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Richard H. Stern

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The Semiconductor Chip Protection Act of 1984: The International Comity of Industrial Property Rights

by

Richard H. Stern†

I

INTRODUCTION

Congress’ passage of the Semiconductor Chip Protection Act of 1984 (hereinafter the SCPA)¹ marks the first enactment of intellectual property legislation specifically aimed at a new kind of technology, the layout (or “mask work”) of integrated circuits in semiconductor chip products.² The new law is neither a copyright law nor a patent law, but a hybrid form of

† Member of the Bar, District of Columbia and U.S. Patent and Trademark Office. The author is former chief of the Intellectual Property Section, U.S. Department of Justice, and former Distinguished Visiting Professor at the University of Minnesota Law School. The material in this Article is adapted from portions of R. STERN, SEMICONDUCTOR CHIP PROTECTION (forthcoming).


² Semiconductor chip products (“chips”) are minute electronic circuits laid out in semiconductor material (e.g., silicon). A modern microprocessor comprised of a die, approximately 0.3 inches x 0.3 inches in size, is capable of storing as much computer circuitry as that contained in an entire room full of vacuum tube computer circuitry. The SCPA protects the layout or “topography” of these semiconductor chip products by protecting the “mask work” used to manufacture the chip. See SCPA §§ 902, 905, 910. A “mask work” is defined as:

a series of related images, however fixed or encoded—

(A) having or representing the predetermined, three-dimensional pattern of metallic, insulating, or semiconductor material present or removed from the layers of a semiconductor chip product; and

(B) 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 product . . .

SCPA § 901(a)(2).
industrial property legislation combining selected aspects of copyright law\textsuperscript{3} and patent law\textsuperscript{4} with some new elements not found in any traditional form of intellectual property law.\textsuperscript{5} This Article focuses primarily on two of these new elements, the international comity provisions and the reciprocity provisions found in sections 902(a) and 914, respectively, of the SCPA.

Before the enactment of the SCPA, the industrialized nations shared an essentially common view of intellectual property protection, recognizing patents, copyrights, and trademarks. Despite technical differences concerning the protection of particular items, a consensus existed as to the subject matter and general scope of the protection. On the other hand, a major issue existed among industrialized nations as to whether the intellectual property rights of aliens should be recognized to the same extent as the rights of nationals.

With the enactment of the SCPA in 1984, the United States became the first nation to explicitly recognize and protect an intellectual property right in mask works.\textsuperscript{6} There was never any question that the United States would extend reciprocal protection to the mask works of foreign nationals whose country upheld the new U.S. intellectual property regime for chips. Rather, a major concern has been to induce foreign nations to recognize and protect such an intellectual property right in mask works. Sections 902(a) and 914 of the SCPA approach the problem with a "carrot and stick scheme": the carrot promises U.S. protection, on a reciprocal basis, of intellectual property from possible piracy by others, while the stick threatens unrestrained piracy of the chips of uncooperative nations.

The SCPA thus represents a novel approach to inducing other nations to respect the intellectual property rights of U.S. citizens. It offers protection of the intellectual property rights of any foreign nation's citizens to the same

\textsuperscript{3} Like the copyright system, the SCPA allows protection to attach automatically upon "fixation" of a mask work in the form of a semiconductor chip product. See SCPA § 902(a)(1). A mask work is "fixed" when "its embodiment in the product is sufficiently permanent or stable to permit the mask work to be perceived or reproduced from the product for a period of more than transitory duration . . . ." SCPA § 901(a)(3). Rights are secured by registration after a fairly cursory examination, as under copyright law, rather than after an exacting examination for novelty and creative merit, as under patent law. See SCPA § 902(b); 130 CONG. REC. S12,917–18 (daily ed. Oct. 3, 1984); H.R. REP. No. 781, supra note 1, at 8–9.

\textsuperscript{4} Ownership of a mask work is unitary and indivisible, like ownership of a patent rather than ownership of a copyright. See SCPA §§ 901(a)(1), 903(b); 130 CONG. REC. S12,916–17 (daily ed. Oct. 3, 1984). As in the case of a patent, an application for mask work protection must be filed within a fixed period after the first commercial exploitation to secure ownership rights. Compare SCPA § 908(a) with 35 U.S.C. § 102.

\textsuperscript{5} For example, SCPA § 907 provides an exemption or limitation of liability for certain forms of innocent infringement. Under patent and copyright law, an improvement or enhancement of a protected work cannot be exploited in disregard of prior rights in the original work. SCPA § 906(a), however, may exempt from the liability provisions a reproduction by reverse engineering of a protected mask work for purposes of analysis.

extent that the foreign nation either actually protects U.S. citizens' intellectual property rights or begins to take reasonable steps in the direction of such reciprocity.

In this connection, section 902(a) of the SCPA authorizes the President to issue a proclamation (hereinafter a Presidential Proclamation) granting total reciprocity to nations that specifically protect mask works of U.S. firms. Section 914 offers temporary reciprocity after a foreign nation has met the following conditions: (1) the foreign nation makes reasonable progress toward the enactment of intellectual property law similar to that of the United States; and, (2) it appears that the citizens of the foreign nation and persons that they control are not engaging in misappropriation of mask works.

Upon establishment in the foreign nation of an intellectual property law similar to that of the United States, permanent reciprocity of protection may be accorded to that foreign nation's citizens. However, section 914 will lapse in November 1987, unless Congress renews it. If SCPA § 914 proves to be an effective mechanism for inducing reciprocity, it will probably be extended.

To date, Japan has enacted a mask work chip protection law similar to that of the United States, and Sweden and Canada have officially notified the United States that they intend to enact similar legislation. Australia, the Netherlands, and the United Kingdom have advised the United States that their existing copyright laws would be interpreted to protect mask works in a manner similar to that of the SCPA. Finally, the European Economic Community (hereinafter EEC) proposes to direct its Member States to establish some form of mask work protection as well.

The main innovation of the SCPA framework is the transition period during which foreign nations are accorded intellectual property protection even though they have not yet established de jure intellectual property comity with the United States. Under SCPA § 914, as long as a foreign nation maintains de facto comity and makes reasonable progress toward de jure comity, its citizens will enjoy the same protection as that afforded to U.S. citizens.

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7. SCPA § 902(a).
8. SCPA § 914.
Although this incremental approach reflects the peculiarities of the international market in which the U.S. semiconductor industry operates, the extension of this approach to other high-technology products may be productive. Moreover, the promise of protection against third-nation competition or piracy in the large and important U.S. market may prove to be a catalyst for the creation of an international regime of comity for intellectual property rights.

Accordingly, this Article focuses on the international comity and reciprocity aspects of the SCPA. Part II provides a general overview of the SCPA. Parts III and IV describe the transitional protection afforded by section 914 and the reciprocity scheme of section 902(a), respectively. The Article then discusses in Part V the prospects for future international protection of mask work rights. Finally, Part VI offers several proposals for both improving the SCPA framework and encouraging the development of an international scheme of comity for the protection of mask works.

II
SCP A O V ERV IE W

The SCPA became fully operative on January 7, 1985. The legislation generally provides that mask works are registered in the Copyright Office, and thereafter the pirating of such registered works is a violation of federal law. This Part outlines these general provisions of the SCPA and the policy behind the legislation.

A. Legislative History of the SCPA

The SCPA reflects an industry-wide consensus that developed after industry dissent resulted in the failure of initial efforts to pass a law protecting mask works. The evolution of the SCPA was marked by sharp disagreement between the Senate and House over whether to amend the Copyright Law, or to devise a new, sui generis form of industrial property protection. The Senate favored the adaptation of existing copyright law to deal

13. One of these peculiarities is that the United States is the world's largest market for the sale of semiconductor chips. Therefore, it is particularly important for foreign firms not to be disadvantaged by piracy of their products in the U.S. market.

14. SCPA § 913 provided for the law to become effective on November 8, 1984, the date of its enactment. SCPA § 913(a), however, allowed the federal courts and the Copyright Office an additional 90 days to act on matters arising under the Act. No similar provision delayed the Commerce Department's duty to act under SCPA § 914, and it published regulations that went into effect on the date of enactment. See 49 Fed. Reg. 44,517 (1984).

15. H.R. 1007, 96th Cong., 1st Sess. (1979). For a discussion of the bill's language, see H.R. REP. NO. 781, supra note 1, at 14-15. The measure, which would have protected semiconductor chip products, proved so controversial within the U.S. semiconductor industry that it "disappeared as a viable proposal." Id.

16. This approach was taken in S. 1201, supra note 1, 130 CONG. REC. S5833-38 (daily ed. May 16, 1984).

17. This approach was taken in H.R. 5525, supra note 1, 130 CONG. REC. H5524-25 (daily ed. June 11, 1984).
with semiconductor chip mask works on the theory that this approach would provide greater certainty than would a new legal scheme. The House favored the development of a new form of industrial property law, specifically tailored to the problems and interests of the U.S. Government and the semiconductor industry. The disagreement was finally resolved in favor of the House's sui generis approach.

In formulating the legislation, Congress sought means to induce foreign nations to recognize the mask work rights of U.S. citizens. The proponents of both copyright law extension (S. 1201) and sui generis legislation (H.R. 5525) argued that greater foreign recognition of U.S. mask work rights would result from the adoption of their respective proposals. The Senate Report asserted that foreign nations who were party to treaties with the United States requiring mutual recognition of copyrights would feel obliged to accord comity to U.S. copyrights of mask works. On the other hand, argued the Senate, foreign nations would feel no treaty obligation to recognize sui generis protection of mask works, thereby leaving wholly uncertain the status of U.S. mask works protected under such a new law. Finally, because of the overwhelming size of the U.S. semiconductor market, and perhaps because of the influence of the SCPA legislation, observers apparently thought that U.S. adoption of a copyright system for semiconductors would likely spur other nations to follow the U.S. example and extend their own copyright law in a similar manner.

The House Report, on the other hand, challenged the idea that the Senate's proposed extension of U.S. copyright law to mask works would increase the probability of foreign comity. A major problem identified by the House would be "fitting mask work protection under the Universal Copyright Convention," since the subject matter of the Convention does not include any industrial property other than works of applied art, a category of doubtful

20. One advantage of the sui generis approach ultimately adopted by Congress was that it avoided the possible misuse of analogies between mask works and the traditional subject matter of copyright. See H.R. Rep. No. 781, supra note 1, at 6, 10.
22. Id. at 5–8; see also S. Rep. No. 425, supra note 1, at 13.
24. The United States, like most major industrial nations, is a party to the Universal Copyright Convention. See infra note 29 and accompanying text.
applicability to mask works. At the time the House considered the new law, no country had yet protected mask works explicitly under the provisions of the Convention. In fact, most countries appeared to agree with prior U.S. copyright law decisions refusing to protect mask works under copyright law.  

