



**Canadian  
Intellectual Property  
Office**

An Agency of  
Industry Canada

**Office de la propriété  
intellectuelle  
du Canada**

Un organisme  
d'Industrie Canada

# **A GUIDE TO INTEGRATED CIRCUIT TOPOGRAPHIES**



January 2001

**Canada** 

CIPO  OPIC

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## Canadian Intellectual Property Office (CIPO)

A GUIDE TO INTEGRATED CIRCUIT TOPOGRAPHIES

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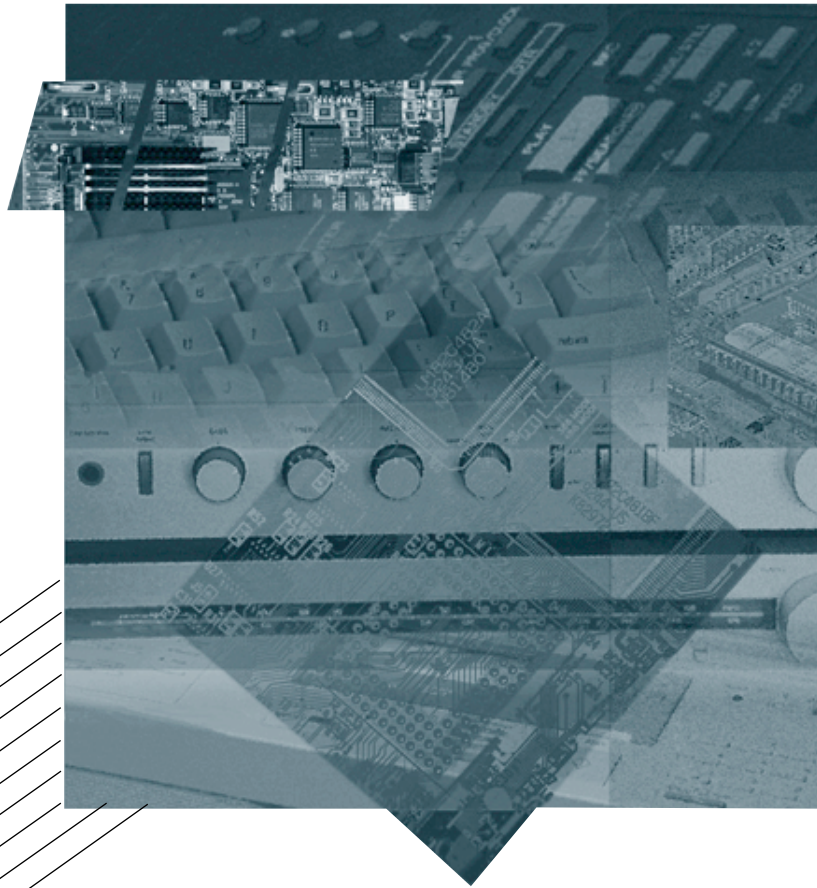
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# A GUIDE TO INTEGRATED CIRCUIT TOPOGRAPHIES



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## INTRODUCTION

### **The newest kind of intellectual property**

Integrated circuit topographies are now considered a form of intellectual property. Recognizing the growing impact of integrated circuit technology in virtually all fields of industry, and the need to protect Canadian innovations in this technology both nationally and internationally, Canada has introduced protection for integrated circuit topographies. Topographies are innovative, three-dimensional circuit designs used in many different products. Examples of such products are automobiles, industrial robots, cameras, spacecraft and computers.

On May 1, 1993, the *Integrated Circuit Topography Act* and Regulations came into force. The Act defines the protection available for integrated circuit topographies, the three-dimensional configurations of the materials that form integrated circuits. Protection under this Act is extended to nationals of other countries on a reciprocal basis, thereby making protection in other countries available to Canadians.

### **Purpose of this guide**

In this booklet we will look at what integrated circuit topographies are, how they can benefit you and how to register them. With a basic knowledge of the process, you can take steps to protect your integrated circuit topographies from copying by others. You may also develop a better understanding of the

intellectual property rights of others. This may help you to avoid the costly and time consuming legal battles that could result from infringing those rights.

