, most of the relevant substantive provisions set out for patents, above, would (among others) also apply to industrial designs:

- national treatment (Article 2 and 3)
- right of priority (Article 4)
- importation of articles; failure to work (Article 5)
- period of grace for the payment of fees for maintenance of rights; restoration (Article 5 bis)

(a) Requirement for Protection

Article 25.1 of the TRIPS Agreement calls for Members to provide protection for "independently created" industrial designs that are "new or original". The Agreement then goes on to give a reverse definition of novelty or originality by specifying that Members may consider that designs are not new or original if they do not "significantly differ" from known designs or combinations of known design features. Members may specify that industrial design protection shall not extend to design which are dictated essentially by technical or functional considerations.

The protection of textile designs is specifically addressed in Article 25.2 by obliging Members to ensure that any cost, examination or publication, do not unreasonably impair the opportunity to seek and obtain such protection. Members are free to meet this obligation through either industrial design law or through copyright law.

(b) Protection (Rights Conferred)

The Agreement provides that the owner shall have the right to prevent unauthorized third parties from making, selling or importing, for commercial purposes, articles bearing or embodying a design which is a copy, or substantially a copy, of the protected design.

As was the case with patents, Article 26.2 of the Agreement allows Members to provide limited exceptions to the exclusive rights conferred by an industrial design. Such exceptions must not unreasonably conflict with a normal exploitation of the protected industrial design and must not unreasonably prejudice the legitimate interests of the owner of the protected industrial design, taking account of the legitimate interests of third parties.

Article 26.3 of the Agreement provides for a minimum term of protection of at least 10 years for industrial designs.

Layout-Designs (Topographies) of Integrated Circuits

In the case of Layout-designs (topographies) of integrated circuits, the TRIPS Agreement requires Members to provide protection in accordance with specified sections of the Treaty on Intellectual Property in Respect of Integrated Circuits (IPIC Treaty) as well as provisions of the Agreement itself, as subsequently set out12.

The sections of the IPIC Treaty which are specified (i.e. incorporated by reference into the TRIPS Agreement) are: Articles 2-7 (other than paragraph 3 of Article 6), Article 12 Article 35 of the TRIPS Agreement
12 and paragraph 3 of Article 16. These sections address:

- definitions of terms such as "integrated circuits" and "layout-design" (topography) (Article 2);
- the obligation to protect layout-designs (Article 3);
- the legal form of protection (sui generis or industrial property or copyright) (Article 4);
- national treatment (article 5);
- acts requiring and acts not requiring the authorization of the rights holder (Article 6(1) and (2)); sale and distribution of infringing integrated circuits acquired innocently (Article 6(4)); exhaustion of rights (Article 6(5));
- faculty to require exploitation, registration, disclosure (Article 7),
- safeguarding of obligations under Paris and/or Berne Conventions (Article 12);
- non-retroactivity (Article 16(3)).

Scope of Protection

Subject to the provisions of Article 37.1 (Acts not Requiring the Authorization of the Rights Holder), Article 36 of the TRIPS Agreement provides that Members shall consider unlawful the unauthorized:

- reproducing (incorporated by reference from the IPIC Treaty),
- importing,
- selling, or
- otherwise distributing for commercial purposes,

a protected layout-design, an integrated circuit incorporating a protected layout-design, or an article incorporating such an integrated circuit insofar as it incorporates an unlawfully reproduced layout-design.

Article 37.1 of the TRIPS Agreement requires Members not to consider unlawful any of the above acts where the person performing or ordering such acts did not know, and had no reasonable ground to know, that an integrated circuit or article incorporating such an integrated circuit incorporated an unlawful reproduced layout-design.

The Agreement further provides that infringing layout-designs which were acquired or ordered innocently, may be imported, sold or distributed for commercial purposes after sufficient notice of infringement is given, provided that a sum equivalent to a reasonable royalty is paid to the right holder.

(b) Government Use and Compulsory Licensing

Article 37.2 of the Agreement provides that for the non-voluntary licensing of a layout-design or its use by or for the government without the authority of the right holder, Members shall apply the conditions (as set out for patents) in Article 31, sub-paragraphs (a) to (k).

(c) Term of Protection

Article 38 provides that:

- where Members require registration, the term of protection shall be for a minimum period of 10 years from filing an application for registration or from the date of first commercial exploitation anywhere in the world; and
- where Members do not require registration the term shall be a minimum of 10 years from the date of first commercial exploitation anywhere in the world;
- in either case, members may provide for the lapse of protection 15 years after the creation of the layout-design.