Industrial Property Rights Protection: Analysis of the Integrated Circuits Act of Thailand

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Abstract

To encourage continued investments in R&D to result in technological advancements in the field of microelectronics, protection of Intellectual Property Rights (IPR) embedded in the layout designs is a very important issue. In Thailand, protection is provided for the layout design of integrated circuits through the Protection of Layout-Designs of Integrated Circuits Act, B.E. 2543 (2000). The law is on intention to provide protection to creators of layout-designs of integrated circuits in order to help boost the microchip industry in Thailand. However, the Act is very complicated to understand for people in IT society. The purpose of this paper is to explain and analyze the legal principles of the Integrated Circuits Act, B.E. 2543 (2000). The development of intellectual property protection for integrated circuits in international level is also discussed in this paper. This paper will be a valuable contribution towards integrated circuit industry especially for integrated circuit designers.

Keywords: Intellectual Property, Integrated Circuits, and Law

1. Introduction

Electronics and Information Technology are the fastest growing sectors that plays significant role in knowledge-based economy. This is primarily due to the advancements in the field of electronics, computers and telecommunication. Microelectronics, which primarily refers to Integrated Circuits (ICs) ranging from Small Scale Integration (SSI) to Very Large Scale Integration (VLSI) on a semiconductor chip, has rightly been recognized as a strategic technology especially for Information Technology (IT) based society. Design on ICs requires considerable expertise and several hundreds of man-years of effort depending on the complexity [1]. But while integrated circuits are, like many types of computer software, very expensive to design, they can be relatively cheap to produce and easy to copy. Unauthorized “second-sourcing” of integrated circuits is reported to be quite common [2].

To respond to the challenge of protecting industrial property rights in integrated circuit design in the United States, the United States Congress enacted the Semiconductor Chip Protection Act (USSCPA). Consequently, many countries and trade blocs modeled laws on the USSCPA during the mid – 1980s [2]. After that, the World Intellectual Property Organization (WIPO) settled the terms of a treaty which matches the USSCPA, the Treaty on the Protection of Intellectual Property in respect of integrated circuits. The Treaty is usually called the “Integrated Circuits Treaty” [2].
Many international companies have located integrated circuit production plants in Thailand. The implementation of legislation protecting industrial property rights in integrated circuits will ensure resource security for these companies to expand such industry in Thailand.

Since Thailand is a member of the World Trade Organization (WTO), it is required to implement the intellectual property laws into compliance with the current WTO Agreement regarding Trade Related Intellectual Property (TRIPS Agreement). All signatories of the WTO are expected to eventually adhere to it. Copyrights, trademarks, geographical indications, industrial designs and patents, integrated circuits and trade secrets are the major branches of TRIPS [3].

Thailand also is a party to several international treaties and bilateral agreements, such as [4],

1. Agreement Establishing the World Trade Organization
2. Agreement on Trade – Related Aspects of Intellectual Property Rights, including Trade in Counterfeit Goods. (Trips)
3. Convention Establishing the World Intellectual Property Organization (WIPO)
4. Berne Convention, of September 9, 1886, for the Protection of Literary and Artistic Works

Thai first intellectual property law was promulgated in A.D.1892. It was aimed at literacy protection. Currently Thailand has 5 intellectual property laws. They are:

1. Copyright and related rights under the Copyright Act, B.E.2537 (A.D.1994)
2. Trademarks, Certification Marks, Service Marks, Group Marks under the Trade Mark Act, B.E.2534 (A.D.1991), as amended by the Trademark Act (No.2), B.E.2543 (A.D.2000)
5. Protection of Undisclosed Information under the Trade Secret Act, B.E.2545 (A.D.2002)

It should be noted that the protection of an integrated circuit is a separate issue from the protection of the copyright and trade secrets (if applicable), present in the software that may be stored in an integrated circuit. Copyright law is too general to accommodate the original ideas of scientific creation of layout-Designs of integrated Circuits. Certain aspects of integrated circuit products may be patentable, for example the structure and method of operation of electronic circuit manifested in an integrated circuit, or the industrial processes used to manufacture integrated circuit products. However, patents do not appropriately accommodate the requirements of intellectual property rights protection for the layout designs of integrated circuits. This is because in the context of layout designs, the concept of originality is of utmost significance, whether it is a “novelty or not”. While the Patent Law requires that the idea should be original as well as novel [1].

Therefore, all aspects above may be eligible for additional protection under the Integrated Circuits Act, separate and apart from the rights available under the Integrated
Circuits Act. Protection under the Integrated Circuits Act can be much broader than the protection available under the Integrated Circuits Act, and should generally be considered in addition to protection under the Integrated Circuits Act [5].

The aim of this paper is to explain and analyze the legal principles of the Integrated Circuits protection in Thailand. The development of intellectual property protection for integrated circuits in international level is also discussed in next sections.


