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PROCEEDINGS AND DEBATES OF THE 98TH CONGRESS

HOUSE

BILL	DATE	PAGE(S)
H.R.5525	JUN 11 '84 (78)	H5489-97 H5524-25

ACTION:

Suspensions: House voted to suspend the rules and pass the following bills:

Semiconductor chip protection: H.R. 5525, amended, to amend title 17, United States Code, to protect mask works of semiconductor chips against unauthorized duplication (passed by a yea-and-nay vote of 388 yeas, Roll No. 221). Subsequently, this passage was vacated and S. 1201, a similar Senate-passed bill, was passed in lieu after being amended to contain the language of the House bill as passed. Agreed to amend the title of the Senate bill;

Pages H5489, H5524

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SEMICONDUCTOR CHIP PROTECTION ACT OF 1984

Mr. KASTENMEIER. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 5525) to amend title 17, United States Code, to protect mask works of semiconductor chips against unauthorized duplication, and for other purposes, as amended.

The Clerk read as follows:

H.R. 5525

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Semiconductor Chip Protection Act of 1984".

PROTECTION OF SEMICONDUCTOR CHIP PRODUCTS

SEC. 2. Title 17, United States Code, is amended by adding at the end thereof the following new chapter:

"CHAPTER 9—PROTECTION OF SEMICONDUCTOR CHIP PRODUCTS

"Sec.
"901. Definitions.
"902. Subject matter of protection.
"903. Ownership and transfer.
"904. Duration of protection.
"905. Exclusive rights in mask works.
"906. Limitation on exclusive rights: reverse engineering; first sale.
"907. Limitation on exclusive rights: innocent infringement.
"908. Registration of claims of protection.
"909. Mask work notice.
"910. Enforcement of exclusive rights.
"911. Remedies for infringement.
"912. Relation to other laws.

"§ 901. Definitions

"As used in this chapter—

"(1) a 'semiconductor chip product' is the final or intermediate form of any product—

"(A) having two or more layers of metallic, insulating, or semiconductor material deposited or otherwise placed on, or etched away or otherwise removed from, a piece of semiconductor material in accordance with a predetermined pattern; and

"(B) that is intended to perform electronic circuitry functions;

"(2) a 'mask work' means the 2-dimensional and 3-dimensional features of shape, pattern, and configuration of the surface of the layers of a semiconductor chip product, regardless of whether such features have an intrinsic utilitarian function that is not only to portray the appearance of the product or to convey information;

"(3) a mask work is 'fixed' in a semiconductor chip product when its embodiment in the product, by or under the authority of the owner of the mask work, is sufficiently permanent or stable to permit the mask work to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration;

"(4) a mask work is 'original' if it is the independent creation of an author who did not copy it from another source;

"(5) to 'commercially expolit' a mask work is to sell, offer for sale after the mask work is fixed in a semiconductor chip product, or otherwise distribute to the public for profit semiconductor chip products embodying the mask work;

"(6) the 'owner' of a mask work is the author of the mask work, the legal representatives of a deceased author or of an author under a legal incapacity, the employer of an author who created the mask work for the employer in the case of a work made within the scope of the author's employment, or a person to whom the rights of the author or of such employer are transferred in accordance with this chapter;

"(7) an 'innocent purchaser' is a person who purchases a semiconductor chip product in good faith and without having notice of protection with respect to that semiconductor chip product;

"(8) having 'notice of protection' means having actual knowledge that, or reasonable grounds to believe that, a mask work fixed in a semiconductor chip product is protected under this chapter; and

"(9) an 'infringing semiconductor chip product' is a semiconductor chip product which is made, imported, or distributed in violation of the exclusive rights of the owner of a mask work under this chapter.

"§ 902. Subject matter of protection

"(a)(1) An original mask work fixed in a semiconductor chip product is eligible for protection under this chapter if—

"(A) on the date on which the mask work is registered under section 908, or the date on which the mask work is first commercially exploited, whichever occurs first, the owner of the mask work is a national or domiciliary of the United States, or is a national domiciliary, or sovereign authority of a foreign nation that is a party to a treaty affording protection to mask works to which the United States is also a party, or is a stateless person, wherever that person may be domiciled;

"(B) the mask work is first commercially exploited in the United States; or

"(C) the mask work comes within the scope of a Presidential proclamation issued under paragraph (2).

"(2) Whenever the President finds that a foreign nation extends, to mask works of owners who are nationals or domiciliaries of the United States or to mask works on the date on which the mask works are registered under section 908, or the date on which the mask works are first commercially exploited, whichever occurs first, protection (A) on substantially the same basis as that on which the foreign national 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, the President may by proclamation extend protection under this chapter to mask works (i) of owners who are, on the date on which the mask works are registered under section 908, or the date on which the mask works are first commercially exploited, whichever occurs first, nationals, domiciliaries, or sovereign authorities of that nation, or (ii) which are first commercially exploited in that nation.

"(b) Protection under this chapter shall not be available for a mask work that—

"(1) is not original; or

"(2) consists of designs that are staple, commonplace, or familiar in the semiconductor industry, or variations of such designs, combined in a way that is not original.

"(c) In no case does protection under this chapter for a mask work extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in the mask work.

"§ 903. Ownership and transfer

"(a) The exclusive rights in a mask work subject to protection under this chapter shall vest in the owner of the mask work.

"(b) The exclusive rights in a mask work registered under section 908, or a mask work for which an application for registration has been or is eligible to be filed under section 908, may be transferred in whole or in part by any means of conveyance or by operation of law, and may be bequeathed by will or pass as personal property by the applicable laws of intestate succession.

"(c) In any case in which conflicting transfers of the exclusive rights in a mask work are made, the transfer first executed shall be void as against a subsequent transfer which is made for a valuable consideration and without notice of the first transfer, unless the first transfer is recorded in the Copyright Office within three months after the date on which it is executed, but in no case later than the day before the date of such subsequent transfer.

"(d) Mask works prepared by an officer or employee of the United States Government as part of that person's official duties are not protected under this chapter, but the United States Government is not precluded from receiving and holding exclusive rights in mask works transferred to the Government under subsection (b).

"§ 904. Duration of protection

"(a) The protection provided for a mask work under this chapter shall commence on the date on which the mask work is registered under section 908, or the date on which the mask work is first commercially exploited, whichever occurs first.

"(b) Subject to the provisions of this chapter, the protection provided under this chapter to a mask work shall continue for a term of ten years beginning on the date on which such protection commences under subsection (a).

"§ 905. Exclusive rights in mask works

"Subject to the other provisions of this chapter, the owner of a mask work has the exclusive rights to do and to authorize any of the following:

"(1) to reproduce the mask work by optical, electronic, or any other means;

"(2) to import or distribute a semiconductor chip product in which the mask work is embodied; and

"(3) to induce or knowingly to cause another person to do any of the acts described in paragraphs (1) and (2).

"§ 906. Limitation on exclusive rights: reverse engineering; first sale

"(a) Notwithstanding the provisions of section 905(1), it is not an infringement of the exclusive rights of the owner of a mask work to reproduce the work solely for the purpose of teaching, analyzing, or evaluating the concepts or techniques embodied in the mask work or the circuitry or organization of components used in the mask work.

"(b) Notwithstanding the provisions of section 905(2), the owner of a particular semiconductor chip product lawfully made under this chapter, or any person authorized by such owner, is entitled, without the authority of the owner of the mask work, to sell or otherwise dispose of that semiconductor chip product.

"§ 907. Limitation on exclusive rights: innocent infringement

"(a) Notwithstanding any other provision of this chapter, an innocent purchaser of an infringing semiconductor chip product—

"(1) shall incur no liability under this chapter with respect to the distribution of units of the infringing semiconductor chip product that occurred before that innocent purchaser had notice of protection with respect to that semiconductor chip product; and

"(2) shall be liable only for a reasonable royalty on each unit of the infringing semiconductor chip product that the innocent purchaser distributed after having notice of protection with respect to that semiconductor chip product.

The amount of the royalty referred to in paragraph (2) shall be determined by voluntary negotiation between the parties, mediation, or binding arbitration, or, if the parties do not resolve the issue, by the court in a civil action for infringement.

"(b) The immunity from liability and limitation on liability referred to in subsection (a) shall apply to any person who directly or indirectly purchases an infringing semiconductor chip product from an innocent purchaser.

"(c) The provisions of subsections (a) and (b) apply only with respect to units of an infringing semiconductor chip product that an innocent purchaser purchased before having notice of protection with respect to that semiconductor chip product.

"§ 908. Registration of claims of protection

"(a) Protection of a mask work under this chapter shall terminate if application for registration of a claim of protection in the mask work is not made as provided by this chapter within two years after the date on which the mask work is first commercially exploited.