The Convention and U.S. copyright law operate on the principle of “national treatment” rather than on the principle of reciprocity. Under the principle of national treatment, the extension of U.S. copyright law to U.S. mask works must be accompanied by equal protection for foreign mask works, even if the foreign nations concerned provide no equivalent protection for U.S. mask works. Thus, an anomaly could exist whereby the United States would protect the mask works of a particular country from copyright infringements in the United States, while the nationals of that country could openly pirate U.S. mask works at home. The House Report therefore advocated the negotiation of bilateral treaties or other bilateral arrangements that would “assure U.S. nationals of substantially the same amount of mask work protection in foreign countries” as the United States grants to nationals of those countries. This view prevailed.

B. Securing Protection of Semiconductor Chip Mask Works

Semiconductor chip layouts are protected under the SCPA by registering them with the U.S. Copyright Office, along with sample dies and overlays or other acceptable identifying material. They are protected only if their design, when considered as a whole, is not “staple, commonplace, or familiar in the semiconductor industry.” In effect, this is a compromise between the patent law’s requirement of invention or “nonobviousness” and the copyright law’s principle of mere creation of the work without copying it from another. No government agency initially examines the mask for creativity; the Copyright Office is to allow registration if the required papers are submitted, and the question of invalidity may be raised only in subsequent litigation. Unless a mask work is registered in the Copyright Office within two

32. Universal Copyright Convention, supra note 29, art. II(1); H.R. Rep. No. 781, supra note 1, at 7.
33. H.R. Rep. No. 781, supra note 1, at 8. The House Report also suggested the possibility of multilateral initiatives. Id.
35. SCPA § 902(b).
years of the first sale or commercial exploitation of the chip, all rights to protection are forfeited.38

C. Exclusive Rights of the Owners of Semiconductor Chip Mask Works

Under the SCPA, the owner of a registered mask work can legally prevent unauthorized persons from reproducing the mask work by duplication or manufacture, importing or distributing chips embodying the mask work or equipment containing chips embodying the mask work, or inducing or "knowingly causing" another person to commit one of the foregoing acts.40

Because they are personal property rights, chip rights are similar to patent rights and may be licensed or assigned.41 It may become important for custom and semicustom chip manufacturers,42 cell library licensors,43 and proprietors of silicon compilers44 to limit the rights of their licensees and customers by appropriate contracts, in order to prevent the licensees and customers from suing each other or the licensor/supplier for infringement of mask work rights.45 The term of protection for a mask work under the SCPA is ten years from the date of registration or first commercial exploitation, whichever occurs first.46

D. Infringement of Mask Work Rights

The exclusive rights of the owner of a registered chip are infringed by the acts of reproducing, distributing, or importing the chip in the United States without the owner's permission.47 An unlawful infringement of a registered chip owner's rights occurs when a mask work is "substantially similar" to the.

38. "Commercial exploitation" of a chip is defined as "[the distribution] to the public for commercial purposes [of] a semiconductor chip product embodying the mask work . . . ." SCPA § 901(a)(5).
39. Id. at § 908(a).
40. Id. at §§ 905, 910.
41. See id. at § 903(b). Chip rights under the SCPA differ from rights under the copyright laws in that ownership of different aspects of the mask work right cannot be split among several persons. Thus, under U.S. copyright law there could be an "owner" of the right to distribute a semiconductor chip product as a component of a printed circuit board. There also could be "owners" of other similar rights, with each owner being entitled to institute civil actions against infringers of the particular rights. Under the SCPA, there can be only one owner and one such plaintiff, as under patent law. See 130 CONG. REC. S12,916 (daily ed. Oct. 3, 1984).
42. "Custom" and "semicustom" chips are distinguished from standard chips in that they are designed for particular customers' applications and are not off-the-shelf products.
43. A "cell library" is a collection of modules or elements that perform a particular function in a chip (e.g., function as an oscillator). Such modules may be combined to make a chip.
44. "Silicon compilers" are systems for combining elements into a custom chip at a lower level than a cell of a cell library.
45. Otherwise, an earlier customer may sue both the manufacturer and a later customer if the manufacturer makes chips for the later customer that are similar in layout to those sold to the earlier customer. For a general discussion of this problem, see Stern, Proprietary Rights in Cell Libraries, IEEE MICRO, June 1985, at 73–78.
46. SCPA § 904.
47. Id. at § 910.
layout of the mask work. A close similarity is required for infringement, although the SCPA does not provide a precise rule. When the substantial similarity of two chips is the result of functional requirements, however, there is no infringement.

E. Remedies for Infringement

In the event of mask work infringement, the SCPA provides for a court order requiring the defendants: (1) to halt the manufacture or sale of the infringing chips; (2) to pay the profits lost by the owner of chip rights as a result of diverted sales; and, (3) to disgorge any profits that may have been earned from the infringing chips. In the alternative, the court has the discretion to impose a penalty of up to $250,000 in the form of "statutory damages". Furthermore, the court may also order the destruction of the infringing semiconductor chip products and the equipment used in their manufacture.

F. Exceptions to Infringement of Mask Work Rights

No infringement of mask work rights occurs when a chip is "reverse engineered". Therefore, the competitors of a chip innovator are free to set themselves up as second sources if they wish to sell their own versions of the chip. Furthermore, sources such as distributors or equipment manufacturers are not liable for the resale of infringing products if they acquire them without having notice of the mask work rights. After learning of an infringement, however, an innocent purchaser may sell off inventory of infringing chips only on a reasonable royalty basis. The first authorized sale of a chip to a purchaser exhausts the mask work owner's rights under the SCPA as to use, distribution, and importation of that chip.

49. Id. at 26-27; S. REP. No. 425, supra note 1, at 17-18.
50. "Functional requirements" are economically worthwhile characteristics of a layout, such as use of less silicon, production of a higher yield of useful product, or greater freedom from noise. See S. REP. No. 425, supra note 1, at 16-17.
51. SCPA § 911.
53. A "second source" is another source of supply for the same product. One reason for having a second source is to create an alternative in case the primary source is unavailable. Price competition, improved service and enhanced quality are other possible reasons.
54. SCPA § 901(a)(8) defines "notice of protection" as "having actual knowledge that, or reasonable grounds to believe that, a mask work is protected" under the SCPA.
56. See generally SCPA § 906(b); 130 CONG. REC. S12,917 (daily ed. Oct. 3, 1984).
G. Retroactive Protection Arrangements

The SCPA fully protects all chip mask works marketed after November 8, 1984, the date of enactment of the law. It also partially protects semiconductor chip products first marketed between July 1, 1983 and November 8, 1984, if they were registered before July 1, 1985.\(^{57}\) Those chips marketed before July 1, 1983 are not directly protected by the SCPA, but may still be protected by state law.\(^{58}\)

III
TRANSGITIONAL PROTECTION OF FOREIGN MASK WORKS:
SECTION 914

The SCPA provides interim protection for foreign mask works for a three-year transitional period when a foreign nation has not yet instituted reciprocal protection but is taking steps in that direction. Under SCPA § 914, nationals of foreign nations enjoy the protection of the SCPA on substantially the same terms as U.S. nationals during the first three years of the SCPA's effectiveness if their nations qualify for transitional treatment. In effect, this section offers to preserve foreign mask work rights if foreign nations agree to work toward a regime of protection similar to that of the United States.

A. Legislative History

The issue of transitional protection for foreign mask works was first raised long after the House passed H.R. 5525, its proposed version of the SCPA.\(^{59}\) The question had never come up under S. 1201 since, as a copyright law, the Senate bill operated on a "national treatment" basis.\(^{60}\) When it began to appear that the non-copyright approach of H.R. 5525 would prevail, representatives of foreign nations and of foreign semiconductor chip manufacturers (primarily those from Japan) urged Congress to provide them several years of equal "national treatment" while they attempted to implement mask work protection laws. Although the issue was raised at a very late stage in the development of the legislation (after the Senate and House had each passed bills), those concerned realized that it was in everyone's best interest to encourage international comity for the protection of mask works.\(^{61}\) Accordingly, SCPA § 914 was inserted into the compromise bill.

\(^{57}\) SCPA § 913(b)–(d).

\(^{58}\) Section 912(e) authorizes the states to pass new laws or to interpret existing laws to regulate the marketing of semiconductor chip products placed on the market before July 1, 1983. SCPA § 912(e). It is uncertain how far a state can go in this respect without conflicting with the SCPA or other federal laws.

\(^{59}\) H.R. 5525, supra note 1.

\(^{60}\) See supra note 31 and accompanying text.

\(^{61}\) The initial reaction of some members of the semiconductor industry in the United States was based on a zero-sum model of competition between U.S. and Japanese semiconductor
B. Section 914: Authorization of Transitional Eligibility

SCPA § 914(a) authorizes the Secretary of Commerce to issue an order (hereinafter a section 914 order) extending transitional eligibility to nationals of foreign nations if the Secretary finds that:

(1) the foreign nation in question is making good faith efforts and reasonable progress toward entering into a mask work treaty with the United States or enacting legislation for protection of mask works;

(2) the nationals of the foreign nation (and persons controlled by them) are not engaging in misappropriation of mask works or distribution of pirated semiconductor chip products; and,

(3) issuing the order would promote the purposes of the SCPA and international comity as to protection of mask works. The following sections discuss each of these discretionary factors.

I. Good Faith Efforts and Reasonable Progress

Under SCPA § 914(a)(1), the criteria for issuing a discretionary interim order is whether the foreign nation is "making good faith efforts and reasonable progress toward" establishing a regime of chip protection similar to that contemplated by SCPA § 902(a)(2). The purpose for such a requirement is to encourage foreign nations to provide protection substantially similar to that available under the SCPA; however, "good faith efforts and reasonable progress" toward such a goal is satisfactory, and complete success is not required.

The concept of good faith and reasonableness is explained only in the Senate and House memoranda on the final compromise bill and in the final

manufacturers. In this overly simplistic view, anything that would benefit Japanese semiconductor manufacturers was automatically considered to be detrimental to the interests of U.S. semiconductor manufacturers, and vice versa. But others in the industry perceived U.S. and Japanese semiconductor competition as inseparable from competitive relations with other Pacific rim manufacturers. In their view, whether or not the competitive relationship among all Pacific rim semiconductor manufacturers was zero-sum, that between U.S. and Japanese manufacturers was not necessarily zero-sum.

Those semiconductor manufacturers in the first group (zero-sum model) were pleased, at least initially, with the prospect of Japanese firms' chips being pirated by other Pacific rim sellers. Those in the second group, however, were more interested in maintaining the uneasy status quo of the last several years, during which U.S. semiconductor protection legislation had been pending and during which, by reason of administrative guidance or otherwise, Japanese semiconductor manufacturers were not engaging in chip piracy. Those in the second group realized that they had no interest in pirating Japanese chips and that they would not benefit economically from other Pacific rim manufacturers pirating such chips. Moreover, they realized that they would substantially benefit from having their own proprietary or intellectual property rights in chips recognized and respected in Japan. Eventually, the views of the second group prevailed within the industry and in Congress. Some of the flavor of this evolution in thinking is reflected in the floor remarks of the House bill's manager, Congressman Kastenmeier. 130 CONG. REC. (daily ed. Oct. 10, 1984) H11,611 (daily ed. Oct. 9, 1984). See also id. at E4432-35 (daily ed. Oct. 10, 1984) (extension of remarks).