“BHUMIBOL ADULYADEJ, REX; Given on the 4th Day of May B.E. 2543; Being the 55th Year of the Present Reign.
His Majesty King Bhumibol Adulyadej is graciously pleased to proclaim that: WHEREAS it is expedient to have a law on protection of layout-designs of integrated circuits; Whereas it is aware that this Act contains certain provisions in relation to the restriction of rights and liberties of person, in respect of which section 29, in conjunction with section 48 and section 50 of the Constitution of the Kingdom of Thailand to permit by virtue of law; Be it, therefore, enacted by the King, by and with the advice and consent of the National Assembly.....” [6]

During 1999 the Thai government has been preparing legislation to protect plant variety rights, integrated circuits, geographical indicators and trade secrets [7]. In the year 2000, Thai government introduced a law focused on the circuit design industry due to the country's strong commitment to the TRIPs Agreement and policy promoting technological transfer and development. This law, the Act on the Protection of Integrated Circuit Designs 2000, became effective on August 10, 2000 [6]. The protection of layout-designs of integrated circuits is in accordance with the provisions prescribed in this Act only and this protection will not be subject to the law on patent (the Patent Act).

In this section, many important aspects of the Protection of Layout-Designs of Integrated Circuits Act, B.E. 2543 (A.D. 2000) will be analyzed in simple fashion.

The term “integrated circuit” is defined in section 3 of the Act as meaning “a circuit, in its final or an intermediate form, in which the elements, at least one of which is an active element, and some or all of the interconnections are integrally formed in or on a piece of material and that is intended to perform an electronic function”. This definition identifies the characteristics required for layout design protection for an integrated circuit [6].

The term “layout design” is also defined in section 3 of the Act as meaning “the three-dimensional disposition, however expressed, of the elements, at least one of which is an active element, and of some or all of the interconnections, of an integrated circuit; and includes such a three-dimensional disposition prepared for an integrated circuit intended for manufacture” [6]. This definition identifies the characteristics required for layout design protection.

In section 6 of the Act, some aspects of innovation of the integrated circuit designs are addressed as follows [6]:


“Layout-designs eligible for protection under this Act are as follows;

(1) a layout-design which a designer has created by himself and is not commonplace in the integrated circuit industry;

(2) a layout-design which a designer has created by combining elements, interconnections of layout-designs or integrated circuits that are commonplace in the integrated circuit industry in a way of resulting in the layout-design which is not commonplace in the integrated circuit industry.”

As mentioned above, in order to qualify for protection under the Act, the layout design must meet the definition of “layout design” or “integrated circuit” under the Act and it must be original.

Under sections 8-12 of the Act, a circuit designer who has created a circuit design has the right to apply for protection provided by this Act. However, if a circuit design is created under an employment contract, the employer is entitled to apply for protection. A government agency, local government or state organization which is a juristic person is entitled to apply for protection of a circuit design created under a hire-of-work contract, made to order, or made under the supervision of such organization unless otherwise agreed in writing. If several persons have independently created identical circuit designs, the earlier applicant is entitled to the protection.

In section 13, the Act requires the applicant for protection to be a Thai national or juristic person whose principal office is in Thailand, or a national of a country party to an international convention on the protection of integrated circuits to which Thailand belongs, or who is domiciled in or has an effective establishment for circuit design creation or production in Thailand or in a country party to an international convention as referenced above.

If the circuit design has been exploited commercially within or outside of Thailand, an application for registration must be filed within two years from the date commercial exploitation first took place. It should also be noted that circuit designs not commercially exploited within fifteen years from creation can not be registered. The right to a circuit design is protected once registration is granted and a certificate issued. The registration of a circuit design is valid for 10 years from the date of filing the registration application or first date of commercial exploitation, whichever is earlier. The right of the right-holder of a circuit design will expire if the right-holder renounces the right to the circuit design by surrendering his certificate of circuit design, or dies without leaving any heirs. An order of the Director-General or the Board, or a court judgment canceling the registration of the circuit design, will also result in the expiration of protection.

The right-holder has the exclusive right to reproduce, import, sell or distribute in any manner for commercial purposes his protected circuit design, an integrated circuit containing his protected circuit design, or a product incorporating such integrated circuit. However, reproduction for use in the course of evaluation, analysis, research or education, or reproduction for one's own benefit and not for commercial purposes, will not be held as an infringement of the right of the right-holder.

As mentioned in [2], an infringement of eligible layout rights occurs when a person, acting without the owner’s authority, does anything substantially falling within the scope of the owner’s exclusive rights: though the right of commercial exploitation is only
infringed if the person knows or should reasonably know that the owner has given no authorization. For the penalties in chapter 7 of the Act, anyone reproducing a protected circuit design without the permission of the right-holder is liable to a fine from Baht 50,000 to Baht 500,000. Any infringer importing, selling or distributing for commercial purposes a circuit design is liable to a fine from Baht 20,000 to Baht 200,000. The court can also order the confiscation or destruction of all infringing circuit designs, integrated circuits and infringing products or take other action to prevent resale [7].