Keep in mind that this booklet offers general information and does not cover all the complex issues that may arise through the registration process. This guide does not provide authoritative definitions and explanations.

### **Canadian Intellectual Property Office**

The federal agency responsible for integrated circuit topographies in Canada is the Canadian Intellectual Property Office (CIPO), which is part of Industry Canada—the federal department responsible for industry and science in Canada. CIPO is responsible for other forms of intellectual property as well: patents, trade-marks, copyrights and industrial designs.

### **Other forms of intellectual property**

Along with integrated circuit topographies, intellectual property rights include patents, trade-marks, copyrights and industrial designs. These are all rights that are granted for intellectual creativity. The differences are:

■ **patents** cover new inventions (process, machine, manufacture, composition of matter), or any new and useful improvement of an existing invention;

■ **trade-marks** are words, symbols, designs (or a combination of these), used to distinguish the goods and services of one person or organization from those of others in the marketplace;

■ **copyrights** provide protection for artistic, dramatic, musical or literary works (including computer programs), and three other subject-matter known as: performance, sound recording and communication signal;

■ **industrial designs** are the visual features of shape, configuration, pattern or ornament (or any combination of these features), applied to a finished article of manufacture;

■ **integrated circuit topographies** are the three-dimensional configurations of electronic circuits embodied in integrated circuit products or layout designs.

### **Visit CIPO's Web site**

CIPO's Web site includes useful information about its product lines, services and legislative changes. The five intellectual property guides are available, as are interactive tools that explain intellectual property in an enjoyable way. You may visit our Web site at the following address: [www.cipo.gc.ca](http://www.cipo.gc.ca).

### Definition and use

Semiconductor integrated circuits are at the heart of modern information, communications, entertainment, manufacturing, medical and space technologies, and are now finding their way into items as ordinary as household appliances. The Act and Regulations refer to the “microchips” which embody such integrated circuits as “integrated circuit products”.

Today’s integrated circuit products are constructed from a complex series of layers of semiconductors, metals, dielectrics (insulators) and other materials on a substrate. The Act and Regulations refer to the three-dimensional configuration of these layers as an “integrated circuit topography”. The *Integrated Circuit Topography Act* provides protection against copying of registered topographies, but does not prevent others from developing integrated circuit products which use other topographies to provide the same electronic functions.

Some integrated circuit products, such as Random Access Memories (RAMs) and Read Only Memories (ROMs) may be used to store sets of instructions for electronic processors. In addition to the protection available for integrated circuit topographies embodied in such integrated circuits, the sets of instructions they store may be subject to protection under the *Copyright Act* as literary works, and may in some cases be patentable as industrial methods.

Other aspects of integrated circuit products may also be patentable, for example, the structure and method of operation of electronic circuits embodied in integrated circuit products, or industrial processes used to manufacture integrated circuit products. Indeed, protection available under the *Patent Act* can be much broader than the protection available under the *Integrated Circuit Topography Act*, and should generally be considered in addition to protection under the *Integrated Circuit Topography Act*.

Protection in other countries should also be considered, particularly where significant market opportunities are expected, or where significant foreign competitors have manufacturing facilities.

### Canadian protection for integrated circuit topographies

Canada’s legislation to protect integrated circuit topographies is comparable to that of some other countries. The protection is provided by the *Integrated Circuit Topography Act*.

Canada’s integrated circuit topography legislation protects the original design of a registered topography, whether it has been embodied in an integrated circuit product or not. Topographies which define only part of the structure needed to perform an electronic function may be registered. For example, topographies which define generic layers

of gate array integrated circuit products, and topographies that define interconnection layers which customize gate array integrated circuit products to perform specific electronic functions, may be registered separately.

A topography will qualify as original if it is developed through the application of intellectual effort, and if it is not produced by the mere reproduction of all, or a substantial part, of another topography. The Act does not protect pre-existing topographies which are commonplace among topography designers or integrated circuit product manufacturers.