"(b) The Register of Copyrights shall be responsible for all administrative functions and duties under this chapter. Except for section 708, the provisions of chapter 7 of this title relating to the general responsibilities, organization, regulatory authority, actions, records, and publications of the Copyright Office shall apply to this chapter, except that the Register of Copyrights may make such changes as may be necessary in applying those provisions to.this chapter.

"(c) The application for registration of a mask work shall be made on a form prescribed by the Register of Copyrights and shall include any information regarded by the Register of Copyrights as bearing upon the preparation or identification of the work, the existence or duration of protection, or ownership of the work.

"(d) The Register of Copyrights shall by regulation set reasonable fees for the filing of applications to register claims of protection in mask works under this chapter, and for other services relating to the administration of this chapter or the rights under this chapter, taking into consideration the cost of providing those services, the benefits of a public record, and statutory fee schedules under this title. The Register shall also specify the identifying material to be deposited in connection with the claim for registration.

"(e) If the Register of Copyrights, after examining an application for registration, determines, in accordance with the provisions of this chapter, that the application relates to a mask work which warrants protection under this chapter, then the Register shall register the claim and issue to the applicant a certificate of registration of the claim under the seal of the Copyright Office. The effective date of registration of a claim of protection shall be the date on which an application, deposit, and fee, which are determined by the Register of Copyrights or by a court of competent jurisdiction to be acceptable for registration, have all been received in the Copyright Office.

"(f) In any action for infringement under this chapter, the certificate of registration of a mask work shall constitute prima facie evidence (1) of the facts stated in the certificate, and (2) that the applicant issued the certificate has met the requirements of this chapter, and the regulations issue under this chapter, with respect to the registration of claims.

"(g) Any applicant for registration under this section who is dissatisfied with the refusal of the Register of Copyrights to issue a certificate of registration under this section may seek judicial review of ths refusal by bringing an action for such review in an appropriate United States district court, in accordance with chapter 7 of title 5, not later than sixty days after the refusal. The failure of the Register of Copyrights to issue a certificate of registration within three months after an application for registration is filed shall be deemed to be a refusal to issue a certificate of registration for purposes of this subsection and section 910(c).

"§ 909. Mask work notice

"(a) The owner of a mask work provided protection under this chapter may affix notice to the mask work or to the semiconductor ship product embodying the mask work in such manner and location as to give reasonbable notice of such protection. The Register of Copyrights shall prescribe by regulation, as examples, specific methods of affixation and positions of notice for purposes of this section, but these specifications shall not be considered exhaustive. The affixation of such notice is not a condition of protection under this chapter, but shall constitute prima facie evidence of notice of protection.

"(b) The notice referred to in subsection (a) shall consist of—

"(1) the words 'mask work', or the letter M in a circle Ⓜ;

"(2) the year in which the mask work was first fixed in a semiconductor chip product; and

"(3) the name of the owner or owners of the mask work or an abbreviation by which the name is recognized or is generally known.

"§ 910. Enforcement of exclusive rights

"(a) Except as otherwise provided by this chapter, any person who violates any of the exclusive rights of the owner of a mask work under this chapter shall be liable as an infringer of such rights.

"(b) The owner of a mask work protected under this chapter shall be entitled to institute a civil action for infringement after a certificate of registration of a claim in that mask work is issued under section 908.

"(c) In any case in which an application for registration and the required deposit and fee have been received in the Copyright Office in proper form and registration of the mask work has been refused, the applicant is entitled to institute a civil action for infringement under this chapter if notice of the action, together with a copy of the complaint, is served on the Register of Copyrights, in accordance with the Federal Rules of Civil Procedure. The Register may, at his or her option, become a party to the action with respect to the issue of whether the claim is eligible for registration by entering an appearance within sixty days after such service, but the failure of the Register to become a party to the action shall not deprive the court of jurisdiciton to determine that issue.

"(d)(1) The Secretary of the Treasury and the United States Postal Service shall separately or jointly issue regulations for the enforcement of the right to import set forth in section 905. These regulations may require, as a condition for the exclusion of articles from the United States, that the person seeking exclusion—

"(A) obtain a court order enjoining, or an order of the International Trade Commission under section 337 of the Tariff Act of 1930 excluding, importation of the articles; or

"(B) furnish proof that the mask work involved is protected under this chapter and that the importation of the articles would infringe the rights in the mask work under this chapter, and also post a surety bond for any injury that may result if the detention or exclusion of the articles proves to be unjustified.

"(2) Articles imported in violation of the right to import set forth in section 905 are subject to seizure and forfeiture in the same manner as property imported in violation of the customs laws. Any such forfeited articles shall be destroyed as directed by the Secretary of the Treasury or the court, as the case may be, except that the articles may be returned to the country of export whenever it is shown to the satisfaction of the Secretary of the Treasury that the importer had no reasonable grounds for believing that his or her acts constituted a violation of the law.

"§ 911. Remedies for infringement

"(a) Any court having jurisdiction of a civil action arising under this chapter may grant temporary and permanent injunctions on such terms as the court may deem reasonable to prevent or restrain infringement of the exclusive rights in a mask work under this chapter.

"(b) Upon finding for the owner of the mask work, the court shall award the owner actual damages suffered by the owner as a result of the infringement. The court shall also award the owner the infringer's profits that are attributable to the infringement and are not taken into account in computing the award of actual damages. In establishing the infringer's profits, the owner of the mask work is required to present proof only of the infringer's gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the mask work.

"(c) At any time before final judgment is rendered, the owner of the mask work may elect, instead of actual damages and profits as provided by subsection (b), an award of statutory damages for all infringements involved in the action, with respect to any one mask work for which any one infringer is liable individually, or for which any two or more infringers are liable jointly and severally, in an amount not more than $250,000 as the court considers just.

"(d) In any action for infringement under this chapter, the court in its discretion may allow the recovery of full costs, including reasonable attorneys' fees, to the prevailing party.

"(e) An action for infringement under this chapter shall not be maintained unless the action is commenced within three years after the claim accures.

"(f) As part of a final judgment or decree, the court may order the destruction or other disposition of any infringing semiconductor chip such products, and any masks, tapes, or other articles by means of which such products may be reproduced.

"§ 912. Relation to other laws

"(a) Nothing in this chapter shall affect any right or remedy held by any person under chapters 1 through 8 of this title, or under title 35.

"(b) Except as provided in section 908(b) of this title, references to 'this title' or 'title 17' in chapters 1 through 8 of this title shall be deemed not to apply to this chapter.

"(c) The provisions of this chapter shall preempt the laws of any State to the extent those laws provide any rights or remedies with respect to a mask work which are

equivalent to those provided by this chapter, except that such preemption shall be effective only with respect to actions filed on or after January 1, 1986.

"(d) The provisions of sections 1338, 1400(a), and 1498 (b) and (c) of title 28 shall apply with respect to exclusive rights in mask works under this chapter.".

TECHNICAL AMENDMENT

SEC. 3. The table of chapters of title 17, United States Code, is amended by adding at the end thereof the following new item:

"9. Protection of Semiconductor Chip Products..... 901".

EFFECTIVE DATE

SEC. 4. (a) The amendments made by this Act shall take effect on January 1, 1985.

(b)(1) Subject to paragraph (2) of this subsection, protection shall be available under chapter 9 of title 17, United States Code, as added by section 2 of this Act, to any mask work fixed in a semiconductor chip product that was first commercially exploited on or after January 1, 1984, and before January 1, 1985, if a claim of protection in the mask work is registered in the Copyright Office before January 1, 1986, under section 908 of title 17, United States Code, as added by section 2 of this Act.

(2) In the case of any mask work provided protection under chapter 9 of title 17, United States Code, in accordance with paragraph (1) of this subsection, any infringing semiconductor chip products manufactured before the effective date of this Act may be imported into or distributed in the United States, or both, subject to the payment by the importer or distributor, as the case may be, of the reasonable royalty specified in section 907(a)(2) of title 17, United States Code, as added by section 2 of this Act.

(3) For purposes of this subsection, the terms "mask work", "fixed", "semiconductor chip product", "commercially exploit", and "infringing semiconductor chip product" have the meanings given those terms in section 901 of title 17, United States Code, as added by section 2 of this Act.

AUTHORIZATION OF APPROPRIATIONS

SEC. 5. There are authorized to be appropriated such sums as may be necessary to carry out this Act and the amendments made by this Act.

The SPEAKER pro tempore. Pursuant to the rule, a second is not required on this motion.

The gentleman from Wisconsin (Mr. KASTENMEIER) will be recognized for 20 minutes and the gentleman from California (Mr. MOORHEAD) will be recognized for 20 minutes.