62. See SCPA § 914(a).
floor debates, because the bills did not include a transitional eligibility provision when the Senate and House reports were written. The Senate memorandum provides one example of good faith efforts and reasonable progress: if a foreign nation without a new chip law announces its intention to propose such a law to parliament and then appoints a study group to draft appropriate legislation, it would be appropriate for the Patent and Trademark Office to grant a short-term interim order and then to reevaluate the situation at a later time. If reasonable progress has been made toward enactment of such legislation, a further interim order should issue for an additional period of time.

The House memorandum adds that the Secretary of Commerce, in making determinations of good faith efforts and reasonable progress, should take into account the attitude of the nation's private sector as well as that of the government. The memorandum singles out the cooperative attitude of the Japanese electronics industry as an example.

2. Misappropriation of Mask Works

Under SCPA § 914(a)(2), the second discretionary factor in the issuance of an interim order is whether citizens of the foreign nation, or entities that they control (e.g., subsidiaries, affiliates, or agents), are engaging in the misappropriation or unauthorized commercial exploitation of mask works. The intent behind such a requirement is to induce foreign governments to discourage their nation's chip and equipment manufacturers from engaging in chip piracy and from using pirated chip mask works. Both the Senate and House memorandums state that this provision means not only that there should be no piracy of chip mask works protected under the SCPA, but also that there should be no piracy of any other chip designs. Moreover, it is important that equipment manufacturers should not knowingly use chips embodying misappropriated mask works in their products.

The reference to chip designs other than those protected by the SCPA was intended to refer to mask works first commercially exploited before July 1, 1983. This reference is a limited step toward recognizing an earlier effective date for mask work protection from foreign competition than that which the House was willing to agree to for domestic chips in the final compromise bill. This reference, however, does not pertain to those mask works which are outside of the definitional scope of SCPA protection (i.e., those mask works

that are staple, familiar, or commonplace, or mask works that are the result of reverse engineering). That interpretation would undercut basic statutory policies embodied in SCPA §§ 902(b) and 906(a) favoring competition in the manufacture and distribution of such mask works.

3. Promoting the Purposes of the SCPA and Mask Work Comity

The third discretionary factor in determining whether to issue a section 914 order is the potential effect of the order on promoting the purposes of the SCPA and international comity as to the protection of mask works. Section 914(a)(3) is, in effect, just an expansion of the Secretary’s discretion to issue or deny an interim order, although it has some substantive content as well.

The issue of what constitutes a proper method for promoting the purposes of the SCPA arose during the proceeding related to Sweden’s application for a section 914 order. The Patent and Trademark Office raised the questions of whether the omission of any reverse engineering privilege from a foreign law might make that law one that did not provide mask work protection on “substantially the same basis” as the SCPA, as provided in SCPA § 902(a)(2)(B), and whether approval for interim protection would, in fact, promote the purposes of the SCPA, within the meaning of SCPA § 914(a)(3). A further issue arises as to whether a foreign law which omits a provision on reverse engineering might contravene the intent of the SCPA to the point where the foreign law would not provide protection on “substantially the same basis” as the SCPA for the purposes of SCPA §§ 902 and 914.

An important difference exists, however, between SCPA § 902 and SCPA § 914 that might well lead to contrary determinations in the two cases. Under section 914, the congressional purpose is to induce progress toward comity, although full comity is not expected at the outset. In contrast, a Presidential Proclamation under section 902(a) may be final, and thus, whatever comity is to be realized will be embodied in the foreign law as it exists on the date of the issuance of the Presidential Proclamation. Therefore, a foreign law which is considered “defective” may properly be given interim approval under SCPA § 914 in the hope of encouraging enactment of “better” legislation (from the U.S. standpoint) over the next several years. On the other hand, a similarly “defective” foreign law should not be given the benefit of a Presidential Proclamation under SCPA § 902 because of the potential finality of such a Proclamation. Thus if one nation seeks an interim order under SCPA § 914 while another seeks a permanent order of reciprocity under SCPA § 902(a)(2), and neither nation’s laws or proposed laws permit reverse engineering, the Patent and Trademark Office might appropriately make different determinations as to each nation.

Similar considerations apply to innocent infringement, although perhaps not as forcefully. Other aspects of the SCPA, taken individually, may not be

so crucial, such as the registration and deposit system, the provision of notice to dispel "innocence" for alleged innocent infringers, and the specific arsenal of remedies. It is possible, however, that a foreign nation's approach may in its entirety so diverge from the provisions of the SCPA that there would be little hope for the development of comity in the future. In such a case, the United States should not provide even provisional protection under SCPA § 914, but rather should indicate to the foreign country how its law could be modified to comply with the requirements of the SCPA. Of course, considerable circumspection is necessary to avoid offending national sensibilities.

4. Effects of a Section 914 Order

If the Secretary of Commerce issues a section 914 order, foreign nationals may register their mask works under SCPA § 908, notwithstanding the nationality limitation of SCPA § 902(a)(1). As a result of such registration, foreign nationals become entitled to sue infringers under SCPA § 910(b) and are entitled to all of the remedies for infringement of mask work rights provided by SCPA § 911.69 Once a registration certificate is issued as a result of a section 914 order, it will remain in effect for the usual ten-year term provided by SCPA § 904.70

C. Administrative Aspects of Proceedings under Section 914

1. Institution of an Informal Rulemaking Proceeding

The Secretary of Commerce may institute an informal rulemaking proceeding to determine whether the criteria of SCPA § 914(a)(1)-(3) have been met. The Secretary may do so by his own motion,71 or on the request of a

69. SCPA § 914(b); 130 CONG. REC. S12,919 (daily ed. Oct. 3, 1984). By analogy, it appears that if a registrant otherwise qualifies for a Customs Service or International Trade Commission exclusion order, SCPA § 911 remedies would also be available.

70. See SCPA § 914(d)(2). Thus if an order were subsequently revoked or allowed to expire, registration of that country's nationals made during the effectiveness of the interim order would remain valid for the ten year period provided under the SCPA:

If a Secretarial order were rescinded, the effect would be to withdraw the privilege of further registrations, but not the ten-year period of rights under those registrations previously issued. It would be unfair to punish those foreign nationals and domiciliaries who chose to participate in this legislative scheme for the actions of others, outside their control.


71. The Patent and Trademark Office may institute a § 914 proceeding on its own motion. SCPA § 914(a). See also infra note 96.
foreign nation or any interested person. The legislative history states that the Secretary should expeditiously begin consideration of interim eligibility in at least two particular situations: (1) where a country already extends protection to U.S. mask works; and, (2) where a country has a significant semiconductor industry.

2. Regulations for Petitions

The Secretary of Commerce has published interim guidelines for petitions for section 914 orders. Under these guidelines, the authority of the Secretary of Commerce under SCPA § 914 was delegated to the Commissioner of Patents and Trademarks (hereinafter the Commissioner). Any petition to the Commissioner requesting issuance of an order extending interim registration privileges to foreign nationals must contain, among other things:

(1) A statement from the foreign governmental agency in charge of developing semiconductor legislation detailing the efforts and target dates for such legislation;

(2) A statement from the foreign government that its nationals are not engaging in chip piracy; and,

72. The Australian Government, for example, requested initiation of a § 914 proceeding if no Presidential Proclamation could be issued before July 1, 1985. See infra note 95. The section 914 proceeding as to the Netherlands was instituted at its government's request. Letter from the Netherlands Minister of Foreign Affairs to Donald J. Quigg, Acting Commissioner of Patents and Trademarks (May 16, 1985), reprinted in Interim Protection for Mask Works of Nationals, Domiciliaries, and Sovereign Authorities of the Netherlands, 50 Fed. Reg. 24,795, 24,797-98 (1985) [hereinafter cited as Letter from Minister of Foreign Affairs].

73. SCPA § 914(a). Thus a trade association or a semiconductor manufacturer may file a petition. The petition for Japan was filed by the Electronics Industry Association of Japan (EIAJ). The petition for Sweden was filed by the Swedish Federation of Industries (Industriforbundet). The Canadian petition was filed by four Canadian trade associations.

The proceeding is to be conducted as informal rulemaking under the Administrative Procedure Act. 130 CONG. REC. S12,919 (daily ed. Oct. 3, 1984); E4434 (daily ed. Oct. 10, 1984). That procedure calls for public notice and comment, followed by either a hearing at which interested persons are permitted to testify, or the acceptance of written submissions. See 5 U.S.C. § 553 (1983).

74. 130 CONG. REC. S12,919 (daily ed. Oct. 3, 1984); E4434 (daily ed. Oct. 10, 1984). A U.K. decision indicates that the United Kingdom would presently regard mask works as protectable under U.K. copyright law in that chips may be considered "copies" of the technical drawings for the chips. L.B. Plastics Ltd. v. Swish Products Ltd., [1979] 1 Ch. App. That fact would suggest that the United Kingdom deserves immediate interim eligibility under SCPA § 914. There are, however, some indications that the U.K. copyright law as to protection of utilitarian objects as copies of technical drawings may be limited in the future. See infra text at section IV(C)(2). Australia and the Netherlands have indicated to the Patent and Trademark Office that their existing copyright laws already provide mask work protection as extensive as that of the SCPA. See infra notes 151-55 and accompanying text.


(3) Documents and other materials (translated into English) showing the progress being made in the foreign nation toward establishing protection of mask works.\textsuperscript{77}

3. Retroactive Effects of Section 914 Orders

The Secretary of Commerce may make the effective date of the section 914 order retroactive to the date the order was requested.\textsuperscript{78} In some circumstances, such a retroactive order might make it possible for a foreign applicant to avoid forfeiting mask work rights for failure to register within the statutory period (within two years of first commercial exploitation anywhere in the world).\textsuperscript{79}

The following hypothetical facts illustrate the concept of retroactive reciprocity under a section 914 order:


It would appear that in these circumstances, the Copyright Office should issue a registration certificate having an effective date of December 20, 1986, but which the Copyright Office would in fact finally process some time after March 1, 1987.

The Copyright Office initially took the position that it would not issue a registration certificate under the facts of the above hypothetical. The Copyright Office would register the Gamma chip for Company A only if the Patent and Trademark Office issued its section 914 order before January 1, 1987. The Copyright Office stated that it believed that the retroactive effective date provision of SCPA § 914 was not intended to permit the Patent and Trademark Office to waive the two-year forfeiture deadline, even if the length of the Patent and Trademark Office's deliberations were the cause of the forfeiture.\textsuperscript{80}

\textsuperscript{77} See id. at 44,517–19.