The *Integrated Circuit Topography Act* provides protection by giving owners of registered topographies exclusive statutory rights to control certain actions. The legislation permits owners of registered topographies to exclude others from:

- reproducing a protected topography or any substantial part of one;
- manufacturing an integrated circuit product incorporating the topography or a substantial part of one;
- importing or commercially exploiting (which includes the sale, lease, offering or exhibiting for sale or lease, or other commercial distribution) a topography or a substantial part of one, or of an integrated circuit product that embodies a protected topography or a substantial part of one;



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■ importing or commercially exploiting an industrial article which incorporates an integrated circuit product that embodies a protected topography, or a substantial part of one.

The Act protects registered integrated circuit topographies for up to ten years. The term begins on the filing date of the application for registration. The term ends on December 31 of the tenth year after the year of the first commercial exploitation or the year of the filing date, whichever is earlier.

### Exceptions

The exclusive rights listed above are subject to some exceptions, three of which are:

**1** One exception relates to the exhaustion of rights applying to integrated circuit products legitimately put on the market anywhere in the world with the authorization of the owner of the rights. After the first legitimate sale of such a product, the topography owner has no statutory right to control its use, rental, resale or redistribution.

**2** Another exception allows the unauthorized copying of a protected topography for the sole purpose of analysis or evaluation, or for the sole purpose of research or teaching with respect to topographies.

**3** The Act also permits reverse engineering, which is a process of taking apart an integrated circuit to design a new and original topography. The topography created by such a

procedure must meet the originality requirements of the Act if it is to be exploited commercially without the authorization of the original owner of the rights. With this exception, the legislation provides for the suppression of piracy without creating unnecessary obstacles to a free market in semiconductor chips or to the spread of chip technology.

### Remedies

The Act provides for the full range of civil remedies including injunctions, damages and punitive damages. It also provides a defence to innocent infringers, i.e., persons dealing commercially with an infringing integrated circuit product, but unaware, or having no reasonable grounds to believe, that it has been manufactured without authority. After having been notified of the infringement, their liability is limited to the payment of a reasonable royalty with respect to the disposal of integrated circuit products in inventory.

When a court concludes that there has been importation of integrated circuit products in contravention of the Act, Revenue Canada Customs may be required by the court to stop the entry of such products and of articles which incorporate them, and to arrange disposal of them according to a court order.

### Protection for integrated circuit topographies abroad

Some twenty countries have explicit intellectual property protection for semiconductor chips.

Rights exist for Canadians in the United States, Switzerland, Japan, Australia and other countries.

The intent is to arrange protection for nationals and residents of Canada in countries which offer comparable protection to that provided in Canada.

The Minister of Industry Canada announced, by a notice in the *Canada Gazette*, the names of countries in which reciprocal rights have been secured. A list of countries granting reciprocal rights may be found in the *Integrated Circuit Topography Act*.

In addition, the Act has been amended to allow for protection for World Trade Organization (WTO) members, without the necessity of an agreement or the publication of a notice of reciprocity in the *Canada Gazette*.

Protection in other countries should be considered, particularly where significant market opportunities are expected or where significant foreign competitors have manufacturing facilities.

## Registration

For the owner of a topography to have rights under the Act, the topography must be registered. The creator of the topography (the owner) or the successor in title may apply for registration of the topography.

The Registrar of Topographies will not examine a topography to determine originality or compliance with the requirements of the Act. However, the Registrar has authority to reject an application if the creator does not meet the nationality requirements; or, if an application for an “exploited” topography is received more than two years after the date of first commercial exploitation anywhere.

To register a topography, you should obtain the forms from CIPO, put the appropriate information on the forms, including title or titles of topography, date and location of first commercial exploitation, name and address of applicant, and applicant’s interest in the topography, and a description of the nature or function of the topography, and submit the completed forms to the Copyright and Industrial Design Branch of CIPO. **It is also possible to submit an application through electronic commerce. The information is available on the CIPO Web site at: [www.cipo.gc.ca](http://www.cipo.gc.ca) under title Integrated Circuit Topographies, Electronic Services Delivery.**

In addition, you must submit a complete set of overlay sheets, drawings or photographs of the topography. Under certain conditions, some confidential information can be omitted from the drawings or photographs of the topography.