The Chair recognizes the gentleman from Wisconsin (Mr. KASTENMEIER).

(Mr. KASTENMEIER asked and was given permission to revise and extend his remarks.)

Mr. KASTENMEIER. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, today I bring to the floor a bill to protect semiconductor chip products in such a way as to reward creativity, encourage innovation, research, research and development in the semiconductor industry, and prevent future piracy, while at the same time, promoting and protecting the public interest. Current law—be it copyright, patent, or trademark law—offers innovating chip firms very little protection against the misappropriation of their technology.

H.R. 5525, therefore, changes present law by adding a new, freestanding, and unitary chapter 9 to title 17 of the United States Code. Protection of semiconductor chip products by a sui generis approach, rather than through extension of the Copyright Act to admittedly utilitarian objects (as is the case with the Senate bill), carries with it a number of benefits in addition to providing requisite protection. These benefits are clearly and concisely set forth in the House report (No. 98-781) under the rubric "sui generis versus copyright approach" and also in the sectional analysis.

Before commencing my discussion of H.R. 5525, I should note that it has been processed without dissent. To paraphrase my subcommittee colleague from Massachusetts (Mr. FRANK), the enormous consensus behind H.R. 5525 should not undermine a realization of its importance.

I should also mention that H.R. 5525 is supported by the administration, the Copyright Office of the United States, the Semiconductor Industry Association, the Information Industry Association, the Association of American Publishers, ADAPSO, and the American Patent Law Association. A diverse group of respected law professors and lawyers also support the bill.

In addition, I would like to thank my entire subcommittee for its assistance in drafting and developing H.R. 5525—Mr. BROOKS, Mr. MAZZOLI, Mr. SYNAR, Mrs. SCHROEDER, Mr. GLICKMAN, Mr. FRANK, Mr. MORRISON, Mr. BERMAN, Mr. MOORHEAD, Mr. HYDE, Mr. KINDNESS, Mr. SAWYER, and Mr. DEWINE. The lead sponsors from California (Mr. EDWARDS and Mr. MINETA), who have worked arduously since 1979 on attaining passage of a bill, also deserve great recognition. Last, but not least, Senator CHARLES MCC. MATHIAS—my counterpart chairman, who chairs the Senate Judiciary Subcommittee on Patents, Trademarks and Copyright, and Senator PAT LEAHY—ranking minority member, deserve commendation for steering a bill, S. 1201, through the Senate.

It is clearly within the power of Congress to modify or amend this Nation's intellectual property laws. Article I, section 8 of the Constitution provides that:

> The Congress shall have power . . . to Promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.

The monopoly privileges that Congress may confer under the Constitution "* * * are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved." *Sony Corp.* v. *Universal City Studios, Inc.*, 104 S. Ct. 774 (1984) (copyright); *accord, United States* v. *Masonite Corp.*, 316 U.S. 265, 278 (1942) (same as to patents).

The congressional role therefore becomes to define the scope of limited monopoly that should be granted an author in order to give the public appropriate access to a creation. Balancing between the rights of the creator and the needs of the public clearly is necessary. In fact, where changes have occurred and new technologies have been developed, Congress consistently has engaged in precisely such a balancing approach.

H.R. 5525, therefore, represents the committee's commitment to navigating the oft turbulent waters between "* * * the interests of authors and inventors in the control and exploitation of their writings and discoveries on the one hand, and society's competing interest in the free flow of ideas, information, and commerce on the other hand." *Sony Corp.* v. *Universal City Studios, Inc.*, supra.

Now, let me give you some information about H.R. 5525, how it was developed from the original bill (H.R. 1028), and its contents.

H.R. 1028, as originally introduced, amended the Copyright Act to protect semiconductor chips and mask works against unauthorized duplication. It conferred 10 years of copyright protection to those who develop new integrated circuit mask designs, granting the copyright owner exclusive rights to make, distribute, and reproduce images of the mask design and the chips embodying that design. At the same time, the bill protected semiconductor chip users from innocent conduct and made compulsory, reasonable royalty licenses available to innocent infringers when necessary to protect their reasonable interests in their ongoing business activities as users of chips. The bill keyed into copyright law in several specific areas, and excepts others. This drafting approach, however, created a great deal of confusion, which in turn would have bred litigation.

The substitute amendment that I offered in subcommittee and that was approved by the full committee—now incorporated in H.R. 5525—is the result of a comprehensive hearing process. It represents a consensus and compromise position that something should be done to protect creativity in the semiconductor industry, yet that protection should come through a sui generis or hybrid approach. As stated above, my substitute accomplishes this goal by creating a new form of legal protection in a separate and independent chapter 9 of title 17, United States Code. The term of protection is 10 years.

In addition to the sui generis approach, H.R. 5525 differs from H.R. 1028 in several other ways. Rather than delineate during debate the differences between the original bill and H.R. 5525, I merely refer interested Members to the House report, which contains both a discussion and a chart contrasting the two bills.

Suffice it to say that H.R. 5525 is a vastly improved work product. The creation of a sui generis approach for protecting mask works gets the job done and, at the same time, avoids conceptual confusion in copyright law to accommodate a form of intellectual property which is better protected by reference to the background and practices of the semiconductor industry.

In short, from a congressional perspective, the unique problems posed by the need to reward creativity, encourage innovation, research and investment in the semiconductor industry while at the same time protecting the interests of the public has called for unique solutions. The approach taken in H.R. 5525, the creation of a sui generis form of protection, reflects sound judgment that such an approach is uniquely suited to the protection of mask works, which represent a form of industrial intellectual property. This is to be contrasted with the so-called author's copyright in literary and artistic works protected under traditional copyright principles. As floor manager of the bill that became the Copyright Reform Act of 1976, I am aware that copyright has been expanded to encompass new forms of protection, many of which have commercial applications. The commercial application or character of a given copyrighted work, however, presents a far different case from that of mask works, which are intended to be and are used as part of an integral part of a manufacturing process. This manufacturing purpose and use is, in fact, the reason for the Copyright Office's refusal to accept chip products for deposit as copies of pictorial graphic or sculputural works under the Copyright Act.

My strong feelings are perhaps best expressed by the following statement of Prof. L. Ray Patterson, Emory University School of Law:

> The ultimate issue is the problem of integrity in the law of copyright. By integrity, I mean consistency in the principles which the law encompasses. While consistency for its own sake is a virtue of small consequence, consistent principles for a body of law are essential for integrity in the interpretation and administration of that law.

It, therefore is extremely unwise for Congress to provide copyright protection for semiconductor chips by amendment to the present statute. The basis for this conclusion is that the present copyright statute purports to provide for an author's copyright. The appropriate solution to the problem of protection for semiconductor chips is the creation of a sui generis proprietary right, separate and distinct from the author's copyright.

Stated somewhat differently, a mask work is not a book. The proposed legislation does not engage in the legal fiction of treating books and mask works similarly. In the long run, we will reap great benefits by not proceeding from false analogies.

H.R. 5525 is good legislation. My hope is not only that it passes the House, but that it passes the House unanimously.

□ 1230

Mr. MOORHEAD. Mr. Speaker, I yield such time as he may consume to the distinguished gentleman from New York (Mr. FISH), the ranking Republican member on the Committee on the Judiciary.

Mr. FISH. I thank the gentleman for yielding time to me.

Mr. Speaker, I would like to indicate strong support for H.R. 5525, the Semiconductor Chip Protection Act of 1984. This legislation provides needed protection against chip piracy for U.S. manufacturers of semiconductor chip products. The Members and especially the chairman of the Subcommittee on Courts, Civil Liberties, and the Administration of Justice (Mr. KASTENMEIER) are to be commended for their work in formulating H.R. 5525. By the same token, my distinguished colleagues from California (Messrs. EDWARDS and MINETA) have provided valuable leadership on this important issue. In the other body, Senators CHARLES MCC. MATHIAS and PATRICK LEAHY have done excellent work on S. 1201, the Semiconductor Chip Protection Act of 1983.

The semiconductor industry, is a vital and rapidly growing part of the U.S. economy. The Bureau of Industrial Economics of the Department of Commerce forecasts that in 1983 the industry will ship more than $12.2 billion worth of semiconductor and related devices, a substantial increase from the $10.5 billion 1982 value of shipments. It is projected that in 10 years the semiconductor market will have sales of more than $90 billion, thus becoming one of the world's most important product markets, and the basis for computers and telecommunications, two out of the four major industries of the 1990's.

As the level of complexity of semiconductor circuits has grown, so has the cost of creating new chip designs to embody those circuits economically and efficiently. In testimony during hearings before the House Judiciary Subcommittee on Courts, Civil Liberties, and the Administration of Justice, a spokesman for the Semiconductor Industry Association noted that the research and development costs for a single complex chip now can cost approximately $5 million, while related support and development costs for that chip could amount to another $50 million or more. These increasing cost factors have both made the return from piracy greater to would-be chip pirates and made the cost of their piracy greater to legitimate chip manufacturers.