In brief, under the Act in section 23, any of the following acts are not to be taken as infringements [6]:

1. the reproduction for the purpose of evaluation, analysis, research or education;
2. the reproduction for the interest of oneself which is not an act for commercial interest;
3. a layout-design or an integrated circuit lawfully acquired from the commercial exploitation of the right holder;
4. an integrated circuit in which the protected layout-design of the right holder is incorporated or in respect of a product incorporating such integrated circuit; provided that the person committing it did not know or had no reasonable ground to know, at the time of acquiring such integrated circuit or product that the layout-design infringing the right holder's rights was incorporated. In such case, the person committing it may, after being notified that such integrated circuit or product incorporates the layout-design infringing the right holder's rights;
5. a layout-design or an integrated circuit lawfully acquired from the commercial exploitation of the right holder;
6. person who created a layout-design identical to a layout-design in respect of which the right holder is accorded protection, provided that he has independently created it by himself.

3. Registration of Layout-Design and Term of Protection

The application for registration of a layout-design for having protection under this Act must be in accordance with the rules, procedures and conditions prescribed in the Ministerial Regulation.

As addressed in section 15 of the Act, an application for registration must at least have the following particulars [6]:

1. name, nationality, domicile and address of the designer as well as any assignment of a right to apply for protection, provided that there is such an assignment;
2. the date of creation of the layout-design and the date of a first commercial exploitation thereof including description of the commercial exploitation;
3. a painting or photograph of drawing identifying the layout-design or other articles producing the like result, including data on electronic function of the integrated circuit;
4. a sample of an integrated circuit in which the layout-design is incorporated, in the case where it has been commercially exploited; and
5. other particulars as prescribed in the Ministerial Regulation.
Under the Act in section 19, the protection period lasts for a minimum of ten years, which is typically calculated from the time when the layout is first commercially exploited [6].

4. Roles of the Central Intellectual Property and International Trade Court

In fact Thailand has exceeded its obligation under Article 41(5) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), in order to fulfill its obligation and to create a user-friendly forum for settlement of disputes in international trade, the Central Intellectual Property and International Trade Court (CIPITC) is established [9]. This specialized court is a new dimension for the promotion of foreign investment and trade. The court is established by the Act for the Establishment of and Procedure for Intellectual Property and International Trade Court B.E. 2539 (1996) [10]. The court, inaugurated on 1st December 1997, has power to adjudicate both civil and criminal cases regarding intellectual property and civil cases regarding international trade. The territorial jurisdiction of the CIPIT Court covers the whole Bangkok Metropolis, Samut Prakan, Samut Sakhon, Nakhon Pathom, Nonthaburi and Pathum Thani Provinces. At present, before establishing the Regional Intellectual Property and International Trade Court, the territorial jurisdiction of the CIPITC extends throughout the Kingdom [11].

Since intellectual property and international trade cases possess different characteristics from ordinary civil or criminal cases, the new procedure has been devised in order to achieve convenient, speedy and fair proceeding in these cases [12]. Some 2,500 cases were filed in its first fourteen months of operation, approximately 80% of which involved intellectual property claims [13]. Recently, The Thai government has increased its efforts to enforce intellectual property laws.

Very few countries have established specialized court to deal with intellectual property protection. Different countries and legal system have adopted very different ideas regarding the character and scope of damages [14]. Intellectual property and international trade cases are far more complicated than other criminal and civil cases. Thus, to render decision on such cases requires not only knowledge on domestic law, but also deep understanding of social and economic issues as well as technology and international commercial practice. Therefore, the court should be adjudicated by judges who possess knowledge and full understanding of intellectual property and international trade law and practice. In addition, neutral experts, who possess knowledge and experience in relevant matters, should also be recruited to serve as associate judges [12].

Integrated circuits have economical value like any other property. Economic return is the main benefit in motivating further research and development of integrated circuits. Laws are required to provide protection to creators of layout-designs of integrated circuits from any illegal infringement. The holders of the intellectual property right are granted the exclusive right to exploit their intellectual property either by self-exploiting or by licensing to others for royalty [4].

5. Conclusions

The development of intellectual property protection for integrated circuits is discussed in this paper. Many important aspects of the Protection of Layout-Designs of Integrated
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Circuits Act, B.E. 2543 (A.D. 2000) are also analyzed and explained. The paper shows that the need to ensure protection for Layout-Designs of Integrated Circuits acts as a reward and encouragement for an adequate level of investment of human, financial and technological resources. However, the Intellectual Property Rights in relation to the integrated circuits is still evolving and needs further study to gain more understanding for IT society.

References