\textsuperscript{79} See SCPA § 908(a).

\textsuperscript{80} See 37 C.F.R. § 211.4(f) (1985); 50 Fed. Reg. 267 (1985). The Copyright Office believed that issuing a registration where the § 914 order issued after January 1 in the hypothetical would "create public uncertainty about which chips are protected and which are in the public domain." Id.
In its final version of the regulations, however, the Copyright Office agreed “to allow registration for whatever it may be worth” and to let the courts determine whether the registration was effective. The Copyright Office noted that it still was “inclined to believe that the better interpretation of the Act [was] one which applie[d] the statutory deadline,” and hoped that the issue would be kept academic by Patent and Trademark Office action on all SCPA § 914 petitions before the forfeiture deadline expired. It also invited Congress to clarify the law.  

4. The Duration and Termination of Section 914 Orders

The Secretary of Commerce's authority under SCPA § 914 terminates on November 8, 1987, and the orders granting interim eligibility for foreign nations may continue in effect only until that date. The legislative history suggests that the Secretary has discretion to issue a relatively longer or shorter order depending on the circumstances of a particular case. For example, a nation may be unable to introduce a proposed mask work law into its parliament because the parliament is not in session. Under certain circumstances the Secretary could issue a six-month or one-year order, reevaluate progress at the end of that time, and enter a further order if reasonable progress continues. For example, if the government of a particular country states that it intends to introduce such a law when parliament returns, and if the government appoints a study group to draft proposed legislation that would be technically sound and in accordance with national customs and needs, such a short-term order may be warranted. The Secretary may rescind or terminate an order if any one of the three conditions of the order (reasonable progress, absence of piracy, and promotion of SCPA goals and comity) are no longer met. The Secretary may also allow an order to expire without renewing it. In either event, those registrations already enacted would remain valid and effective, but no further registrations by citizens of that foreign nation could be made under section 914. Of course, further

82. SCPA § 914(e).
83. SCPA § 914(c).
85. See generally 49 Fed. Reg. 44,517–18 (1984), which requires that the foreign nation make progress "toward a regime of mask work protection generally similar to that under the Act" and that the foreign nation "promote the purposes of the Act and of achieving international comity toward mask work protection."
86. SCPA § 914(d)(1).
87. SCPA § 914(d)(2).
registrations can always be requested under SCPA § 902, if the applicant is eligible.89

5. Reviewability of Section 914 Orders

A section 914 order is reviewable in federal district court for want of substantial supporting evidence or for arbitrariness and capriciousness.90 During review, the order will ordinarily remain in effect unless exigent circumstances compel its stay.91 Review of the denial of an order or its termination may be sought by the petitioner or an adversely affected person, such as a semiconductor manufacturer in the foreign nation. Similarly, review of the granting of or refusal to rescind an order may be sought by an adversely affected person, such as a U.S. semiconductor manufacturer.

D. Actual Proceedings Under Section 914

To date, SCPA § 914 proceedings have occurred with regard to Japan,92 Sweden,93 the Netherlands,94 Australia,95 the United Kingdom,96 Canada,97 and the EEC.98 In 1985, the Patent and Trademark Office held public hearings inviting comments on the basis of the documents submitted in support of

88. SCPA § 902(a) allows registration of mask works whose first commercial exploitation is in the United States.
89. 130 CONG. REC. S12,919 (daily ed. Oct. 3, 1984). According to the Commerce Department guidelines, the order becomes administratively final after 30 days unless a request for reconsideration is received during that period. A request for reconsideration must be supported by additional evidence. 49 Fed. Reg. 44,517, 44,518 (1984).
91. The papers submitted in support of the Japanese petition, which were filed by the Electronics Industry Association of Japan, are published in 50 Fed. Reg. 12,355 (1985).
92. The papers submitted in support of the Swedish petition, which were filed by the Swedish Federation of Industries, are published in 50 Fed. Reg. 18,720 (1985).
93. The papers in support of the Netherlands petition, which were filed by the Netherlands Government, are published in 50 Fed. Reg. 24,795–808 (1985).
94. The government of Australia submitted a diplomatic note requesting issuance of a Presidential Proclamation or, in the alternative, an SCPA § 914 order. The Patent and Trademark Office then instituted a § 914 proceeding. See infra note 143. The supporting papers are not available to the public.
95. The government of the United Kingdom requested a Presidential Proclamation on March 1, 1985. The Patent and Trademark Office then instituted a § 914 proceeding on its own motion. See infra note 139. The supporting papers are not available to the public.
96. The papers in support of the Canadian petition, which were filed by four Canadian trade associations, are published in Interim Protection for Mask Works of National, Domiciliaries, and Sovereign Authorities of Canada, 50 Fed. Reg. 25,288 (1985).
97. The Commission for the European Communities filed a petition under SCPA § 914 in late June 1985. The Commission stated that it was preparing a draft directive to the Member States of the EEC, which, if adopted in final form, would require the Member States to establish national systems of protection for integrated circuit topography. 50 Fed. Reg. 26,821, 26,822 (1985).
98. Although the Commission requested issuance of an interim order in favor of nationals of EEC Member States before July 1, 1985, the petition was so late and raised enough substantive questions that the Patent and Trademark Office found immediate action infeasible. It therefore gave notice of a public hearing and invited comment. Interim Protection for Mask Works of
the petitions of Japan and Sweden. This Office invited only written comments for the petitions relating to the Netherlands, Australia, the United Kingdom, Canada, and the EEC. Each of the petitions was then granted on varying bases for periods of one year in most cases, but for several years in one case.

Nationals, Domiciliaries, and Sovereign Authorities of the European Economic Community. Id. at 26,821.

99. A public hearing on the Japanese petition was held on May 8, 1985. 50 Fed. Reg. 24,668-69 (1985). The U.S. Semiconductor Industry Association (SIA) proposed allowing only a six-month interim order, rather than an order until November 1987 (as the Electronics Industry Association of Japan proposed). The SIA opposed the longer order because it felt that it was impossible to understand the Japanese chip proposal adequately until an official English translation was available and the administrative interpretation of the new law established. Issuing a six-month order would permit reevaluation of the measure in the light of further information in late 1985. In response to questions from the Patent and Trademark Office, however, SIA indicated that it would not oppose a one-year order. Id.

100. A public hearing on the Swedish petition was held on May 29, 1985. 50 Fed. Reg. 25,618 (1985). The U.S. Semiconductor Industry Association supported a one-year order because the Patent and Trademark Office had previously indicated that it contemplated such an order as to Japan, and because it believed that one year would be long enough for Sweden to enact its proposals and for others to study the resulting law.

101. The Patent and Trademark Office indicated in its announcements relating to these countries that the impending July 1, 1985 deadline for filing applications as to mask works first commercially exploited between July 1, 1983 and November 7, 1984 required expedited procedures. See SCPA § 913(d)(1); see also 50 Fed. Reg. 267 (1985).

From the standpoint of owners of mask works first commercially exploited during the July 1983-November 1984 window, it was essential that some order, however temporary, be entered before July 1, 1985. If the order were entered, the mask works first commercially exploited during the “window” could be registered. If no order were entered, those mask works would fall into the public domain. As for mask works first commercially exploited on or after November 8, 1984, there would be no forfeiture problem until on or after November 8, 1986. 50 Fed. Reg. 287 (1985).


The Japanese petition was granted on the basis that Japan was evidently making reasonable progress toward establishing a regime of mask work protection similar to that contemplated by SCPA § 902(a), and that it was unnecessary to determine whether it had in fact already done so. That determination could not be made until the Japanese Ministry of International Trade and Industry (MITI) had drafted its implementing regulations and put the law into effect. The Patent and Trademark Office determined that an interim protection order of one year would permit a review of progress without unduly burdening those concerned. See 50 Fed. Reg. at 24,669 (1985).

The Swedish petition was granted on the basis that Sweden was engaged in good faith efforts to develop effective legislation to protect semiconductor chip products. The Patent and Trademark Office determined that a one-year interim order would be long enough to permit Sweden to make significant progress toward developing its legislation and to permit timely review of that
IV
FOREIGN RECOGNITION OF SCPA RIGHTS: SECTION 902(A)

A. Section 902(a) Framework

1. Overview of Section 902

In contrast to the traditional copyright approach, the SCPA does not attempt to induce foreign recognition of U.S. mask works through existing treaty obligations. Furthermore, SCPA § 902(a) adopts the principle of reciprocity rather than that of equal "national treatment." Under the principle of reciprocity, the United States will accord foreign nationals protection for their mask works if, and only if, their countries accord substantially equivalent protection to mask works of U.S. citizens.

Section 902(a) contemplates two routes by which a foreign nation can qualify for reciprocal treatment under the SCPA. First, the foreign nation can qualify for reciprocity by becoming a signatory to a treaty providing mask work protection to which the United States is also a party. Second, the foreign nation can qualify by enacting domestic legislation for the protection of mask works under which U.S. citizens may secure mask work protection substantially similar to that of the SCPA on a nondiscriminatory basis. If the foreign nation chooses the latter route, the President of the United States may issue a Proclamation extending the benefits of the SCPA to progress without putting an undue burden on those concerned. See 50 Fed. Reg. at 25,613 (1985).

Australia, the United Kingdom, and the Netherlands had each represented that their existing copyright laws covered semiconductor chip products, although the statutes generally preceded the commercialization of semiconductor chip products and no actual case involving semiconductor chip products had ever been decided. The petitions with respect to these nations were granted together on the basis of the Patent and Trademark Office's determination that "issuance of interim orders under section 914 for these countries will promote the development of an international system assuring mask work protection." 50 Fed. Reg. at 26,820 (1985). Further public inquiry was appropriate, however, and public comment was invited. Id.

Protection was extended to the Member States of the EEC for one year (except for the United Kingdom, which already enjoyed a longer order), and the previous order as to the Netherlands was extended to expire with the other EEC Member State orders. See 50 Fed. Reg. at 37,892 (1985).

103. H.R. REP. No. 8, 98th Cong., 2d Sess. (1984). The Universal Copyright Convention, supra note 29, art. II(1), requires each signatory to accord equal treatment under its copyright laws to its own nationals and the nationals of other signatories. Since SCPA § 902(a) does not provide such equal treatment it does not satisfy the requirements of the Convention. Therefore, the United States cannot object to the chip protection laws of other signatories to the Convention which do not comply with the requirements of the Convention.