The net effect of chip copying is to sharply curtail the normal recovery period during which an innovative chip manufacturer can recoup the research and development costs that the manufacturer invests in creating a new chip and putting it on the market. Unless investments in chip creation can be recovered, fewer and fewer companies will make the research and development investment necessary for advancing chip technology. Instead, more and more companies will engage in chip copying to the detriment of the worldwide technological competitive edge of the United States.

H.R. 5525 provides a 10-year term of protection for the layout of chips and at the same time protects innocent goodfaith purchasers of these products. Moreover, I believe that this legislation by creating a separate and independent chapter of protection for semiconductor chips adequately responds to the questions raised by the various parties who were concerned about amending the Copyright Act for that purpose. H.R. 5525 will go a long way toward eliminating chip piracy and in so doing encourage companies to engage in the necessary research and development to produce new chips. Accordingly, I urge its adoption.

Mr. KASTENMEIER. Mr. Speaker, I yield 4 minutes to the gentleman from California (Mr. EDWARDS), the author of the bill.

(Mr. EDWARDS of California asked and was given permission to revise and extend his remarks.)

Mr. EDWARDS of California. I thank the gentleman from Wisconsin, the chairman of the subcommittee.

Mr. Speaker, I want to commend the chairman, Congressman KASTENMEIER, and the distinguished members of the Judiciary's Subcommittee on Courts, Civil Liberties, and the Administration of Justice, for the many hours of hard work they spent in finding the best possible way to close the gap in the intellectual property laws and to afford legal protection to the maskworks of semiconductor chips. I am delighted that, because of these fruitful labors, we are able to be here on the floor today.

Several years ago, after many discussions with people in the field, it became very clear to Congressman MINETA and me that such protection was essential. On October 12, 1978, we introduced our bill to remove the barrier to innovation in an industry in which innovation is absolutely essential. I would like to touch briefly on why such a bill is needed.

We all know the significance of the semiconductor revolution, which now pervades and enriches our entire way of life. This enrichment is possible because innovating firms spend years in research and development and millions of dollars to produce new chips. Indeed, the development costs of a single new chip can reach $100 million. Yet, a pirate firm can come along and in several months, for less than $50,000, duplicate the mask work of the innovating firm, without having to bear the enormous research and development costs borne by the innovator. By flooding the market with cheap copies, the pirate firm robs the inno-

vating firm from a return on its R&D investment, thus destroying the incentive for innovating firms to set aside internal funds for the development of future generations of semiconductor products. Such piracy is a clear threat to the economic health of our semiconductor industry and has a ripple effect throughout our economy.

Current law offers innovating chip firms only limited protection against the misappropriation of their technology. The current copyright laws give little, if any, protection to semiconductor chips. Patent law can protect the basic electronic circuitry for new microprocessors or other new such products. But patent law does not protect the particular layouts and art-work performed by the different chip manufacturers in adapting those electronic circuits for a particular industrial purpose. Yet, it is those layouts and art works that consume the resources of the innovating firms and that are pirated by free riders.

H.R. 5525 will help innovating firms combat unfair chip piracy and allow them the necessary incentive to continue to invest in research and development, by protecting them against the piracy of the results of that research and development. By including sections protecting innocent infringers and legitimate reverse engineering, H.R. 5525 also protects the interests of consumers and researchers.

Again, I thank and compliment Chairman KASTENMEIER and all the members of his subcommittee for the splendid work product they have crafted. I am also grateful to my colleagues from Silicon Valley, Mr. MINETA and Mr. ZSCHAU, for the support they have provided.

With great pleasure, Mr. Speaker, I yield to my colleague, the gentleman from California (Mr. MINETA), who also represents a part of Silicon Valley in California.

(Mr. MINETA asked and was given permission to revise and extend his remarks.)

□ 1240

Mr. MINETA. Mr. Speaker, I thank the gentleman for yielding to me.

Mr. Speaker, at the outset, I wish to thank my colleagues, Mr. KASTENMEIER and Mr. EDWARDS of California, and the members of both sides of the aisle of the Judiciary Committee for their care and their wisdom in preparing this legislation for floor consideration.

To many, the semiconductor chip is just a part of the gadgetry which goes into computers, automobiles, weaponry, and space ships. However, the semiconductor chip—as tiny and as complex as it is—is in fact the foundation of the electronics industry as we know it today.

Before a single semiconductor chip is ready for production, millions of dollars and hours upon hours of creative energy and craftsmanship must first be expended. Blatant copying of chip designs by rival companies can undermine the financial investment and the personal accomplishment of companies and their highly skilled engineers.

Pirating firms which bear none of the costs of research and development prior to production of a semiconductor chip can set lower prices for their product and, ultimately, can pervade the market originally intended for the pioneering company. In a highly competitive market, innovation and the commensurate return on investment is the lifeblood of this industry.

Today, we have the opportunity to provide protection against unauthorized copying and sales of someone else's product. Moreover, we are, in effect, acknowledging that the information age now encompasses much more than books and recordings—and, therefore, demands of us refinements and additions to existing laws to accommodate creative output in nontraditional areas.

I urge my colleagues to support this legislation and, again, I thank the members of the Judiciary Committee for their recognition of the changing realities of this Nation's high technology industries.

Mr. MOORHEAD. Mr. Speaker, I yield myself 3 minutes.

Mr. Speaker, I would like to commend the chairman and members of the subcommittee, as well as my four distinguished colleagues from California, Mr. EDWARDS, Mr. ZSCHAU, Mr. LUNGREN, and Mr. MINETA, for their work in developing this important legislation, which I strongly support.

Recently, the Cabinet Council on Commerce and Trade directed its Working Group on Intellectual Property which is chaired by the Commissioner of Patents and Trademarks, Jerry Mossinghoff, to consider the need to protect semiconductor chip designs. It found that while the United States dominates this important market, it faces a serious challenge from foreign competition. It also found that the R&D costs for a single complex chip could reach $4 million, while the costs of copying such a chip could be less than $100,000.

The Cabinet Council unanimously endorsed legislation to protect semiconductor chip designs, with the following specific characteristics:

First, it should accord prompt inexpensive protection to original semiconductor chip design through a registration system without substantive examination.

Second, the protection should grant to the owner of the chip design the exclusive right to copy, for commercial purposes, the chip design, or chip embodied in that design, as well as the exclusive right to distribute such a chip.

Third, the protection should have a relatively short term; for example, 10 years.

Fourth, as an exception to the exclusive rights, there should be an express right to reverse engineer for the purpose of teaching, analyzing, or evaluating the concepts or techniques embodied in the design of the semiconductor chip.

Fifth, unless there are overriding circumstances to the contrary, the protection should be prospective from the current time.

H.R. 5525 clearly meets the criteria recommended by the Cabinet Council on Commerce and Trade.

Moreover, H.R. 5525 by creating a separate and independent chapter of protection negates the potential problem of blurring or distorting established copyright principles by amending the Copyright Act to protect semiconductor chips. H.R. 5525 will provide significant and needed protection for the semiconductor industry in a manner that will allow it to retain its competitive edge in this important market.

Mr. KASTENMEIER. Mr. Speaker, I yield 3 minutes to the distinguished chairman of the Committee on Energy and Commerce, the gentleman from Michigan (Mr. DINGELL).

(Mr. DINGELL asked and was given permission to revise and extend his remarks.)

Mr. DINGELL. I thank the gentleman for yielding me this time.

Mr. Speaker, I am pleased to speak in favor of this legislation, which is needed to protect the design of semiconductor chips against unauthorized copying. Chairman KASTENMEIER, and his colleagues on the committee are to be commended for the thoughtful and innovative solution in which they have responded to the problem of computer chip piracy.

For more than a year, Energy and Commerce's Subcommittee on Oversight and Investigations has been investigating the impact of unfair and illegal trade practices on interstate and foreign commerce. We have found that violations of American intellectual property rights are a very serious problem. Based on our investigation, the subcommittee unanimously endorsed the idea of extending copyright protection to semiconductor chip design.

I understand that, under this bill, Customs would enforce the property rights on imports even though the bill does not amend the copyright act per se.

Passing the Semiconductor Chip Protection Act is a necessary, but only partial, answer to the general need to strengthen the protections afforded intellectual property rights. I strongly urge my good friends on the Judiciary Committee to continue to work hard in this area. For example, I believe that strong legislation increasing the civil penalties and adding criminal sanctions for trademark violations is sorely needed to protect American jobs, businesses, and companies from the rising tide of counterfeit products.