Please note that the application must be filed within two years of the first commercial exploitation of the topography.

## Fees

Fees are charged for various services in relation to the registration of a topography. A tariff of fees is included in this guide.

Please make all cheques payable to the Receiver General of Canada.

## Marking

While marking of integrated circuit products is not obligatory, it is advisable to mark a product with a title corresponding to the registered title or titles. Failure to do so may constitute a valid defence in an infringement action if a defendant can prove having had no knowledge of the registration of the topography.

## Further information

Staff at the Integrated Circuit Topographies Office will be pleased to assist you with general questions about integrated circuit topographies and the registration process.

Address your correspondence to:

Integrated Circuit  
Topographies Office  
Canadian Intellectual  
Property Office  
Industry Canada  
Place du Portage I  
50 Victoria Street  
Hull, Quebec  
K1A 0C9

You may also telephone for general information and application forms at (819) 997-1936 between 8:30 a.m. and 4:30 p.m., Eastern time, Monday through Friday, except on legal holidays.

Any correspondence addressed to the Registrar of Topographies at CIPO Headquarters in Hull and delivered:

**1** During business hours to CIPO Headquarters, will be accorded the date of receipt that day.

**2** During business hours to Industry Canada Headquarters or to one of its regional offices, will be accorded the date of receipt in that office\*.

**3** At any time electronically, including by facsimile, will be considered to be received on the day that it is transmitted, if received before midnight, local time, at CIPO Headquarters\*.

**4** Through the Registered Mail Service of the Canada Post Corporation (CPC), will be accorded the date stamped on the envelope by CPC\*.

\* Only if it is also a day on which CIPO Headquarters in Hull is open, if not, it will be considered received on the next working day.



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## TARIFF OF FEES

### Integrated Circuit Topography – Tariff of fees – Effective May 1, 1993

- 1** Filing an application..... \$200
- 2** Amending an application in accordance with a request made pursuant to subsection 20(1) of the Regulations .....\$75
- 3** Entering in the register particulars of a transfer of an interest or grant of a licence affecting a registered topography pursuant to subsection 21(1) of the Act .....\$75
- 4** Amending an entry in the register or making a new entry therein pursuant to subsection 21(2) of the Act .....\$75
- 5** Amending a certificate of registration or issuing a new certificate, pursuant to subsection 19(4) of the Act, for the purpose of correcting a typographical or clerical error made as a result of incorrect information supplied by the applicant .....\$75
- 6** Transmitting material on file to the Federal Court pursuant to section 27 of the Regulations.....\$100
- 7** Providing a copy of a document, of entries in or extracts from the register, or of any material referred to in section 26 of the Regulations, for each page measuring 21.5 cm x 28 cm (8 1/2 inches x 11 inches) or less..... \$5
- 8** Providing a certified copy of a document referred to in subsection 15(2) of the Act ..... \$50

## APPENDIX A - INSTRUCTIONS FOR COMPLETING AN APPLICATION FORM

### INSTRUCTIONS FOR COMPLETING AN APPLICATION FOR REGISTRATION OF AN INTEGRATED CIRCUIT TOPOGRAPHY

#### Applicant

Individuals should write their surnames followed by a comma, and then their first names. Addresses should include the complete postal address: the street name and number, the postal code or the post office box number, where applicable. If your application has been assigned a number by the Office of the Registrar of Topographies, please indicate the number on all correspondence relating to your application.

#### Title

The title (or titles) consisting of words and/or code is essential for identifying the topography. Only alphanumeric characters as shown on standard North American keyboards can be entered in the Register.

#### Nature

Insert a brief description of the nature (structure type) or function of the topography. An example of the function would be “operational amplifier” while examples of the nature would be “bipolar, CMOS, or linear”.