105. SCPA § 902(a)(2) uses the word "or" to link nondiscrimination and substantial equivalence to the SCPA. Nonetheless, the legislative history and the fact that establishing reciprocity is subject to presidential discretion suggest that substantial equivalence to the protection of U.S. law must be provided. For further discussion, see infra section IV(A)(2).
that nation’s citizens.\textsuperscript{106} The Presidential Proclamation may also extend the benefits of the SCPA to mask works of other nationals, if their mask works are first commercially exploited in the qualifying foreign nation.\textsuperscript{107} An executive order has delegated to the Secretary of Commerce the authority to receive requests for Presidential Proclamations under the SCPA.\textsuperscript{108}

2. Requisite Standard of Protection Under Section 902

SCPA § 902(a)(2) authorizes the President to issue a Presidential Proclamation whenever he finds that a foreign nation extends mask work protection to U.S. citizens: “(A) on substantially the same basis as that on which the foreign nation extends protection to mask works of its own nationals and domiciliaries and mask works first commercially exploited in that nation, or (B) on substantially the same basis as provided in this chapter . . . .” (Emphasis added). The meaning of this provision, particularly of the word or, has raised many questions. The word and raises a less significant question, which will be discussed below.

Under a literal reading of SCPA § 902(a)(2), in which or is interpreted to mean simply or, a foreign nation would qualify for a Presidential Proclamation if it met the requirement of clause (A) alone. Under this interpretation, virtually every nation in the world now qualifies for a Presidential Proclamation, since all nations nondiscriminatorily offer the same kind of protection to their own and U.S. nationals: that is, no protection at all. However, this is not the interpretation that Congress intended, and no one in the United States has thus far suggested that it is.\textsuperscript{109}

\textsuperscript{106} SCPA § 902(a)(2).
\textsuperscript{107} SCPA § 902(a)(2)(ii). For example, if Japan qualified for a Presidential Proclamation, the President could include in his Proclamation an extension of mask work protection under the SCPA to Korean-owned mask works that were first commercially exploited in Japan.
\textsuperscript{109} Several foreign observers have considered such an interpretation possible, but this viewpoint is probably explained by their experiences in legal systems in which statutes are read literally and in which there is no recourse available to legislative history.

The point is also mentioned briefly in the Patent and Trademark Office’s orders extending interim protection to mask works of nationals, domiciliaries, and sovereign authorities of Australia, the United Kingdom and the Netherlands, but the orders do not attempt to resolve this ambiguity. 50 Fed. Reg. 26,818, 26,819–20 (1985).

The Canadian Government filed a letter insisting that:
\textit{[T]here is no reasonable alternative for the interpretation of § 902(a)(2) of the SCPA other than in a disjunctive manner. This follows from a plain and ordinary reading of the section . . . . The SCPA, like the 1909 U.S. Copyright Law, the 1976 U.S. Copyright Law, and the Canadian Copyright Act, explicitly provides for the eventual mutual protection of mask works under the aegis of a treaty. Such is the proper forum for the international consensus on specific aspects of such a treaty . . . .}

A refinement of this argument was presented to the Patent and Trademark Office in the SCPA § 914 proceeding concerning Japan. After conceding that nondiscriminatory, nonexistent, or *de minimis* protection could not possibly satisfy SCPA § 902(a), a representative of the Electronics Industry Association of Japan (hereinafter the EIAJ) argued that SCPA § 902(a)(2)(A) contemplates issuance of a Presidential Proclamation if the foreign nation nondiscriminatorily offers "substantial" mask work protection (which the Japanese law clearly does). Thus, argued the EIAJ, "substantial protection" of mask works under domestic law is sufficient grounds for the issuance of a Presidential Proclamation under SCPA § 902(a)(2), and there is no conjunctive requirement of "substantial equivalence" with the SCPA.

"Substantial protection" is nowhere clearly defined. Apparently, it means more than *de minimis* protection yet appreciably less than that offered under the SCPA. Interpreting clause (A) this way, if a foreign law nondiscriminatorily offers a three-year term of mask work protection, approximately thirty percent as much protection as the SCPA, the foreign law might qualify for a Presidential Proclamation because three years of protection would probably be construed as "substantial." However, there is no basis in the legislative history for this interpretation.

A more rational way to interpret the statute is to regard clause (B)'s requirement of protection "on substantially the same basis" as a necessary condition for the issuance of a Presidential Proclamation. Under such an interpretation, the provision of nondiscriminatory protection under clause (A) would be an optional, although desirable, matter, neither necessary nor sufficient in itself for the issuance of a Presidential Proclamation. Thus a foreign law would have to satisfy the test of clause (B) or, preferably, the conjunctive tests of clauses (A) and (B). On balance, such a reading is more consistent with the legislative history of SCPA § 902(a)(2) and its statutory purpose than the other possible readings.

The House Report suggests that under SCPA § 902(a)(2), a foreign nation may either (1) accord both its own nationals and U.S. nationals protection substantially equivalent to that provided under the SCPA, or (2) accord its own nationals more protection than it accords U.S. nationals and more protection than the SCPA provides, as long as U.S. nationals receive at least as much protection under the foreign law as they would under the SCPA.

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112. The SCPA provides for 10 years of protection. Therefore, a foreign law which provides three years of protection would arguably provide 30 percent of the protection offered under the SCPA.

113. H.R. REP. NO. 781, supra note 1, at 18.
The Report does not offer a third option: that the foreign nation nondiscriminatory accord everyone less protection than that provided by the SCPA. The Report immediately thereafter stresses the importance to Congress that there be a sound exercise of discretion in determining whether to issue a Presidential Proclamation.\textsuperscript{114} This view strongly suggests that presidential discretion should not be exercised favorably when a foreign nation provides only minimal mask work protection, even if it is nondiscriminatorily minimal. Elsewhere, the House Report argues that congressional adoption of the non-copyright approach of H.R. 5525, in preference to S. 1201's copyright approach, will assure U.S. citizens substantially the same degree of mask work protection in foreign countries as they will receive in the United States under the SCPA.\textsuperscript{115} The Report's assertion can be correct only if satisfaction of clause (B) of SCPA § 902(a)(2) is a necessary condition for the issuance of a Presidential Proclamation. Thus, the legislative history seems to support an interpretation of SCPA § 902(a)(2) that would require a foreign nation to provide U.S. nationals with approximately as much protection as does the SCPA.

Section 902(a) seeks to induce foreign nations to adopt adequate mask work protection, and to do so by enacting legislation similar to that of the United States. In return, the SCPA offers foreign nations reciprocity of protection. The SCPA's policy objective is not met when a foreign nation's protection is merely "substantial" because protection may be more than insubstantial and yet still be inadequate. Thus the interpretation which seems most faithful to congressional intent is that which requires protection to be on at least "substantially the same basis" as the SCPA: that is, at least approximately equal to the SCPA rather than merely "substantial."

A final point concerning the construction of SCPA § 902(a)(2)(A) is that \textit{and} cannot possibly mean \textit{and}. If the \textit{and} were interpreted literally, a nation which offered U.S. nationals identical protection to that of the SCPA could not qualify for a Presidential Proclamation unless it also offered such protection to the mask works of nationals of all other nations who first exploit their mask works in the nation in question. Yet the failure to extend such protection appears to be a matter of indifference to Congress and irrelevant to the policies it seeks to effectuate under the SCPA. For example, there is no reason to believe that the United States would be concerned as to whether Japan

\textsuperscript{114} \textit{Id.} The Senate Report does not address the question. The bill which the Senate originally passed, S. 1201, had no provision similar to SCPA § 902. The issue never arises under copyright law, because all major nations adhere to the Universal Copyright Convention.

\textsuperscript{115} \textit{Id.} The House Report states: "Moreover, H.R. 5525 affords full reciprocity to foreign owners of mask works and allows them to secure protection under this Act if their country allows such protection to U.S. owners of mask works." \textit{Id.} at 8. One may question what \textit{such} means, but the context appears to use \textit{such} to refer to the same protection that the SCPA gives owners of mask works.
CHIP PROTECTION ACT

protects those mask works of Bulgarian citizens first commercially exploited in Japan, as long as U.S. citizens' mask work rights are protected. 116

These considerations illustrate the problems which can arise from a literal reading of SCPA § 902(a)(2). The section was roughly adapted from the approximately analogous provisions of section 104(b) of the Copyright Act, and it appears that little attention was devoted to refining the terminology. There were far more pressing issues at the time, such as whether the SCPA would be enacted at all by the end of the 98th Congress, how to resolve disagreements over the wording of the reverse engineering provision, and above all, the economically important issue of how to determine the cutoff date for the protection of chips already on the market. As a result, no one involved in the legislative process seemed to spend any valuable legislative bargaining chips on clarifying and improving section 902(a)(2). Congress apparently felt that it was better to leave the ambiguities of section 902(a)(2) for later interpretation.

If Congress decides to make technical corrections in the SCPA, it should delete all of § 902(a)(2)(A) ("Clause (A)"). Such a change would eliminate the problems of statutory construction discussed above. A further suggestion, discussed at the end of this Article, is to delete SCPA § 902(a) altogether and thus leave SCPA § 914 as the sole method for securing reciprocity. 117

3. Defining the Phrase "Substantially the Same Basis"

Once it is accepted that a foreign law must protect U.S. mask works on substantially the same basis as the SCPA in order to qualify the foreign nation for a Presidential Proclamation, the phrase "substantially the same basis" must be defined. 118 It is uncertain whether the concept has only an affirmative character, so that SCPA § 902(a)(2) is satisfied as long as mask work owners are protected at least to the same extent as under the SCPA, or whether a foreign law can give mask work owners too much protection and thus become an obstacle to the objectives of the SCPA.

This issue arose in connection with the U.K.'s request for a Presidential Proclamation and Sweden's request for an order for interim protection under SCPA § 914. 119 In both instances, it appeared that the foreign nation would grant at least as much protection to mask work owners as does the SCPA. 120 However, the foreign nation either did not, or did not intend to, extend to competitors of mask work owners any privilege of reverse engineering, at

116. The legislative history is silent on this point.
117. See infra text at section VI.
118. The phrase "substantially the same basis" is contained in SCPA § 902(a)(2)(B).
119. For a discussion of Sweden's request for an order under SCPA § 914, see supra text at section III(B)(3).
least as that concept is recognized under SCPA § 906(a). Moreover, it appeared that innocent infringement by equipment manufacturers would not entitle them to exemption from or limitation of liability, as is the case under SCPA § 907.

It has been questioned whether a foreign law must be substantially equivalent to the SCPA in all regards to qualify the foreign nation for orders under SCPA §§ 902(a) and 914, and whether there is a maximum as well as a minimum requirement for protection under such a foreign law. Although the SCPA is silent on such issues, it seems for policy reasons that the foreign law should be similar to the SCPA in its essential aspects, but that strict similarity is not required. Moreover, too much protection, as well as too little, could raise serious questions under SCPA § 902(a)(2), creating perhaps even insurmountable barriers to the issuance of a permanent reciprocity order.