I thank the gentleman for giving me the opportunity to express my thoughts on this subject and will close by again commending him on the excellent legislative work he has done.

Mr. MOORHEAD. Mr. Speaker, I yield 3 minutes to the gentleman from California (Mr. ZSCHAU).

(Mr. ZSCHAU asked and was given permission to revise and extend his remarks.)

Mr. ZSCHAU. I thank the gentleman for yielding.

Mr. Speaker, I rise in strong support of H.R. 5525. This legislation is important and it is necessary. It would provide protection for the designs of U.S. semiconductor manufacturers so that they will have the incentive to invest the enormous amounts of money and take the risks associated with advancing the state of semiconductor technology.

Mr. Speaker, the United States today is experiencing massive trade deficits. They are expected to rise to well over $100 billion this year. Over the past several years, we have taken some solace in the fact that at least the electronics industry has had trade surpluses. In 1978, the trade surplus for electronics products was about $12 billion, but that surplus has been ebbing away in recent years. In 1978, the surplus was $7.4 billion. Last year, it was $1.5 billion. I predict that this year, 1984, for the first time in history, the United States will experience a trade deficit in electronics products.

This is a very bad trend for this country's economy and its trade position. In order to restore our superiority in the world markets of electronics, we must innovate. We must develop new technologies, new products. However, so often, when we innovate in the semiconductor field, our designs are copied by foreign competitors who then offer the pirated products at low prices. This prevents the U.S. company from earning a fair return for its innovations.

Zylog, a company in my district, developed the Z-80 microprocessor. Within a short period of time, the Japanese had copied it. The pirate firm sold the copy at half-price in the U.S. market. As a result, the Japanese captured 50 percent of the market and Zylog lost between $10 and $20 million. Such losses are hardly an incentive for innovating in this competitive industry.

Another example is the random access memory (RAM). U.S. firms developed the 4K RAM. It was a standard in the industry. However, it was copied by foreign firms, then they linked four of them together to create the 16k RAM. Later they combined four 16k RAM's together to create the 64K RAM. The foreign 64k RAM, based on pirated U.S. designs, took a substantial market share away from the original U.S. innovators.

Now we are on the forefront of a new random access memory technology—the 256K RAM. It will require a new design. Its development costs will exceed $50 million. However, that design could be copied for about $100,000 by a private firm. We cannot allow that to happen without legal remedies. I urge my colleagues to vote to suspend the rules and pass H.R. 5525 to provide protection for these and other designs.

I might add that the House Republican Task Force on High Technology Initiatives has endorsed this legislation.

Finally, I want to commend my friends and colleagues from California, Mr. EDWARDS and Mr. MINETA, for their leadership over the years on this important issue, the gentleman from Wisconsin, Mr. KASTENMEIER, and the gentleman from California, Mr. MOORHEAD, for bringing this needed and important legislation to the floor of the House.

Mr. MOORHEAD. Mr. Speaker, I yield 3 minutes to the gentleman from Michigan (Mr. SAWYER).

(Mr. SAWYER asked and was given permission to revise and extend his remarks.)

Mr. SAWYER. Mr. Speaker, I thank the gentleman for yielding me this time, and I yield to the gentleman from Arizona (Mr. RUDD).

(Mr. RUDD asked and was given permission to revise and extend his remarks.)

Mr. RUDD. I thank the gentleman for yielding to me.

Mr. Speaker, I rise in support of this piece of legislation which is so vital for the protection of the industry in our country.

Mr. Speaker, developing and producing semiconductor chip designs takes literally years of effort and requires millions of dollars in investment. A single chip, typically small enough to fit on a fingertip, may contain over 100,000 transistors. It is no wonder that it has revolutionized industry and our very way of life, reaching into every American home. Semiconductor chips are found in everyday appliances like televisions, refrigerators, microwave ovens, and telephones. They have made possible the tremendous developments in medical science—in X-ray and scanning machines, pacemakers, and monitoring devices.

Few inventions have ever changed our world so rapidly. Few have provided such impetus for continuing advances in every field, from medicine to communications to defense.

Continuing innovation in semiconductor chip design is threatened, however, by the pirating of chip designs. These designs can be copied at relatively little cost and in only a few months time.

Legislation is therefore urgently needed to combat piracy and the unfair competition which stifles further innovation in this field.

H.R. 5525 provides the protection needed to insure the continuing development of semiconductor chip technology.

I urge my colleague's support for this legislation.

Mr. SAWYER. Mr. Speaker, this is a badly needed piece of legislation. For those who have not had the benefit of sitting through some of the hearings on it, we have evolved very rapidly from the old vacuum tube and the big resistors and coils and whatnot, down to printed circuitry where it is all miniaturized, and in effect, printed on a board. Now it is even more drastically reduced to the so-called semiconductor chips, where they can take a set of drawn circuitry the size of a bed sheet and miniaturize it by photo engraving onto a chip maybe the size of your little fingernail, which includes all of the components of the former circuits.

□ 1250

Unfortunately, it takes millions of dollars to develop the patterns and the circuitry, on this bed sheet for, in effect, reduction and miniaturization onto a chip. Somebody can copy what cost many millions of dollars to produce; just, in effect, copy it onto another chip for a matter of $50,000 or some such amount and, of course, gaining a tremendous price advantage because they do not have to recapture the investment of the original designing.

We have actually had testimony that people have made an error in drawing their circuitry and put a circuit on that is useless and, rather than redo the whole print, they just in effect disconnected the circuit, so it was superfluous on the chip. They get copies coming in from overseas that even include the mistake, proving irrefutably that it was pure theft of the work and research that went into the composition and development of that chip.

So it was, strangely enough, not coverable by patents or covered by copyrights, although the information that may be put in it was. So this legislation now covers that great amount of research and development, that invaluable work, and helps protect our lead in this very essential industry of the future.

Mr. KASTENMEIER. Mr. Speaker, at this point I have no further requests for time. I would ask that the Speaker inquire of the gentleman from California if he has any further requests for time.

Mr. MOORHEAD. Mr. Speaker, I have a couple more requests for time, but I do not see the Members here. The gentleman from Pennsylvania (Mr. CLINGER) desired time.

The SPEAKER pro tempore. Would the gentleman like to request that all Members have 5 legislative days and that the remarks of the specifically enumerated gentlemen be printed in the RECORD at this point?

Mr. MOORHEAD. The gentleman from Texas (Mr. BARTLETT) may be in the cloakroom. I have sent someone back to check and see if he is there.

Mr. Speaker, I reserve the balance of my time.

GENERAL LEAVE

Mr. KASTENMEIER. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks on the bill, H.R. 5525, now under consideration.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Wisconsin?

There was no objection.

Mr. KASTENMEIER. Mr. Speaker, in conclusion, I would also like to compliment the staff. Michael Remington, Deborah Leavy of the majority, and Joe Wolfe and Tom Mooney of the minority, have all contributed to this legislation over a period of time. I think their efforts should be recognized.

I would also, as I have said before, hope that Members will take the time to read the House report not only for the legislative background, but for the technical background. A better understanding of the issue that we have discussed here today will result. Last, I again express the view that the gentleman from California (Mr. EDWARDS) who has worked on this legislation for many years, is primarily responsible for moving it through and I want to congratulate him.

Mr. NELSON of Florida. Mr. Speaker, I rise in support of H.R. 5525, the Semiconductor Chip Protection Act. As one of the original cosponsors of this bill, I feel that this important legislation will encourage more research and technology in the high-technology industries and will protect the interests of the consumer.

This bill provides a 10-year copyright on semiconductor chips, giving owners the exclusive right to make, distribute, and reproduce images of the "mask design" and the chips embodying that design.

After a company invests the time, energy, and money to create the design, pirate companies should not profit by copying the design and flooding the market with reproductions. This undercuts the return on investment that innovative companies must count on to engage in further research and development. Without remedial measures, this problem could eventually seriously affect our country's semiconductor industry. This bill protects the integrity and capability of this high high-tech industry by helping to insure its economic health.

Mr. Speaker, I thank you for the opportunity to speak in support of this important legislation and I urge my colleagues to vote in favor of this bill.

●Mr. BARTLETT. Mr. Speaker, I rise in strong support of H.R. 5525 because it represents an evolution of traditional copyright and patent law to meet the needs of evolving technology. The gap in intellectual property law that leaves the layout and design of semiconductor chips prey to unauthorized duplication is a threat to the vitality and creativity of the chip industry. We cannot allow this industry's creative spark to be extinguished by chip copiers who do not have to bear the research and development expense of a chip's original architects. If we do not act, the lifeblood of the information age and the technical strength of the United States wil be diluted.

