



ANNOUNCEMENT

from the Copyright Office, Library of Congress, Washington, D.C. 20559

FINAL REGULATIONS

REGISTRATION OF CLAIMS OF PROTECTION IN MASK WORKS; GATE ARRAYS

The following excerpt is taken from Volume 56, Number 38 of the Federal Register for Tuesday, February 26, 1991 (pp. 7816-7818)

37 CFR Part 211

[Docket No. 88-7B]

Registration of Claims of Protection in Mask Works; Gate Arrays

AGENCY: Library of Congress, Copyright Office.

ACTION: Final regulations.

SUMMARY: The Copyright Office of the Library of Congress is amending its regulations on mask work registration to provide an exception to the most complete form requirement. Paragraphs (c) and (e) of § 211.4 require one registration per work and that the registration cover the most complete form of the semiconductor chip product in existence. The final regulation permits separate registration of unpersonalized gate arrays and the customized metallization layers despite the existence of a completed final form.

EFFECTIVE DATE: February 26, 1991.

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SUPPLEMENTARY INFORMATION: On February 7, 1989, the Copyright Office published a notice of proposed rulemaking regarding modifications in its mask work regulations. The Office proposed creating an exception to its most complete form requirement which generally limits applicants to one registration per mask work. The proposed¹ modification authorized separate registration of unpersonalized gate arrays and customized metallization layers.

The Copyright Office received four comments on the proposed regulation.

All of the comments expressed support for the general policies advanced by the proposal. Two of the comments, however, suggested that certain clarifications be adopted.

The Copyright Office has studied carefully the comments that were submitted. For reasons detailed in this announcement, the Copyright Office has adopted as final the proposed regulation with a few technical changes.

1. Background

On November 8, 1984, the President signed into law the Semiconductor Chip Protection Act of 1984, Public Law 98-620. The Act created a new form of intellectual property law separate and apart from any earlier law. The legislation consisted of an amalgam of patent and copyright principles, but also contained new features. The law was codified as chapter 9 of title 17 of the U.S. Code, and is primarily administered by the Copyright Office.

On June 28, 1985, the Copyright Office issued final regulations implementing the Semiconductor Chip Protection Act. A public hearing (49 FR 39171) and interim regulations (50 FR 263) preceded the formulation of final regulations.

One of the most controversial issues during the rulemaking proceeding was the registrability of "intermediate forms" of semiconductor chip products. Section 901 of the Act defines "semiconductor chip product" as including the final or intermediate form of any product. A mask work cannot be protected under the Act until it has been fixed in such a product.

The policy adopted by the 1985 regulations allowed only one registration for the same version of a mask work. The regulations further required applicants to register mask

work contributions in their most complete form. The purpose of these policies was to discourage applicants from fractionalizing their mask work contributions into smaller portions, thereby creating an ambiguous public record.

The general policies adopted in the final regulations worked well. While some may continue to dispute the necessity of the most complete form requirement, applicants experienced few problems in complying with the policy.

Despite the general appropriateness of the most complete form regulation, it came to the attention of the Copyright Office that there was one instance where an exceptional hardship was created. That hardship concerned the different registration possibilities depending upon whether the owner was a merchant manufacturer or a captive manufacturer.

So-called merchant manufacturers are companies that license unpersonalized, gate arrays to other who customize the² chips into finished products by adding the customized metallization layers. In the typical circumstance, the merchant manufacturer owns the mask work contribution in the unpersonalized gate array, and the company creating the final product owns the rights in the customized metallization layers. As a result, two separate registrations may be made, one to cover each owner's mask work contribution.

The so-called captive manufacturer owns both the gate arrays and the metallization layers. Typically, captive manufacturers are large manufacturers of computer products. Once a captive manufacturer has produced any final product by adding the metallization layers the company loses the right to register separately the unpersonalized

¹Error; line should read: "registration per mask work. The proposed"

²gate arrays to others who customize the"

gate arrays under the existing regulations.

Captive manufacturers whose mask work registrations now cover both gate arrays and the metallization layers, complained to the Copyright Office that the most complete form regulation puts them at a competitive disadvantage in protecting their unpersonalized gate arrays. They theorized that it would be more difficult for them to prove substantial similarity against an alleged infringer of only the gate arrays. They argued that merchant manufacturers, whose registrations typically cover only the gate arrays, would have substantially less difficulty in presenting an infringement case.

In order to put captive manufacturers on an equal footing with merchant manufacturers, the Copyright Office proposed a narrow exception to the "most complete form" regulation in order to extend to the captive manufacturers of gate arrays the same registration possibilities as merchant manufacturers.

2. Summary of Public Comments

The Copyright Office received four comments on the proposed amendment of the mask work regulation. The commentators were the Computer and Business Equipment Manufacturers Association (CBEMA), an attorney in private practice, Compaq, and IBM. All of the comments supported the proposal, in principle. However, both Compaq and IBM asked that the proposed regulation be modified in order to provide further clarifications.

Compaq stated that under the proposed regulation, it was unclear whether the finished product could be submitted as the deposit, or whether the applicant was limited to submitting the intermediate forms. Compaq argued that requiring the intermediate forms to be deposited would be a hardship on proprietors. Compaq further asserted that the proposed exception should be expanded to include similar treatment for standard cells.

IBM contended that the phrase "unpersonalized gate array" is ambiguous. They asserted it is unclear whether the so-called "book metal layer" would be considered part of the base layers or the personality layers. In addition, IBM asserted that the regulation governing deposit of the most complete form should be modified to allow coverage of functional elements besides gates. In order to solve these problems, IBM proposed either defining the phrase "unpersonalized gate array" or substituting the phrase "semi-custom chip base".

3. Final Regulation on Registration of Claims of Protection in Mask Works

Mask work regulations are intended to provide only broad, general guidance to applicants in seeking registration. The regulations are supported by detailed registration practices.

From the outset of mask work registration, issues with respect to gate arrays have arisen. The explanation accompanying the final regulations in 1985 specifically discussed gate arrays and cell libraries. (50 FR 26716). The proposed regulation is the result of a long dialogue with the industry. As a result of this experience, the Copyright Office and the industry have a common understanding as to the general meaning of the terms utilized in the proposed regulation.

The Copyright Office has studied carefully the comments of Compaq and IBM. These two companies are leaders in the industry, and the Office appreciates the time and thought they have given this rulemaking proceeding. Nevertheless, the Copyright Office believes some of their suggestions are best left to registration practice.

a. Deposit and Scope of the Claim

Compaq raises the issue of whether the finished product will be accepted as a deposit of the "unpersonalized gate array" and "custom metallization layers". This issue is actually a deposit issue rather than a registration issue. As long as the finished product includes the entire mask work contribution underlying the unpersonalized gate array or the custom metallization layers, the finished product should be submitted as the deposit, along with the identifying material for the layers being registered, as specified in 37 CFR 211.5.

IBM appears to interpret proposed § 211.4(e) as limiting claims in base layers to the layout of gates. IBM argues that base layers may include other functional elements, such as memory cells.

The regulations do not establish the scope of mask work claims. Only the applicant can do that through designating the nature of the mask work contribution at line 8 of the application for registration. In claiming in the base layers, the layout of other functional elements besides gates may be asserted. For example, a typical statement might read: "New layout of base layers for a semi-custom chip, including memory cells."

With respect to the "book metal layer," the Copyright Office believes this is a matter best left to registration practice. From the explanation given in IBM's comment letter, it would appear preferable to include the book metal layer as part of the custom metallization layers. However, the Copyright Office declines to establish a firm policy on the issue in the regulations.

b. Definition of "Unpersonalized Gate Array"

From the outset of establishing mask work registration practices, industry spokesmen have addressed problems associated with gate arrays, and the Examining Division has considerable experience in registering claims in semiconductor chip products created by adding customized metallization layers to gate arrays. The Copyright Office believes there is a common understanding concerning the material covered by the exception to the most complete form requirement. In the interest of clarification, however, we have adopted a special definition of "unpersonalized gate array." IBM's primary concern appears to be a belief that the Copyright Office might interpret the term "unpersonalized gate array" in a narrow, technical way whereby base layers containing other functional elements besides gates could be excluded from the exception. The Copyright Office plans no such restrictive interpretation.

c. Standard Cells

The Copyright Office believes expansion of the exception from the "most complete form" standard to include "standard cells" would be unwarranted. Cell libraries are collections of parts of semiconductor chip products stored in computer memory tape which are used by chip designers to create new semiconductor chip products. Mask works protectible under the Semiconductor Chip Protection Act must be fixed in a semiconductor chip product. Semiconductor materials include silicon, germanium, and gallium arsenide. According to House Report 98-781, 98th Congress, 2d Session (1984) at 16-17, fixation solely in computer tapes does not meet the fixation requirement for eligibility under the Act.

Under the existing regulations, all intermediate forms of mask works are eligible for registration once they are fixed. Individual cells are included when fixed.

Only one comment suggested expansion of the exception from the "most complete form" requirement to cover standard cells. Since cells can be registered as part of the owner's entire contribution if they are fixed, the Office is not willing to depart further from the "most complete form" requirement without a compelling justification. That justification has not been presented. The Office continues to believe that the best representation of an original mask work is its most advanced form in the manufacturing process, and we conclude that exceptions from this requirement must be carefully circumscribed and allowed only in compelling cases.

³in principle. However, both Compaq and"

⁴intermediate forms. Compaq argued that"

Accordingly we decline to make an exception for standard cells at this time.

d. Regulatory Flexibility Act Statement

With respect to the Regulatory Flexibility Act, the Copyright Office takes the position this Act does not apply to Copyright Office rulemaking. The Copyright Office is a department of the Library of Congress and is part of the legislative branch. Neither the Library of Congress nor the Copyright Office is an "agency" within the meaning of the Administrative Procedure Act of June 11, 1946, as amended (title 5, chapter 5 of the U.S. Code, subchapter 11 and chapter 7). The Regulatory Flexibility Act consequently does not apply to the Copyright Office since that Act affects only those entities of the Federal Government that are agencies as defined in the Administrative Procedure Act.¹

Alternatively, if it is later determined by a court of competent jurisdiction that the Copyright Office is an "agency" subject to the Regulatory Flexibility Act, the Register of Copyrights has determined that this final regulation will have no significant impact on small businesses.

List of Subjects in 37 CFR Part 211

Mask works, Semiconductor chip products.

Final Regulations

In consideration of the foregoing, part 211 of 37 CFR chapter 11, is amended in the manner set forth below.

PART 211—[AMENDED]

1. The authority citation for part 211 is revised to read as follows:

Authority: 17 U.S.C. 702 and 908.

2. Section 211.4(c), (d), and (e) are revised to read as follows:

¹ The Copyright Office was not subject to the Administrative Procedure Act before 1978, and it is now subject to it only in areas specified by section 701(d) of the Copyright Act [i.e. "all actions taken by the Register of Copyrights under this title [17]," except with respect to the making of copies of copyright deposits]. [17 U.S.C. 708(b)]. The Copyright Act does not make the Office an "agency" as defined in the Administrative Procedure Act. For example, personnel actions taken by the Office are not subject to APA-FOIA requirements.

§ 211.4 Registration of claims of protection in mask works.

(c) One registration per mask work.

(1) Subject to the exception specified in paragraph (c)(2) of this section, only one registration can generally be made for the same version of a mask work fixed in an intermediate or final form of any semiconductor chip product. However, where an applicant for registration alleges that an earlier registration for the same version of the work is unauthorized and legally invalid and submits for recordation a signed affidavit, a registration may be made in the applicant's name.

(2) Notwithstanding the general rule permitting only one registration per work, owners of mask works in final forms of semiconductor chip products that are produced by adding metal-connection layers to unpersonalized gate arrays may separately register the entire unpersonalized gate array and the custom metallization layers. Applicants seeking to register separately entire unpersonalized gate arrays or custom metallization layers should make the nature of their claim clear at Space 8 of application Form MW. For these purposes, an "unpersonalized gate array" is an intermediate form chip product that includes a plurality of circuit elements that are adaptable to be personalized into a plurality of different final form chip products, in which some of the circuit elements are, or will be, connected as gates.

(d) Registration as a single work.

Subject to the exception specified in paragraph (c)(2) of this section, for purposes of registration on a single application and upon payment of a single fee, the following shall be considered a single work.

(1) In the case of a mask work that has not been commercially exploited: All original mask work elements fixed in

a particular form of a semiconductor chip product at the time an application for registration is filed and in which the owner or owners of the mask work is or are the same; and

(2) In the case of a mask work that has been commercially exploited. All original mask work elements fixed in a semiconductor chip product at the time that product was first commercially exploited and in which the owner or owners of the mask is or are the same.

(e) *Registration in most complete form.* Owners seeking registration of a mask work contribution must submit the entire original mask work contribution in its most complete form as fixed in a semiconductor chip product. The most complete form means the stage of the manufacturing process which is closest to completion. In cases where the owner is unable to register on the basis of the most complete form because he or she lacks control over the most complete form, an averment of this fact must be made at Space 2 of Form MW. Where such an averment is made, the owner may register on the basis of the most complete form in his or her possession. For applicants seeking to register an unpersonalized gate array or custom metallization layers under paragraph (c)(2), the most complete form is the entire chip on which the unpersonalized gate array or custom metallization layers reside(s), and registration covers those elements of the chip in which work protection is asserted.

Dated: February 13, 1991.

Ralph Oman,
Register of Copyrights.

Approved by:
James H. Billington,
The Librarian of Congress.
[FR Doc. 91-4412 Filed 2-25-91; 8:45 am]
BILLING CODE 1410-07-01