The SCPA reflects a series of balances and trade-offs among competing interests, and many of these compromises were essential to building the consensus permitting enactment of the SCPA. For example, the reverse engineering provision was a major point of controversy during the 1979 congressional hearings, and the SCPA could probably never have been passed without such a provision. Furthermore, passage of the SCPA would probably have been threatened had it failed to include some sort of innocent infringement provision. Both Congress and the semiconductor industry felt that an overly comprehensive scheme of protection could be as harmful to the semiconductor industry and the public, or to the policies of the SCPA, as a regime offering too little protection. For example, such a restrictive scheme might stifle chip competition, innovation, and technological progress in the semiconductor field. For these reasons, it is at the very least arguable that a foreign nation's scheme of mask work protection must exempt reverse engineering to satisfy the requirement of SCPA § 902(a)(2)(B) that protection be "on substantially the same basis as provided in this chapter."

The failure of a foreign nation to excuse innocent infringement presents a similar, though probably less serious question. Semiconductor Industry Association (SIA) representatives also have raised questions before the Patent and Trademark Office concerning the lack of registration, deposit, and notice provisions in Sweden and the United Kingdom. But these questions are probably not as serious as those concerning reverse engineering and innocent infringement, and are instead appropriately left to national discretion.

121. These issues were raised by an officer of the Patent and Trademark Office at a public hearing under SCPA § 914. See 50 Fed. Reg. 24,669 (1985).

122. The situation with respect to SCPA § 914 is somewhat different. See supra text at section III(B).
4. Copyright Versus Sui Generis Legislation Under SCPA
   § 902(a)(2)(B)

Japan has followed the lead of the United States in adopting a *sui generis* intellectual property system for protecting chip mask works. Australia, the Netherlands, Sweden, and the United Kingdom have indicated their preference for schemes of protection based on copyright law. An important question is whether current copyright law in other nations will provide the kind of protection which comports with the objectives of SCPA § 902(a)(2). While a copyright-based system is not inherently incapable of satisfying the standards of section 902(a)(2), automatic incorporation of such a system without any modification could result in a law that is not "substantially equivalent" to the SCPA.

For example, without substantial modification, copyright law will probably rarely or never allow reverse engineering as that concept is defined under the SCPA. Moreover, neither current copyright law nor patent law recognizes innocent infringement as a defense. The Berne Convention\(^1\) may also prove to be problematic, in that its fifty to seventy-five years of protection may be excessive when applied to mask works. Finally, *droit moral*\(^2\) may present a significant problem. In nations recognizing that right, application of copyright protection to chips could create a situation in which mask work owners could not lawfully modify chip layouts (or distribute modified chips) during the product’s life cycle without the permission of the original designer. Moreover, the designer would be entitled to withdraw the chip from circulation if it no longer reflected his current style or personal taste. The burden of dealing with such uncertainties would clearly be commercially unacceptable. On the other hand, a sensitive appreciation of such problems could lead to the development of a system which avoids these difficulties. As long as obligations under the Berne Convention are not interpreted too literally, most of the problems posed under copyright law can be overcome.

The preceding discussion has focused on the question of whether a foreign nation’s adoption of a copyright approach would conflict with SCPA § 902(a)(2)(B). A wholly separate question exists as to whether application of copyright law to chips would conflict with the foreign nation’s preexisting concepts of the role of copyright, as was the case in the United States. It is possible that in countries such as the Netherlands, copyright law will not be

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2. *Droit moral* is a doctrine whereby artists and authors have the right to protect the "integrity" of their works and protect them against "mutilation." Moreover, under the copyright laws of most countries (other than common-law jurisdictions including the United States), *droit moral* allows an author to withdraw his or her work from publication if it no longer reflects the author's artistic views. See Lewis, *The 'Droit Moral' in French Law—Part II*, 1 EUR. INTELL. PROP. REV. 11-12 (1984).
adaptable to chips because of the requirement of artistic merit or the requirement that a work reflect a certain degree of individual and personal creativity. Another problem may be a bias against the application of copyright to purely utilitarian articles.

5. The Effect of a Presidential Proclamation

The issuance of a Presidential Proclamation is entirely discretionary, and the President's decision to issue or deny issuance of a Proclamation is not ordinarily reviewable. Moreover, a Presidential Proclamation may be retroactive. One of the unresolved questions under SCPA § 902(a)(2) is whether a Presidential Proclamation under the SCPA is revocable. Section 104(b)(4) of the Copyright Act, for example, expressly permits the President to "revise, suspend, or revoke" any Presidential Proclamation or "impose any conditions or limitations on protection under a proclamation." Other legislation involving Presidential Proclamations contains similar language. Surprisingly, SCPA § 902(a)(2) has no corresponding provision. Either this reflects an oversight (as does much of the rest of section 902(a)(2)'s language) or Congress intentionally withheld these powers from the President. Congress may also have felt that presidential power to modify a Proclamation was implicit. Unfortunately, there is no legislative history on this point.

The inherent dangers of lack of power of revocation are that a Presidential Proclamation may issue because of a mistake, such as a misunderstanding of what another nation's law actually provides or how it will be administered, or because a foreign nation's law is susceptible to judicial or legislative modification. If a mistake or change occurs, the basis for the original Presidential Proclamation may entirely disappear, and the comity-inducing purposes of SCPA § 902(a)(2) may not be served by the continued operation of a Presidential Proclamation. It may be argued that the President has an "inherent

125. The two requirements are not necessarily equivalent. The Netherlands copyright law requires a work to be the result of a personal decision by the author to express his or her ideas in a particular manner, which means that a work must have an individual or personal character (but not necessarily artistic, literary, or scientific merit). Ruling of June 28, 1946, 1946 N.J. Rep. 712 (Neth. Sup. Ct.). The ruling is summarized in the Letter from the Minister of Foreign Affairs, supra note 72, supporting the Netherlands' petition for an order for interim protection under SCPA § 914.

126. For example, under West German law there is a bias against the application of copyright law to purely utilitarian articles. See C. Fellner, The Future of Legal Protection for Industrial Design 132-35 (1985).

power" to revoke or modify his or a predecessor's Presidential Proclamation, although there is no specific authority to support this argument.\textsuperscript{132}

In sum, since a Presidential Proclamation under the SCPA may be irrevocable, it should not be issued without a thorough and deliberate evaluation of the facts. Furthermore, the evaluation process should also include an opportunity for and an analysis of public comment.

\textbf{B. Administrative Proceedings Under Section 902(a)(2)}

SCPA § 902(a)(2) does not set forth any guidelines as to the nature of proceedings leading up to the issuance of a Presidential Proclamation. By contrast, the legislative history of SCPA § 914 makes it clear that the Administrative Procedure Act's rulemaking procedures are to be followed for section 914 orders, with public notice and comment preceding any agency action.\textsuperscript{133} Under the provisions of section 104 of the Copyright Act,\textsuperscript{134} which is analogous to SCPA § 902(a)(2), it has been the practice for matters concerning Presidential Proclamations to be transacted \textit{ex parte} within the State Department. This practice has not created any problems, apparently because there have been no controversial requests for copyright Presidential Proclamations.

Executive Order No. 12,504 delegates to the Secretary of Commerce the authority to receive requests from foreign governments for Presidential Proclamations under SCPA § 902(a) and to forward them to the President with recommendations, and it authorizes the Secretary of Commerce to issue regulations concerning SCPA § 902(a) applications.\textsuperscript{135} By an unpublished order, the Secretary of Commerce has delegated this responsibility to the Patent and Trademark Office, already the delegate of the Secretary of Commerce for section 914 matters.\textsuperscript{136}

The Patent and Trademark Office initially emulated the State Department's \textit{ex parte} procedures for copyright matters and, like the State Department, failed to issue any regulations concerning the application process. As a result, when the United Kingdom requested a Presidential Proclamation, the

\textsuperscript{132} \textit{But see} Grossmeyer v. United States, 4 Ct. Cl. 1 (1867), \textit{rev'd on other grounds}, 76 U.S. (9 Wall.) 72 (1868), in which the court ruled that the statutes establishing Presidential power to proclaim that Southern states were in insurrection against the United States necessarily implied a Presidential power to determine and proclaim that the insurrection had been suppressed. Consequently the original Presidential Proclamation then became nugatory. \textit{See also} Chappell & Co. v. Fields, 210 F. 864 (2d Cir. 1914) for authority that the courts cannot remedy an erroneous issuance of a Presidential Proclamation. The court in \textit{Chappell & Co.} held that a Presidential Proclamation is conclusive evidence that U.K. copyright law protects U.S. citizens on substantially the same basis as U.K. citizens; the court therefore had no right to determine whether the subsequent revision of U.K. copyright law eliminated the basis for the Presidential Proclamation.


\textsuperscript{134} 17 U.S.C. § 104(b)(4) (1982).


Patent and Trademark Office kept all papers confidential and made no announcement or request for public comment.

When the U.S. semiconductor industry learned of the United Kingdom's request, the SIA repeatedly protested the ex parte handling of the request. The SIA initially objected to the ex parte handling of the United Kingdom's request at the public hearing on the Japanese application for a section 914 order and then filed several letters with the Patent and Trademark Office to the same effect. The SIA requested that the Patent and Trademark Office take no action without first making the submitted documents available for public inspection and permitting comment, preferably at a public hearing. The SIA also requested that the Patent and Trademark Office publish regulations for SCPA § 902(a)(2) generally similar to those it had issued for SCPA § 914 proceedings. The Patent and Trademark Office of its own accord (as SCPA § 914(a) explicitly permits) then instituted a section 914 proceeding for the United Kingdom, deferred action on the United Kingdom's request for a Presidential Proclamation, and, after written public comment, issued a section 914 order for the United Kingdom. As yet, the Patent and Trademark Office has failed to issue any regulations under SCPA § 902(a)(2).

C. Present International Recognition of Mask Work Rights

Currently only Japan (which has passed its own law for the protection of semiconductor chip products in response to the SCPA), the United Kingdom (and countries such as Australia which adopt U.K. copyright law), and perhaps the Netherlands will accord U.S. mask works protection similar to that offered in the United States. Sweden may interpret its present copyright law in a similar manner. Most other countries, however, do not protect U.S. mask works to the same extent as does the SCPA.

1. Japan

When it became apparent that the United States would enact a chip protection law, the Japanese Ministry of International Trade and Industry (MITI) appointed a study group and committee of experts to prepare a semiconductor protection law. The Japanese Diet (Parliament) passed the "Act Concerning the Circuit Layout of a Semiconductor Integrated Circuit" in May, 1985. The Japanese law is generally similar to the SCPA.