H.R. 5525 plugs a loophole in current copyright, patent, and trademark law. This body of law does not protect the specific architecture which adapts a chip to a particular industrial purpose. Chip design does not reach the level of inventiveness required by patent law and because chip design is considered purely utilitarian it is beyond the reach of copyright law. The consequence is that firms lose the incentive to invest millions of dollars and years of work in the design of a chip's microarchitecture. For $50,000 or less, a chip pirate can copy and market the innovating firm's mask work, reap the financial rewards, and destroy the originator's investment return. In the words of the Judiciary Committee's report, this arrangement acts as a "devastating disincentive to innovative research and development."

The fundamental purpose of intellectual property law is to afford protection against exploitation to the work of creators. The underlying purpose of these laws is to preserve incentive, for creators to take risks and make investments that will ultimately benefit society in anticipation of future reward. It is now necessary and in the public interest, to extend the law's protections to preserve technological R&D incentive. As Prof. David Lange testified before the House Judiciary Committee last year, the preservation of creative incentive through the extension of intellectual property protection is meant to enrich the public domain.

> The cardinal principal in copyright law, then, is that any decision to extend the law or to recognize new interests ought to be based on realistic expectation that one day the public domain will bear new fruit.

It is precisely upon these grounds that we extend new protections to semiconductor chip designers in H.R. 5525.

This legislation's importance extends beyond the appropriate extension of intellectual property law to semiconductor chips. It is a commentary on what has come to be termed industrial policy. Industrial policy generally refers to the managed decline of dying industries and the direction of credit flows to approved sectors of the economy. This concept is fatally flawed; its proponents would foist on the United States the very thing that nations which currently have a managed industrial policy say makes their economies rigid, bureaucratic, and, most importantly, noninnovative. The thing that the United States does best is innovation, an activity inimical to government management. The keys to innovation are venture capital and risk taking. These keys are exactly the ones that H.R. 5525 seeks to preserve in our No. 1 field of innovation: computer chip microcircuitry. I submit to you that this legislation thus embodies the essence of what our industrial policy should be: the encouragement of venture capital, risk taking, and innovation.

Because the law of intellectual property needs to be extended to computer chip design and because our industrial policy should endorse the risk of venture capital in ways that will ultimately benefit the public domain, I urge you to support H.R. 5525.●

● Mr. AuCOIN. Mr. Speaker, I rise in strong support of H.R. 5525, the Semiconductor Chip Protection Act of 1984. This legislation would provide copyright protection to the intricate patterns that make up the design of this country's newest technological wonder: the semiconductor chip.

Since the first integrated circuit semiconductor chip was produced 25 years ago, advances in the high-tech industry have been revolutionizing the way we live, the way we work and the way we play. Everything from kitchen appliances and robots to new manufacturing techniques and video games have been made possible by progress in chip design. We can only speculate about the tremendous opportunities this new technology holds for our future.

Beyond changing our lives, the chip is also transforming our economy. As we all know, a great deal of attention is being focused all across the country on the role our high-technology electronics industry must play in developing America's economic strength and competitiveness in world markets.

In Oregon, the high-tech electronics industry is a growing source of economic strength. The emergence of Oregon's "Silicon Forest"—with companies such as Intel, Tektronix, and Mentor Graphics—has significantly contributed to the diversification of Oregon's economic base—creating hundreds of jobs and millions of dollars in revenue.

But, in recent years, the remarkable advances in the chip industry have been threatened by chip piracy. Chip piracy involves the looting or copying of chip design.

The development of an original innovative chip, typically smaller than a fingernail, takes years, consumes thousands of hours of engineer and technician time and costs of millions of dollars. Research and development costs for a single new chip can reach $100 million. Yet, a competing firm can photograph a chip and copy the painstaking work of the innovating firm for a cost of less than $50,000.

Because the pirating firm does not have the enourmous costs borne by the innovator, such a firm can undersell the innovating firm and flood the market with cheap copies of the semiconductor chip.

This causes the creative firm to lose sales and profits to the pirate firm. Worst of all, once returns on investment to the innovative firm are choked off by the unfair competition of the pirate competitor, the incentive for innovating firms to invest in new product research is greatly reduced.

Unfortunately, current copyright laws give little protection to semiconductor chips. The Semiconductor Chip Protection Act before us today is intended to fill that gap by extending copyright protection to new semiconductor designs. It would protect new semiconductor chip design in such a manner as to reward creativity, encourage research and innovation while at the same time benefiting the public.

Mr. Speaker, America's entrepreneurial spirit and ingenuity have raised this country's high-tech industry to a position of world prominence. We must foster and strengthen that innovative edge by passing the semiconductor Chip Protection Act. I urge my colleagues to join me in supporting this most important bill.

● Mr. LUNGREN. Mr. Speaker, America is on the verge of a second industrial revolution. In places like Silicon valley in my State of California new worlds of untold potential are unfolding out of grains of sand. The integrated circuit is not only a product of technological innovation but also the source of such progress itself. George Gilder has compared this phenomena with a "breeder reactor, creating its own fuel of knowledge."

However, if we as a Nation are to be successful in fully actualizing the potential of this cutting edge technology in an environment of intense global competition, it is essential for us to provide a framework of law that will insure the protection of intellectual property rights.

The development of mask designs or the layout for computer chips, can involve the expenditure of millions of dollars and years of effort. Foreign or domestic competitors can pirate these designs with relative ease and at little cost through the process of microphotography. The pirate can then market an identical chip minus the problem of recouping the costs of development and thereby putting the developing company at a significant competitive disadvantage.

The current available legal protections are wholly inadequate to protect the manufacturer's investment in developing the masks used to produce the chip. The mask is usually developed by the application of standard engineering principles and generally does not meet the novelty and unobviousness requisites for patentability. Likewise, a mask normally does not constitute a work of authorship under the Copyright Act. Therefore, it is critical that the present law must be amended in order to enhance the incentives for investment and innovation.

In this regard, I am pleased to have this opportunity to rise in support of the Semiconductor Chip Protection Act of 1984. This legislation creates a new form of legal protection (a sui generis approach) that avoids the potential hazards of amending the Copyright Act. It provides the much needed protection of intellectual property rights without compromising entrepeneural incentives. H.R. 5525 can play an important role in bringing law into conformity with an emerging generation of of new technology and innovation. I commend it to you and ask for your support.●

● Mr. GLICKMAN. Mr. Speaker, I rise in support of H.R. 5525, the Semiconductor Chip Protection Act, and commend our colleague, DON EDWARDS, for his work on this bill and its predecessor, as well as the chairmen of the Courts Subcommittee, BOB KASTENMEIER, and of the full Judiciary Committee, PETER RODINO, for the attention they gave to this important bill and the help they gave in moving it ahead expeditiously.

The technological advances which are necessary to keep this Nation of ours at the forefront of the world economy raise new challenges for those of us here in the Congress. Failing to address them in a constructive fashion would mean not only an abdication of our responsibilities, but also a potential decline in the innovation which spurs this Nation on. This legislation is an example of our willingness to tackle the problem. It shows that we are not going to let ourselves be trapped in a technological snakepit, but instead are willing to work with engineers and scientists to promote technological progress.

The bill we have before us was carefully crafted to reflect the need for legal protection for semiconductor chip mask works. It also takes into account the need to encourage other nations to adopt protections against fraudulent copying of these chips which are, indeed, intellectual properties just like other works which benefit—and thrive—as a result of copyright protection. This basic protection is essential if the semiconductor chip on which so many advances have come to rely is to continue to flourish.

Again, I commend all of those here in the House who have worked to respond creatively and sensibly to this technological challenge. I also encourage every Member of this House to lend their support to H.R. 5525.●

● Mr. LOWERY of California. Mr. Speaker, as an original sponsor of H.R. 5525, the Semiconductor Chip Protection Act of 1984, I rise in strong support of this measure on the Suspension Calendar and urge my colleagues to cast their votes likewise.

The U.S. semiconductor industry spends many millions of dollars developing new semiconductor chips. The development costs, including technical support, for a new chip frequently reaches $50 million. This level of R&D expenditure has placed America in the forefront of all other nations, but our lead is threatened by chip piracy—the practice of photographically copying the layout of a new chip and, in effect, making Xerox copies of the original chip. Through chip piracy, foreign competitors can replicate the manufacturing masks for about $50,000. Then, it can make and sell the same product at a much lower price, since the pirate does not have to pay any of the huge up-front R&D costs by the innovator. Besides being unfair, the result discourages investment in innovation in the chip industry.

H.R. 5525 amends the U.S. Copyright Act by creating a new kind of copyrightable work—mask works. The owner of this copyright can prevent unauthorized manufacture of semiconductor chips embodying the copyrighted mask work.

The enactment of H.R. 5525 will give semiconductor companies new incentives to innovate and create better, more efficient chips. In addition, because of the wide applicability of chips (autos, microwave ovens, computers, and so forth), I believe increased innovation in the semiconductor industry will be a tremendous boon to our economy as a whole.

In sum, Mr. Speaker, support for the Semiconductor Chip Protection Act of 1984 is essential to maintaining America's technological leadership and industrial competitiveness.●

● Mr. McCAIN. Mr. Speaker, I rise in strong support of H.R. 5525, the Semiconductor Chip Protection Act being brought to the House floor under suspension today. This bill would amend the Copyright Act to provide copyright protection for microscopic semiconductor circuit patterns and masks.

Currently no form of intellectual property law is available to protect semiconductor designers from unauthorized copying of their products. Currently, semiconductors can be copied simply by photographically reproducing another firms chip for as little as $50,000. The developmental cost frequently reaches up to $100 million for an advanced microprocessor and its accompanying peripheral chips. Thus a competitor, who copies a successful design, can significantly undercut the innovator's price, thereby gaining an unfair economic benefit.

This bill would allow a 10-year copyright to the creator of a new mask work, while establishing a maximum civil penalty of $250,000 for infringement. Those products are eligible for protection if it is first commercially marketed in the United States. Also, nations that protect U.S. rights by treaty automatically qualify for reciprocal treatment.

I also believe this measure has importance to more than those individuals manufacturing these items. We are all aware of the size of our country's trade deficit and the threat it poses to our Nation's economy. For

various reasons, our country is having trouble competing with foreign producers, both in this country and abroad. If we lose our edge in this field it will have devastating consequences for our country. We must insure this does not happen. By rewarding those innovators of semiconductors, who keep us preeminent in this area, we facilitate American excellence in the economy of tomorrow, high technology. This measure contributes greatly to this goal.

I urge my colleagues to cast a vote in support of this long overdue measure.●

Mr. KASTENMEIER. Mr. Speaker, I have no further requests for time, and I yield back the balance of my time.

Mr. MOORHEAD. Mr. Speaker, I yield back the balance of my time.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Wisconsin (Mr. KASTENMEIER) that the House suspend the rules and pass the bill, H.R. 5525, as amended.

The question was taken.

Mr. GUNDERSON. Mr. Speaker, on that I demand the yeas and nays.

The yeas and nays were ordered.

The SPEAKER pro tempore. Pursuant to the provisions of clause 5, rule I, and the Chair's prior announcement, further proceedings on this motion will be postponed.

PARLIAMENTARY INQUIRY

Mr. KASTENMEIER. Mr. Speaker, I have a parliamentary inquiry.

The SPEAKER pro tempore. The gentleman will state it.

Mr. KASTENMEIER. Mr. Speaker, I have a unanimous consent request regarding the bill just tentatively passed, and also a motion relating to the Senate bill.

Is it in order for me to make that motion now, or subsequently?

The SPEAKER pro tempore. The Chair would advise the gentleman that such requests and motions would be in order following the passage of the bill in the House later today.

Mr. KASTENMEIER. I thank the Speaker.

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SEMICONDUCTOR CHIP PROTECTION ACT OF 1984

The SPEAKER pro tempore. The pending business is the question of suspending the rules and passing the bill, H.R. 5525, as amended.

The Clerk read the title of the bill.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Wisconsin (Mr. KASTENMEIER) that the House suspend the rules and pass the bill, H.R. 5525, as amended, on which the yeas and nays are ordered.

The vote was taken by electronic device, and there were—yeas 388, nays , not voting 45, as follows:

[Roll No. 221]

YEAS—388

Ackerman	Bosco	Coyne
Addabbo	Boucher	Craig
Albosta	Boxer	Crane, Daniel
Alexander	Breaux	Crane, Philip
Anderson	Britt	Crockett
Andrews (NC)	Brooks	Dannemeyer
Andrews (TX)	Broomfield	Darden
Annunzio	Brown (CA)	Daschle
Anthony	Brown (CO)	Daub
Applegate	Broyhill	Davis
Archer	Bryant	de la Garza
Aspin	Burton (CA)	Dellums
AuCoin	Burton (IN)	Derrick
Badham	Byron	DeWine
Barnes	Campbell	Dicks
Bartlett	Carper	Dingell
Bateman	Chandler	Dixon
Bates	Chappie	Donnelly
Beilenson	Cheney	Dorgan
Bennett	Clinger	Dowdy
Bereuter	Coats	Downey
Berman	Coelho	Dreier
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Bilirakis	Coleman (TX)	Durbin
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Boggs	Conte	Early
Boland	Conyers	Eckart
Boner	Cooper	Edgar
Bonior	Corcoran	Edwards (AL)
Bonker	Coughlin	Edwards (CA)
Borski	Courter	Edwards (OK)
Emerson	Levin	Robinson
English	Levine	Rodino
Erdreich	Levitas	Roe
Erlenborn	Lewis (CA)	Roemer
Evans (IA)	Lewis (FL)	Rogers
Evans (IL)	Lipinski	Rose
Fascell	Livingston	Rostenkowski
Fazio	Lloyd	Roth
Feighan	Loeffler	Roukema
Ferraro	Long (LA)	Rowland
Fiedler	Long (MD)	Roybal
Fields	Lott	Rudd
Fish	Lowery (CA)	Russo
Flippo	Lowry (WA)	Sabo
Florio	Lujan	Savage
Foglietta	Luken	Sawyer
Ford (MI)	Lundine	Schaefer
Ford (TN)	Lungren	Scheuer
Fowler	Mack	Schroeder
Frank	MacKay	Seiberling
Franklin	Madigan	Sharp
Frost	Markey	Shaw
Fuqua	Marlenee	Shelby
Garcia	Marriott	Shumway
Gaydos	Martin (IL)	Shuster
Gejdenson	Martin (NY)	Sikorski
Gekas	Martinez	Siljander
Gephardt	Matsui	Sisisky
Gibbons	Mavroules	Skeen
Gilman	Mazzoli	Skelton
Gingrich	McCain	Slattery
Glickman	McCandless	Smith (FL)
Gonzalez	McCloskey	Smith (IA)
Gore	McCollum	Smith (NE)
Gradison	McCurdy	Smith (NJ)
Gramm	McEwen	Smith, Denny
Gray	McGrath	Smith, Robert
Green	McHugh	Snowe
Gregg	McKernan	Snyder
Guarini	McKinney	Solarz
Gunderson	McNulty	Solomon
Hall (IN)	Mica	Spence
Hall (OH)	Mikulski	Spratt
Hall, Ralph	Miller (CA)	St Germain
Hall, Sam	Miller (OH)	Staggers
Hamilton	Mineta	Stangeland
Hammerschmidt	Minish	Stark
Hance	Mitchell	Stenholm
Hansen (UT)	Moakley	Stokes
Harkin	Molinari	Stratton
Harrison	Mollohan	Studds
Hartnett	Montgomery	Stump
Hatcher	Moore	Sundquist
Hawkins	Moorhead	Swift
Hayes	Morrison (WA)	Tallon
Hefner	Mrazek	Tauke
Heftel	Murphy	Tauzin
Hertel	Murtha	Taylor
Hightower	Myers	Thomas (GA)
Hiler	Natcher	Torricelli
Hillis	Neal	Towns
Holt	Nelson	Traxler
Hopkins	Nichols	Udall
Horton	Nielson	Valentine
Howard	Nowak	Vander Jagt
Hoyer	O'Brien	Vandergriff
Huckaby	Oakar	Vento
Hughes	Obey	Volkmer
Hunter	Olin	Vucanovich
Hutto	Ortiz	Walgren
Hyde	Ottinger	Walker
Ireland	Owens	Watkins
Jacobs	Packard	Waxman
Jeffords	Panetta	Weaver
Jenkins	Parris	Weber
Johnson	Patman	Weiss
Jones (NC)	Patterson	Wheat
Jones (OK)	Paul	Whitley
Jones (TN)	Pease	Whittaker
Kaptur	Penny	Whitten
Kasich	Pepper	Williams (MT)
Kastenmeier	Perkins	Wilson
Kazen	Petri	Winn
Kennelly	Pickle	Wirth
Kildee	Porter	Wise
Kindness	Price	Wolf
Kleczka	Pursell	Wolpe
Kogovsek	Quillen	Wortley
Kostmayer	Rahall	Wright
Kramer	Rangel	Wyden
LaFalce	Ratchford	Wylie
Lagomarsino	Ray	Yates
Lantos	Regula	Yatron
Latta	Reid	Young (AK)
Leath	Richardson	Young (MO)
Lehman (CA)	Rinaldo	Zschau
Lehman (FL)	Ritter	
Leland	Roberts	

NOT VOTING—45

Akaka	Frenzel	Pashayan
Barnard	Goodling	Pritchard
Bedell	Hansen (ID)	Ridge
Bethune	Hubbard	Schneider
Bevill	Kemp	Schulze
Carney	Kolter	Schumer
Carr	Leach	Sensenbrenner
Chappell	Lent	Shannon
Clarke	Martin (NC)	Simon
Clay	McDade	Synar
D'Amours	Michel	Thomas (CA)
Daniel	Moody	Torres
Dickinson	Morrison (CT)	Whitehurst
Dwyer	Oberstar	Williams (OH)
Foley	Oxley	Young (FL)

□ 1510

So (two-thirds having voted in favor thereof) the rules were suspended and the bill, as amended, was passed.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

Mr. KASTENMEIER. Mr. Speaker, I ask unanimous consent to take from the Speaker's table the Senate bill (S. 1201) to amend title 17 of the United States Code to protect semiconductor chips and masks against unauthorized duplication, and for other purposes, and ask for its immediate consideration.