#### Interest

Please indicate if the applicant is the creator of the topography or a successor in title by marking the appropriate block.

#### Conditions of registration

Registrability in Canada is dependant upon the following conditions:

The creator of the topography is, at the time of its creation or on the filing date of the application:

- i) a national of Canada;
- ii) a national of a country recognized by Canada by convention or treaty that affords protection for topographies;
- iii) a national of a country that the Minister has certified by notice published in the *Canada Gazette*.

OR

The creator of the topography has, at the time of its creation or at the time of filing, a real and effective establishment for the creation of topographies or the manufacture of integrated circuit products in Canada or a country that is a member of the World Trade Organization (WTO) or has a reciprocal agreement with Canada.

OR

The topography is first commercially exploited in Canada and the application is filed within two years thereafter.

#### First commercial exploitation

To commercially exploit means to sell, lease, offer or exhibit for sale or lease, or otherwise distribute for a commercial purpose.

#### Date

The date (day, month and year) as well as the country must be indicated.

#### Material filed and other information

List of material being filed with the application and other information. You should indicate:

- the number of layers of the topography;
- the number of layers being deposited;
- the number of layers containing confidential information for which design data is submitted;
- the number of integrated circuit products deposited (for commercially exploited topographies, at least four integrated circuit products must be submitted if parts of the design data are blocked out).

#### Agent

This section should only be completed if the application is filed by someone appointed to act on the applicant’s behalf.

#### Representative for service

This section must be completed if the applicant does not have a Canadian address.

#### Signature

The application must be signed and dated by either the applicant or the applicant’s agent.

#### Fees

The fee for filing an application is \$200 (Canadian funds). (Please do not add provincial or federal taxes.)

# APPENDIX B - APPLICATION FORM



**Canadian  
Intellectual Property  
Office**  
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Industry Canada

**Office de la propriété  
Intellectuelle  
du Canada**  
Un organisme  
d'Industrie Canada

## APPLICATION FOR REGISTRATION OF AN INTEGRATED CIRCUIT TOPOGRAPHY

<b>APPLICANT- Name and address</b>		<b>Client Number (If already assigned by ICT)</b>
		<b>Postal code</b>
<b>TITLE(S)</b>		
<b>DESCRIPTION OF THE NATURE OR FUNCTION OF TOPOGRAPHY</b>		
<b>INTEREST</b>		
<input type="checkbox"/> Creator of topography                 OR <input type="checkbox"/> Successor in title		
<b>CONDITIONS OF REGISTRATION</b>		
Registrability in Canada is dependent upon the following conditions: The creator of the topography is, at the time of its creation or on the filing date of the application: i) a national of Canada; ii) a national of a country recognized by Canada by convention or treaty that affords protection for topographies; iii) a national of a country that the Minister has certified by notice published in the <i>Canada Gazette</i> ; OR The creator of the topography has, at the time of its creation or on the filing, a real and effective establishment for the creation of topographies or the manufacture of integrated circuit products in Canada or a country that is a member of the World Trade Organization (WTO) or has a reciprocal agreement with Canada; OR The topography is first commercially exploited in Canada and the application is filed within two years thereafter.		
<b>COMMERCIAL EXPLOITATION</b>		
<input type="checkbox"/> The topography has not been commercially exploited OR <input type="checkbox"/> The topography was first commercially exploited in _____ on _____. (place/country) (day/month/year)		
<b>MATERIAL FILED AND OTHER INFORMATION</b>		
<b>AGENT - Name and address</b>		<b>Client Number (If already assigned by ICT)</b>
		<b>Postal code</b>
<b>REPRESENTATIVE FOR SERVICE - Name and address in Canada</b>		<b>Client Number (If already assigned by ICT)</b>
		<b>Postal code</b>
<b>SIGNATURE(S)</b>		
_____	(check appropriate box) <input type="checkbox"/> applicant <input type="checkbox"/> agent	
Contact person (please print or type)		
_____	Telephone no. ( )	
Signature(s)		

(Français au verso)  
OPIC-CIPO 148 (12-97)