138. Id.
2. United Kingdom and Australia

In the United Kingdom, copyright law has been interpreted to extend protection to three-dimensional industrial objects as "copies" of the blueprints or technical drawings for the objects. Under the Swish case, a competitive product can constitute a copyright infringement, even though the copying was done from the commercial product without any access to the drawings.142 The Attorney General of the United Kingdom has represented to the Patent and Trademark Office, in nonpublic papers filed in support of a request for a Presidential Proclamation under SCPA § 902(a)(2), that this line of authority would protect chip mask works. One theory is that the chip is a copy of the technical drawings for the masks. Another is that the chip is itself an "engraving" or "photograph," as the U.K. Copyright Act defines those terms.143

There is a question, however, as to the continuing vitality of this interpretation of U.K. copyright law. In addition, it is unclear how the Swish doctrine would apply to chip mask works. A possible limitation of the applicability of the Swish doctrine, which could seriously impair mask work protection, is that a three-dimensional object infringes the copyright in a drawing only when "persons who are not experts in relation to objects of that description" would recognize the object as a reproduction of the drawing.144 It is by no means certain that a nonexpert would perceive the link between drawings of the masks used in the fabrication of a chip and the chip itself; the microscopic size of the chip and its pattern, and the fact that the chip is ultimately sealed inside an opaque package further contribute to the uncertainty.145

Moreover, a 1981 report authored by U.K. copyright law experts recommended that the government eliminate copyright protection of utilitarian, functional objects under the Swish doctrine.146 If the government implements this recommendation, there will no longer be a basis for copyright protection of chip layouts in the United Kingdom. In this connection, there has been a great deal of criticism of the Swish doctrine, not only within the United Kingdom but in the European Community as well.147 Finally, the

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141. Similarities between the Japanese law and the SCPA include a term of ten years, express reference to a reverse engineering privilege, an exhaustion doctrine, and a registration provision. Id.
142. See L.B. Plastics Ltd. v. Swish Products Ltd., [1979] 1 Ch. App. The United Kingdom is a signatory to the Universal Copyright Convention and is thus obliged to grant U.S. nationals treatment equal to that given U.K. nationals.
147. See Fellner, supra note 126, at 55–57.
fact that the House of Lords has decided to hear an appeal in the *Leyland* case\textsuperscript{148} may indicate that it will limit the *Swish* doctrine.

These possible obstacles to reliance on the *Swish* doctrine for the protection of chips raise an issue as to whether U.K. courts will indeed protect U.S.-owned mask work rights on substantially the same basis as the SCPA or indeed on any basis at all.\textsuperscript{149} With some qualification, a majority of expert opinion on U.K. copyright law holds that U.K. courts will at this time probably protect chip layouts.\textsuperscript{150} However, there remains considerable uncertainty on this point, especially with regard to the future.

Australia has a copyright law generally similar to that of the United Kingdom.\textsuperscript{151} Its government has submitted a diplomatic note requesting a Presidential Proclamation under SCPA § 902 on the theory that Australian copyright law (coupled with Australia’s obligations under the Universal Copyright Convention) already provides U.S. nationals with mask work protection.\textsuperscript{152} In the alternative, Australia requested an interim order under SCPA § 914, which was subsequently issued.\textsuperscript{153} As in the case of the United Kingdom, Australian copyright law extends to utilitarian objects, but similar uncertainties exist as to the applicability of the law to semiconductor chip products.\textsuperscript{154}

3. The Netherlands

It is possible that the Netherlands copyright law covers mask works. In a letter submitted to the Patent and Trademark Office in support of the Netherlands’ petition for an order under SCPA § 914, the Netherlands’ Minister for Foreign Affairs observed that “the Netherlands Government takes the view that there is no reason at the present moment to assume that mask works are not eligible for protection under the Netherlands Copyright Act of 1912,” based on the assumption “that designers of mask works face choices and make decisions which entail a certain measure of creativity and bear a

\textsuperscript{148} British Leyland Motor Corp. v. Armstrong Patents Co., [1984] 1 Ch. App. In the *Leyland* case, the defendant supplied spare tailpipes for British Leyland automobiles, thus depriving British Leyland of its exclusive supplier market for spare parts. British Leyland sued for infringement of its copyright in the technical drawings of the tailpipe design. The court held that the defendant had indeed infringed British Leyland’s copyright in its technical drawings for the design. \textit{Id.}

\textsuperscript{149} There has been no decision by a U.K. court on the applicability of U.K. copyright law to semiconductor chip products. Interim Protection for Mask Works of Nationals, Domiciliaries, and Sovereign Authorities of the United Kingdom, 50 Fed. Reg. 24,665 (1985).


\textsuperscript{151} \textit{See supra} note 144.

\textsuperscript{152} \textit{See supra} note 143.

\textsuperscript{153} \textit{Id.} at 24,666.

\textsuperscript{154} \textit{Id.}
personal character." But the issue has not yet been considered by a Dutch court. If the question proves in practice to be uncertain or problematic, "the Netherlands Government will certainly give thought to the possibility of amending the Copyright Act so as to resolve matters."

It is also possible that the unfair competition law of the Netherlands would be interpreted to prohibit the misappropriation of chip layouts. Where an alternative design may be used without impairing the function or suitability of a product, "slavish copying" may be held to be unfair competition.

4. Sweden

It is possible that Swedish courts would interpret the present Swedish copyright law to protect mask works as "literary works." However, in order to avoid the considerable uncertainty on this point, Sweden has proposed to enact a law amending its Copyright Act to cover mask works specifically.

5. Other Countries

It appears that the House Report was correct in predicting that most countries do not feel obliged under the Universal Copyright Convention to recognize U.S. mask works under their domestic copyright laws simply because the United States has passed a law bringing mask works under the subject matter of copyright. After all, the United States now feels no obligation to recognize the droit moral of authors from those countries (such as France) which consider droit moral part of the subject matter of copyright under their domestic law. Thus, present international comity as to mask work rights probably ends with Japan, the United Kingdom, Australia, and perhaps the

155. Letter from the Minister of Foreign Affairs, supra note 72. It is unclear how this assumption applies to automatically placed and routed layouts such as gate arrays. A "gate array" is a chip with gates in a predetermined matrix that are interconnected by use of software to perform a specific function. The interconnection is often wholly automatic. The view taken by the Netherlands Government does not appear to take into account the extent to which chips are now designed by means of computers, software, and preexisting chip-part data bases.
156. Id.
157. Id.
158. Id.
159. "Slavish copying" means making a virtually identical copy. Prohibiting slavish copying could conflict with the SCPA reverse engineering provision. Slavish copying is unlawful in the Netherlands and Belgium. See FELLNER, supra note 126, at 101-04. Many other countries also consider slavish copying as unlawful or unfair competition. See id. at 111-12 (Denmark); 124-27 (France); 145 (Switzerland); 147-48 (Greece); 154-58 (Italy).
160. Letter from Minister of Foreign Affairs, supra note 72, at 24,799.
162. Id.
164. See Gilliam v. ABC, 538 F.2d 14 (2d Cir. 1976).
Netherlands and Sweden. In any event, the possibility that foreign nations will feel obliged by a prior treaty to grant copyright protection to U.S. mask works is now largely foreclosed by the SCPA’s non-copyright format. Any comity will have to come from new treaties or changes in the domestic law of foreign nations.165

V
POSSIBLE FUTURE INTERNATIONAL RECOGNITION OF MASK WORK RIGHTS

A. Proposed Alternative Regimes for Providing Mask Work Protection

1. WIPO

The World Intellectual Property Organization (hereinafter WIPO), an agency of the United Nations, appointed a committee of experts on semiconductor protection from various nations to prepare a report for WIPO on the state of national and international protection of semiconductors and to propose methods of achieving a regime of international comity.166 WIPO also prepared a draft Treaty on the Protection of Intellectual Property in Respect of Integrated Circuits and held a conference in November 1985 where governmental and industry representatives discussed refinement of the draft treaty and possible steps toward its adoption.167

The focus of the draft treaty proposed by WIPO differs somewhat from that of SCPA § 902(a) because WIPO favors one multilateral agreement rather than the many bilateral international arrangements encouraged by the SCPA. Some observers feel that the procedures of SCPA §§ 914 and 902(a)(2) will offer more flexibility and a greater opportunity to encourage comity and uniformity of regulation in the field than would multilateral negotiations for a single treaty. Conversely, others feel that bilateralism may lead to a patchwork of inconsistent, ad hoc arrangements, or to a regime in which

165. See 130 CONG. REC. S12,924 (daily ed. Oct. 3, 1984). However, the United Kingdom, Australia, and the Netherlands all interpreted the Universal Copyright Convention as obliging them to recognize U.S. mask works under their copyright laws. Australia may consider the United States in violation of its obligations under the Convention by not affording mask works at least 25 years of protection. But see H.R. REP. NO. 781, supra note 1, at 8 (arguing that the Convention does not now obligate member countries to protect mask works).

In its petition for a § 914 order, the Commission of the European Communities made this remark: “Nothing in this petition shall be interpreted as an acceptance of the compatibility of the provisions of the Semiconductor Chip Protection Act of 1984 with the obligations of the United States under international law.” Interim Protection for Mask Works of Nationals, Domiciliaries, and Sovereign Authorities of the European Economic Community, 50 Fed. Reg. 26,821, 26,822 (1985).

166. The members of WIPO’s committee of technical experts were Dr. Robin Bell of Australia, Arno Koerber of the Federal Republic of Germany, Professor Zentaro Kitegawa of Japan, Robert John Hart of the United Kingdom, and Richard H. Stern of the United States.

excessive weight would be given to positions advanced by the U.S. semiconductor industry. Regardless of the merits of either position, the fact remains that because the United States was the first nation to enact legislation for chip protection and did so unilaterally, no multilateral mechanism is now available, and none will be forthcoming for several years.

2. European Economic Community

Another effort toward multilateral mask work protection arrangements is under way within the EEC. The European Commission has prepared a draft directive requiring member States to protect the "topographies" of semiconductor products. Draft article IV(2) of the proposal would permit Member States to use copyright or sui generis forms of protection. A concept of "originality", generally similar to that of SCPA § 902(b), is contemplated by draft article IV(1), under which protection would be available to topographies consisting of known elements only when "the combination of such elements, considered as a whole, is not already known." Eligibility and reciprocity generally similar to that of SCPA § 902(a) are contemplated by draft article V(2). Other proposed provisions contemplate a registration and deposit requirement (article VI), a reverse engineering rule (article VII(2)), a first sale rule (article VII(3)), and a ten-year term of protection (article VIII). These provisions are clearly similar to those of the SCPA.

A possible step in the direction of nonuniformity, however, concerns symbols. The EEC proposes to use the letter "T" in a circle (rather than "M" in a circle) as the symbol giving notice of topography rights. It would appear more sensible for the EEC to use "M" in a circle, or for the United States to change to "T" in a circle. Confusing, nonuniform symbols are imperfect methods of giving notice to others that topography/mask work rights are claimed, especially since the amount of room for a number of different symbols on dies or packages is limited.

B. Potential Alternative Mask Work Protection Mechanisms

For the same reasons that led the U.S. Congress to reject the copyright modification approach in 1984, enactment of sui generis legislation is preferable at this time to modification of copyright or other existing law. However, there are clearly other possible routes to achieving international comity in this area. They include not only reliance on existing copyright law as in the United Kingdom or proposed expansion of copyright law as in Sweden.