The Clerk read the title of the Senate bill.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Wisconsin?

There was no objection.

The Clerk read the Senate bill, as follows:

S. 1201

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Semiconductor Chip Protection Act of 1984".

DEFINITIONS

SEC. 2. Section 101 of title 17 of the United States Code is amended by adding at the end thereof the following:

"A 'semiconductor chip product' is the final or intermediate form of a product—

"(1) having two or more layers of metallic, insulating, or semiconductor material, deposited or otherwise placed on, or etched away or otherwise removed from a piece of semiconductor material in accordance with a predetermined pattern;

"(2) intended to perform electronic circuitry functions; and

"(3) that is a writing, or the manufacture, use, or distribution of which is in or affects commerce.

"A 'mask work' is a series of related images, however fixed or encoded—

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

"(2) in which series the relation of the images to one another is that each image has the pattern of the surface of one from of the semiconductor chip product.

"A 'mask' is a substantially two-dimensional sheet, partially transparent and partially opaque to preselected radiation. A mask embodies a mask work if the pattern of transparent and opaque portions of the mask is substantially similar to the pattern of one of the images of the mask work. Masks and mask works shall not be deemed

pictorial, graphic, or sculptural works. The copyright in a mask work shall neither extend to, nor affect, limit, or impair any copyright in any other work of authorship embodied therein or in a semiconductor chip product.

The provisions of sections 109(a), 401, 405, 406, 501(A), 503, 506, 509, and 602 of this title, applicable to copies of a work shall apply also to semiconductor chip products.".

SUBJECT MATTER OF COPYRIGHT

SEC. 3. Section 102(a) of title 17 of the United States Code is amended—

(1) by adding after paragraph (5) the following:

"(6) mask works;"; and

(2) by redesignating paragraphs (6) and (7) as paragraphs (7) and (8), respectively.

EXCLUSIVE RIGHTS

SEC. 4. Section 106 of title 17 of the United States Code is amended—

(1) by striking out "and" at the end of paragraph (4);

(2) by striking out the period at the end of paragraph (5) and inserting "; and" in lieu thereof; and

(3) adding at the end thereof the following:

"(6) in the case of mask works, only the lowing rights—

(A) to embody the mask work in a mask;

"(B) to distribute a mask embodying the mask work;

"(C) to embody an image of the mask work in a semiconductor chip product;

"(D) in the manufacture of a semiconductor chip product, substantially to reproduce, by optical, electronic, or other means, an image of the mask work on material intended to be part of the semiconductor chip product; and

"(E) to distribute a semiconductor chip product made as described in subparagraph (C) or (D) of this paragraph.".

LIMITATION ON EXCLUSIVE RIGHTS AS TO MASKS

SEC. 5. (a) Chapter 1 of title 17 of the United States Code is amended by adding at the end the following:

"§ 119. Scope of exclusive rights: Rights of reverse engineering with respect to mask works

"(a) In the case of mask works, the exclusive rights provided by section 106 are subject to a right of reverse engineering use ·der the conditions specified by this sec-

(b) It is not infringement of the rights of the owner of a copyright on a mask work to reproduce the pattern on one or more masks or in a semiconductor chip product solely for the purpose of teaching, analyzing, or evaluating the concepts or techniques embodied in the mask or semiconductor chip product, or the circuit schematic, logic flow, or organization of components utilized therein.".

(b) The chapter analysis for chapter 1 of title 17 is amended by adding at the end thereof the following:

"119. Scope of exclusive rights: Right of reverse engineering with respect to mask works.".

(c) Section 106 of title 17 of the United States Code is amended by striking out "118" and inserting in lieu thereof "119".

DURATION OF COPYRIGHT

SEC. 6. Section 302 of title 17 of the United States Code is amended by adding at the end thereof the following:

"(f) MASKS.—Copyright in mask works endures for a term of ten years from the earliest of first authorized—

"(1) distribution;

"(2) use in a commercial product; or

"(3) manufacture in commercial quantities of semiconductor chip products made as described in subparagraph (C) or (D) of paragraph (6) of section 106.".

INNOCENT INFRINGEMENT

SEC. 7. (a) Chapter 5 of title 17 of the United States Code is amended by adding at the end thereof the following:

"§ 511. Innocent infringement of mask works

"(a) Notwithstanding any other provision of this chapter, an innocent purchaser of an infringing semiconductor chip product shall not be liable as an infringer or otherwise be liable or subject to remedies under this chapter with respect to the distribution of units of such semiconductor chip product that occurred before such innocent purchaser had notice of infringement.

"(b) The remedies of the owner of a copyright on a mask work against an innocent purchaser shall be limited to a reasonable royalty upon each unit of the infringing semiconductor chip product that the innocent purchaser made or distributed after having notice of infringement, it the innocent purchaser establishes the applicability of all of the following circumstances:

"(1) the innocent purchaser, before first having notice of infringement, committed substantial funds to the use of the infringing product;

"(2) the innocent purchaser would suffer substantial out-of-pocket losses (other than the difference in price between the infringing product and a noninfringing product) if denied the use of the infringing product;

"(3) the innocent pruchaser's use of the infringing product is and will be for substantially the same purpose that initially gave rise to the innocent pruchaser's immunity under subsection (a);

"(4) in the case of an innocent purchaser who, after having notice of infringement, makes the infringing semiconductor chip product, or has it made for him, the copyright owner and the owner's licensees, if any, are unable to supply the semiconductor chip product to the innocent purchaser at a reasonable price; and

"(5) it would be inequitable in the circumstances not to permit the innocent purchaser to continue the use or proposed use of the infringing product.

"(c) The immunity of an innocent purchaser and limitation of remedies with respect thereto shall extend to good faith purchasers from him.

"(d) For the purposes of this section—

"(1) 'innocent purchaser' means one who purchases an infringing semiconductor chip product in good faith, and without having notice of infringement;

"(2) 'notice of infringement' means actual knowledge that, or reasonable grounds to believe that, a product is an infringing semiconductor chip product; and

"(3) 'infringing semiconductor chip product' means a semiconductor chip product which is made or distributed in violation of the exclusive rights of an owner of a copyright in a mask work.".

(b) The table of sections for chapter 5 is amended by adding at the end thereof the following new item:

"511. Innocent infringement of mask works.".

IMPOUNDING AND SEIZURE

SEC. 8. Sections 503(a), 503(b), and 509(a) of title 17 of the United States Code are each amended by inserting "masks," after "film negatives," each place it appears.

SAVINGS CLAUSES

SEC. 9. Nothing contained in this Act shall be deemed to add to or detract from existing rights of owners of copyrights in works of authorship listed in section 102(a) of title 17 of the United States Code, prior to its amendment by this Act. Nothing contained in this Act shall be deemed to detract from any right of the lawful owner of a product purchased from the copyright owner, or from a person authorized by the copyright owner, freely to use, distribute and resell the product with liability therefor the copyright laws.

EFFECTIVE DATE

SEC. 10. The amendments made by this Act shall not create liability for any conduct that occurred prior to the date of enactment of this Act, but shall apply to all acts of manufacture or distribution of semiconductor chip products that occur in the United States after such date, to all acts of importation of semiconductor chip products into the United States that occur after such date, and to all violations of the exclusive rights of the copyrights owner under section 106(6) of title 17, United States Code, as amended by section 4 of this Act, that occur after such date. Notwithstanding the provisions of this section, no alleged infringer shall be liable under this Act with respect to the continued manufacture or distribution of any semiconductor chip product that the alleged infringer commercially distributed in the United States prior to January 1, 1980.

MOTION OFFERED BY MR. KASTENMEIER

Mr. KASTENMEIER. