

Federal Statutory Protection for Mask Works

The Semiconductor Chip Protection Act (SCPA) of 1984 established a new type of intellectual property protection for mask works that are fixed in semiconductor chips. It did so by amending title 17 of the *United States Code*, adding chapter 9.¹

Protection for mask works is not copyright protection. The legal requirements for mask work protection differ from those for copyright protection in terms of eligibility for protection, ownership rights, registration procedures, term of protection, and remedies for rights violations. This circular provides information for registering claims under the SCPA.

Definitions

Mask work · The SCPA defines a mask work as a series of related images, however fixed or encoded (1) that have or represent the predetermined three-dimensional pattern of metallic, insulating, or semiconductor material present or removed from the layers of a semiconductor chip product; and (2) in which series the relation of the images to one another is that each image has the pattern of the surface of one form of the semiconductor chip product.

Semiconductor chip product · The SCPA defines a semiconductor chip product as the final or intermediate form of any product (1) intended to perform electronic circuitry functions and (2) having two or more layers of metallic, insulating, or semiconductor material, deposited or otherwise placed on or etched away or otherwise removed from a piece of semiconductor material in accordance with a predetermined pattern.

Protection of Mask Works

Protection under the SCPA extends to the three-dimensional images or patterns formed on or in the layers of metallic, insulating, or semiconductor material and fixed in a semiconductor chip product, that is, the “topography” of the “chip.”

Although these images or patterns are purely functional features, they are nevertheless protected, provided that a mask work is neither dictated by a particular electronic function nor one of only a few available design choices that will accomplish that function.

Protection under the SCPA does not extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery associated with

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a mask work, regardless of the form in which it is described, explained, illustrated, or embodied in a mask work (17 U.S.C. §902 (c)).

Originality

To be protected under the SCPA, a mask work must be original. In a 1984 report, the Committee on the Judiciary of the House of Representatives stated that a mask work is “original” if it is the independent creation of an author who did not copy it.²

The mask work cannot consist solely of designs that are staple, commonplace, or familiar in the semiconductor industry, or variations of such designs, combined in a way that, considered as a whole, are not original. (17 U.S.C. §902 (b))

Eligibility

Any original mask work fixed in a semiconductor chip product by or under the authority of the mask work owner is eligible for protection if it meets *one* of the following criteria:

- 1 On the date the mask work is registered with the Copyright Office or the date the mask work is first commercially exploited anywhere in the world (see note below), whichever occurs first, the owner of the mask work is
 - a national or domiciliary of the United States; or
 - a national, domiciliary, or sovereign authority of a foreign nation that is a party with the United States to a treaty affording protection to mask works; or
 - a stateless person.
- 2 The mask work is first commercially exploited in the United States.
- 3 The mask work comes within the scope of a presidential proclamation extending protection to mask works of nationals and domiciliaries of a foreign country and to works first commercially exploited in that country, on the basis of a finding that mask works protected by the SCPA are also protected in the particular foreign country, either under the principle of reciprocity or under the principle of national treatment.

All countries that are members of the World Trade Organization became eligible for mask work protection on June 1, 1996, under Presidential Proclamation 6780, which was issued on March 23, 1995. In addition, that proclamation extended mask work protection to Australia, Canada, Japan, Switzerland, and the member states of the European Community as of July 1, 1995. For a list of WTO members, go to www.wto.org.

NOTE: To “commercially exploit” a mask work is defined in the SCPA as the distribution to the public for commercial purposes of a semiconductor chip product embodying the mask work, with the provision that the term includes an offer to sell or transfer a semiconductor chip product only when the offer is in writing and occurs after the mask work is fixed in the semiconductor chip product.

Term of Protection

Protection for a mask work commences on the date the mask work is registered with the Copyright Office or the date the mask work is first commercially exploited anywhere in the world, whichever occurs first. Protection lasts for 10 years (terminating at the end of the 10th calendar year after it began).

Registration of Mask Works

Registration of mask works is mandatory to secure protection. In addition, a certificate of registration provides certain benefits.

Requirements

To secure protection of mask works for the entire 10-year term, owners must register their works with the Copyright Office within two years of the date on which the mask work is first commercially exploited. Otherwise, protection under the SCPA will be lost.

The effective date of registration of a claim to protection in a mask work will be the date on which an acceptable application, deposit of identifying material, and appropriate fee are received in the Copyright Office.

Importance of Registration Certificate

The SCPA further provides that (a) a certificate of registration for a mask work issued by the Copyright Office constitutes prima facie evidence of the facts stated in the certificate and that the applicant who was issued the certificate has met the requirements for protection; and (b) after a certificate has been issued by the Copyright Office, the owner of the mask work or the exclusive licensee of all rights in the mask work may institute a civil action for infringement occurring after the commencement of protection accorded by the SCPA.

Exclusive Rights of Owner: Limitations and Transfers

During the term of protection, the owner of a mask work has the following exclusive rights:

- 1 to reproduce the mask work by optical, electronic, or any other means;
- 2 to import or distribute a semiconductor chip product in which the mask work is embodied; and
- 3 to induce or knowingly to cause another person to do any of the acts described in number 1 and number 2 above.

Limitations on Rights: Reverse Engineering and First Sale

The SCPA permits reverse engineering of a mask work solely for the purposes of teaching, analyzing, or evaluating the concepts or techniques embodied in the mask work or in the circuitry, logic flow, or organization of components used in the mask work.³ The person who performs legitimate reverse engineering can incorporate the results in an original mask work that is made to be distributed.

Purchasers also obtain a right arising from the first sale of semiconductor chips. The SCPA specifies that purchasers of semiconductor chip products have the right to use and resell them freely but not to reproduce them without the permission of the owner of the mask work embodied in the semiconductor chip product.

Transfer of Rights

The SCPA allows the owner of the exclusive rights to transfer all of them or to license all or fewer than all the rights. A transfer or license must be in writing and signed by the owner of the rights or by a duly authorized agent of the owner. The SCPA also provides that the exclusive rights in a mask work can be transferred by operation of law or by terms of a will or that the rights may pass as personal property under the applicable state law of intestate succession.

For information on the recordation of documents of transfer in the Copyright Office, see “Recordation” below.

Works by U.S. Government Employees

Federal protection under the SCPA is not available for any mask work of the U.S. government, that is, any mask works created by U.S. government employees as part of their official duties.

Registration Procedure

Applications to register mask works require three elements: a completed Form MW, available at www.copyright.gov/forms/formmwi.pdf; a nonrefundable filing fee; and a deposit of identifying material. You can type the required details into fill-in Form MW on your computer and print out a completed form, or you can print out a blank form and fill it in by hand. All forms submitted to the Copyright Office must be clear and legible and suitable for automatic feeding through a photocopier. Forms not meeting this requirement will be returned. If you cannot access Form MW online, call (202) 707-9100 or 1-877-476-0778 (toll free) to request a copy by postal mail.

NOTE: Copyright Office fees are subject to change. For current fees, check the Copyright Office website at www.copyright.gov, write the Copyright Office, or call (202) 707-3000.

Send the application, fee, and deposit in the same package to:

*Library of Congress
Copyright Office–MW
101 Independence Avenue SE
Washington, DC 20559*

Deposit of Identifying Material

The SCPA gives the Register of Copyrights broad, general authority to specify the identifying material to be deposited in connection with the claim for registration. In recognition of the need to preserve trade secrets or avoid public disclosure of sensitive information embodied in various identifying materials, the regulations of the Copyright Office provide different deposit options, depending upon whether the mask work has been commercially exploited. The Copyright Office encourages the fullest disclosure of the mask work within the deposit options established by the regulation.

For commercially exploited mask works, the identifying material should consist of the following:

- 1 four chips (dies) as first commercially exploited; and
- 2 one full set of visually perceptible reproductions of each layer of the mask work. The applicant may elect to deposit either plastic color overlays, composite plots, or photographs of each layer of the mask work.

For mask works that have not been commercially exploited, the identifying material should consist of:

- 1 one full set of either plastic color overlays or composite plots of each layer of the semiconductor chip product; *and*
- 2 although no chips (dies) need to be sent, the applicant may elect to deposit four reproductions of the most complete form as fixed in a chip product.

The visually perceptible materials should be reproduced at a magnification sufficient to reveal the basic circuitry design of the mask work and should be at least 20 times the magnification of the actual size. Large visually perceptible materials are acceptable if they can be folded or cut into a roughly 8½" × 11" format and are storable in a 12" × 15" envelope. Titles should be placed on all identifying materials so that applications and deposit materials can be matched.

Registration in Most Complete Form

Owners seeking registration of a mask work must generally submit the entire original mask work in its most complete form as fixed in a semiconductor chip product. The most complete form means the stage of the manufacturing process that is closest to completion. Entire impersonalized gate arrays and custom metallization layers may be registered separately, as an exception to the general rule.

Registration of Less Than 20 Percent of Intended Final Form

Where the mask work in which registration is sought represents less than 20 percent of the area of the intended final form of the chip product, the deposit must consist of a visually perceptible representation of the work that reveals the totality of the mask work contribution to a person trained in the state of the art. The representation may consist of any combination of plastic color overlay sheets, drawings or plots in composite form, or a photograph(s) of the entire mask set. If needed, additional explanatory material may accompany the visually perceptible representation to identify all the elements in the mask work contribution.

Deposit for Trade Secret Protection

Where an applicant makes a claim of trade-secret protection or of a need to protect sensitive information, certain material may be withheld from the deposit of identifying material. Below is an outline of the deposit options.

Mask Works Commercially Exploited

- 1 Four chips as first commercially exploited; and
- 2 special "identifying portions" (defined below) for no more than two of each five layers of the mask work in which trade secrecy is claimed; and
- 3 color overlays, plots, or photographs for all other layers.

Mask Works Not Commercially Exploited

- 1 Special "identifying portions" (defined below) for any layer or layers in which trade secrecy is claimed; and
- 2 a single photograph of the top or other visible layers of the mask work with the sensitive information maintained under a claim of trade secrecy blocked out, provided the blocked out portions do not exceed the remaining portions.

Identifying Portions

The "identifying portions" should consist of a printout of the mask work design data pertaining to each withheld layer, reproduced in microform, *or* visually perceptible representations (plastic color overlays, composite plots, or, in the case of commercially exploited mask works, photographs of the masks) in which portions maintained under a claim of trade secrecy are blocked out, provided that the portions remaining are greater than the portions blocked out. For mask works not commercially exploited, sensitive information may be blocked out from the design data, provided that the portions remaining are greater than the portions blocked out.

Special Relief

On a case-by-case basis, the Register of Copyrights may decide to grant special relief from the deposit requirements. Requests for special relief must be made in writing and must set forth the specific reasons why the request should be granted. Also, they should propose an alternative form of deposit. Requests should be addressed to:

*Library of Congress
Copyright Office-RPO
Registration Program Office
101 Independence Avenue SE
Washington, DC 20559*

Special Handling

Special handling of an application for registration of a claim to protection in a mask work is granted at the discretion

of the Register of Copyrights in a limited number of cases involving pending or prospective litigation or contract deadlines. There is a fee for special handling, in addition to the filing fee. For details, see Circular 10, *Special Handling*, available on the Copyright Office's website at www.copyright.gov.

Notice

The owner of a mask work protected under the SCPA may affix a notice of ownership to mask works, masks, and semiconductor chip products embodying the mask work in a manner and location that gives reasonable notice of the claim to protection.

The SCPA requires the form of the notice to be:

- 1 the words *mask work*, the symbol *M* or the symbol ©; *and*
- 2 the name of the owner(s) of the rights in the mask work or an abbreviation by which the name is recognized or generally known.

Affixation of such a notice is optional and is not a condition of protection, but the notice does constitute prima facie evidence of notice of protection. The Register of Copyrights prescribes by regulation, as examples, specific methods of affixation and positions of the notice (see 37 C.F.R. §211.6).

Access to Copyright Office Records and Documents

The Copyright Office maintains records and indexes to deposits, registrations, recordations, and other items related to copyright registration. The records and indexes are open to public inspection and can be copied. To assist with searches to locate material, the Office provides various fee-based services. Alternatively, patrons can search certain records independently. Copyright Office records of registrations and recordations from January 1, 1978, forward are available for searching on the Copyright Office website at www.copyright.gov. For details, see Circular 6, *Obtaining Access to and Copies of Copyright Office Records and Deposits*, available on the Office's website.

Recordation

Any transfer of ownership or other document pertaining to a mask work can be recorded in the Copyright Office if the document filed for recordation is accompanied by the appro-

priate fee and meets the certain requirements. For details, see Circular 12, *Recordations of Transfers and Other Documents*, available on the Office's website.

Notes

- 1 Although protection was effective from November 8, 1984, the Copyright Office did not begin registration of claims to protection until January 7, 1985, pursuant to 17 U.S.C. § 913 (a).
- 2 H. R. Rep. No. 781, 98th Cong. 2d Sess. 4 (1984).
- 3 H. R. Rep. No. 781 refers to the "paper trail" evidencing the extensive effort involved in legitimate reverse engineering and states that reverse engineering is an affirmative defense to an infringement claim.

For Further Information

By Internet

Circulars, announcements, regulations, copyright applications, and other related materials are available from the Copyright Office website at www.copyright.gov.

By Telephone

For general information about copyright, call the Copyright Public Information Office at (202) 707-3000 or 1-877-476-0778 (toll free). Staff members are on duty from 8:30 AM to 5:00 PM, eastern time, Monday through Friday, except federal holidays. Recorded information is available 24 hours a day. To request paper application forms or circulars by postal mail, call (202) 707-9100 or 1-877-476-0778 and leave a recorded message.

By Regular Mail

Write to:

*Library of Congress
Copyright Office—COPUBS
Publications Section
101 Independence Avenue SE
Washington, DC 20559*