169. This information is found in a nonpublic version of the draft directive of the EEC. However, the EEC furnished the U.S. Patent and Trade Office with a summary of the draft directive.
but also reliance on or modification of existing laws protecting "utility models,"172 and "industrial designs",173 or laws against unfair competition or "slavish imitation" of industrial designs.174

Nevertheless, the other possible systems of protection have shortcomings which the new industrial property law approach of the United States and Japan does not.175 Moreover, it is difficult (although not impossible) to use utility model or unfair competition laws as vehicles for devising chip protection that is on substantially the same basis as the SCPA for section 902(a)(2)(B) purposes.176 It is probably not worth the effort to adapt such laws to the protection of chip layouts.

On the other hand, it is unrealistic to expect every nation to consider the same legal approach to be consistent with national customs and interests. The issue of what kind of foreign mask work protection laws satisfies the requirements of SCPA § 902(a)(2)(B) has not yet been raised in connection with any specific foreign nation's law. It will be more appropriate to consider the issue in detail if and when it is raised in the context of an actual chip law or a request for extension of SCPA reciprocity.

172. Many foreign countries (Germany and Japan, for example) have laws protecting utility models. A "utility model" is a lesser patent, requiring proof of novelty in order to be granted. An "inventive step" or "nonobviousness to a person of ordinary skill in the art" (cf. 35 U.S.C. § 103 (1952)) is required, but not necessarily to the same degree as for a regular patent. U.S. law does not permit utility models or petty patents, although their concept is similar in principle to that of the SCPA. See generally FELLNER, supra note 126, at 137-38 (Germany), 153 (Italy), 166 (Australia).

173. An "industrial design" is the visible aspect of a useful article. Laws protecting industrial designs, such as the Australian Designs Act and the U.K. Registered Designs Act, often do not apply to things invisible to the naked eye, such as microscopic engravings or objects sealed within a housing. Moreover, such laws may protect only ornamental aspects of designs and may exclude functional aspects, as does the U.S. design patent law. 35 U.S.C. § 171 (1982). For a general discussion of industrial design laws, see FELLNER, supra note 126, at 11-12 (United Kingdom), 93-97 (Benelux), 105-07 (Denmark), 128-31 (Germany), 152 (Italy), 162-63 (Australia). See supra text accompanying note 159.

174. See, e.g., supra notes 158-160 and accompanying text. Other European countries, such as West Germany, have similar laws.

175. Traditional copyright laws do not recognize reverse engineering, often contain provisions for droit moral, do not typically require registration, and often have vague standards of infringement. See generally FELLNER, supra note 126, at 117 (France); 146 (Germany); 159 (Europe).

176. Utility model laws, for example, may have inappropriate durations of protection. Furthermore, if they require examination, rather than mere registration, the front-end cost or delay involved may be too great. Laws against slavish imitation may be too uncertain in their application to provide necessary security of investment or to encourage other business decision-making, and their duration of protection may be inappropriate. Under unfair competition laws, the period of protection is indefinite. Finally, under utility model laws, the requirement for creativity may be too great.
VI

IMPROVING THE SCPA FRAMEWORK AND DEVELOPING AN INTERNATIONAL REGIME FOR SEMICONDUCTOR PROTECTION

As indicated above, the standard for action under SCPA § 914 is more lenient than the standard under SCPA § 902(a)(2). The showing of adequacy of protection, or of protection on substantially the same basis as the SCPA, can properly be less in a section 914 proceeding than when a Presidential Proclamation is sought under section 902(a)(2). Section 914 aims to encourage reasonable progress in the direction of mask work comity, while section 902(a)(2) assumes arrival at that goal. Thus, SCPA § 914 appears to be the more powerful instrument for creating comity as to mask work protection.

In any event, a Presidential Proclamation under section 902 should be drafted with a reservation of power to revoke or modify it in the event of a change in circumstances. Although there may be an inherent power to revoke a Presidential Proclamation issued under the SCPA even without an explicit reservation, the case for the existence of such power is much stronger when the terms of the Proclamation clearly state that it has been granted on this basis. Another option is to subject the grant to a condition subsequent. Finally, when there appear to be uncertainties, it would be prudent to rely temporarily on SCPA § 914, instead of immediately resorting to SCPA § 902(a)(2). A revocable section 914 order which expires in a few years at most gives the U.S. Government the opportunity to study the question more carefully and perhaps to negotiate other arrangements with the foreign nation.

It may therefore be more sensible for the United States to require foreign nations to proceed initially under SCPA § 914 and only later under SCPA § 902(a)(2). First, section 914 proceedings are inherently faster than section 902(a)(2) proceedings since there is no Cabinet or White House step involved in a section 914 determination. Second, because an interim order is less permanent in its effect than is a Presidential Proclamation, the reduced chances of bureaucratic error permit a speedier determination to be made in the case of a section 914 proceeding. Third, there is no real prejudice to the applicant when it receives a section 914 order rather than a Presidential Proclamation.

The relative speed of an SCPA § 914 proceeding was important in the pre-July 1985 period: unless an interim order was put into place before July 1, 1985, rights in chips first commercially exploited between July 1, 1983 and November 7, 1984 could have been forfeited.177 The same principle will apply as November 7, 1986 approaches, and thereafter as long as SCPA § 914

177. See 50 Fed. Reg. 267 (1985), which sets forth the Copyright Office's administrative policy as to forfeiture of rights in such cases.
remains in effect. Since SCPA § 908(a) mandates the forfeiture of unregistered mask works two years after their first commercial exploitation anywhere in the world, a timely processing of a section 914 order may "save" chips that would otherwise fall into the public domain as forfeited during the pendency of a request for a Presidential Proclamation. In such circumstances, direct recourse to SCPA § 902(a)(2) as a means of avoiding the possibly duplicative effort of a § 914 proceeding may, in the long run, produce more delays and more risks in terms of forfeitures.

Perhaps even more important, it may be prudent for the United States and beneficial to the interests of its mask work industry to issue a section 914 order, before taking the possibly irreversible step of a Presidential Proclamation. A section 914 order gives the Patent and Trademark Office time to study the actual administration of the allegedly qualifying system in operation, so that the Office may make a more informed determination as to whether the candidate system in fact offers U.S. nationals mask work protection on substantially the same basis as the SCPA. Moreover, a section 914 order gives the United States more time to ascertain whether circumstances are changing, thereby undermining the premises of the requested Presidential Proclamation. If such is the case, it is possible to rescind the section 914 order or let it expire without ever following it up with a Presidential Proclamation. For these reasons, the SIA has opposed the unconditional issuance of Proclamations and has encouraged instead the issuance of section 914 orders. Recourse to SCPA § 914 instead of SCPA § 902(a)(2) should not be taken as an accusation of bad faith by applicant foreign nations. Rather, it is a concession to the complexity of this new legal area and to the difficulty of making informed determinations under severe time pressures.

The U.K.'s application for a Presidential Proclamation in early 1985 illustrates the usefulness of the Patent and Trademark Office's power to institute a section 914 proceeding. At the time, there were serious questions about whether U.K. copyright law effectively protected chip layouts, whether the government of the United Kingdom was about to abolish such industrial design copyrights, and whether the House of Lords might do so on its own. The secret ex parte proceedings in the Patent and Trademark Office relating to the U.K.'s application allayed none of these concerns. After mounting protests from the U.S. semiconductor industry, the Patent and Trademark Office made the judicious decision to defer action on the United Kingdom's request for a Presidential Proclamation and to institute an immediate SCPA § 914 proceeding. This step permitted the following:

178. See SCPA § 914(e).
179. See supra note 177.
180. See supra note 96 and accompanying text.
181. See supra note 144 and accompanying text.
182. See supra note 146 and accompanying text.
183. See supra note 148 and accompanying text.
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a) an opportunity for public comment, so that the semiconductor industry could manifest its concerns to the Department of Commerce and to the government of the United Kingdom;

b) an opportunity for the government of the United Kingdom to appreciate the magnitude of semiconductor industry concerns, and then to respond to those concerns in a manner which it considered appropriate;

c) the issuance of an interim order under SCPA § 914, which prevented forfeiture of U.K. firms' mask works first commercially exploited between July 1983 and November 1984; and

d) the consequent removal of time pressure, so that all concerned could reevaluate their positions and negotiate compromises.

As a result of the proceeding, the Patent and Trademark Office issued an interim order extending SCPA eligibility to U.K. firms until the end of the statutory power under section 914, which is November 8, 1987. The Office observed that international comity would be promoted by acknowledging the statement of another government that its laws provided for mask work protection, and that any necessary harmonization of mask work laws could take place as part of the SCPA § 914 process.184 In other words, it was preferable to meet the United Kingdom halfway as an interim step, rather than to insist on full U.K. compliance at the outset and thereby possibly cause a stalemate.

In this regard, it is significant that SCPA § 914(a) expressly permits the Secretary of Commerce (i.e., the Patent and Trademark Office) on its own motion to institute a section 914 proceeding, as in the case of the United Kingdom, and permits "any person" to petition for such a proceeding. It thus appears that, as a practical matter, any request by a foreign nation for a Presidential Proclamation under section 902(a)(2) can be turned into a section 914 proceeding. Therefore, many of the difficulties that the deficiencies of SCPA § 902(a) cause may be overcome by recourse to SCPA § 914, irrespective of whether the foreign nation concerned appreciates the difficulties inherent in a section 902(a) request.

Section 914(f)(2) directs the Secretary of Commerce, in consultation with the Copyright Office, to report to Congress in November 1986 on actions taken under SCPA § 914 and on possible modifications of SCPA §§ 902(a) and 914. Presumably one of the issues that will arise will be the extension of section 914 beyond November 8, 1987. The House Memorandum observes that the Secretary's report "undoubtedly will become the subject of a hearing before the House and Senate Judiciary Committees."185 Oversight hearings even before that time are a possibility, in view of the controversies that have surfaced concerning the administration of SCPA § 902(a)(2). It follows that there may be a proposal to extend the operation of SCPA § 914 and to eliminate or modify SCPA § 902(a)(2), since section 914 procedures have thus far appeared much more satisfactory than those under section 902(a)(2). For

example, a judicially reviewable Secretarial Order, subject to revocation, might wholly replace the Presidential Proclamation.

VII
CONCLUSION

Protecting intellectual property rights in semiconductor chip mask works is vitally important to both the U.S. economy and many other economies in the world. The enactment of the SCPA by the United States provides a model for industrialized nations wishing to establish reciprocal recognition of these rights and a consensus for their protection. Many foreign industrialized nations such as Japan and Sweden have accepted the promise of U.S. reciprocal protection against possible intellectual property piracy and infringement and are enacting similar protective legislation. Others, such as the United Kingdom, appear prepared to assure reciprocity by interpreting or modifying their existing laws to afford protection to mask works. The international comity and commercial cooperation which are developing as a result of the passage of the SCPA provide a novel approach to the international protection of intellectual property rights. This approach may be extended in the future to the international protection of other industrial intellectual property rights, as the continued emergence of sophisticated technological products poses new legal challenges and creates new opportunities for piracy and infringement.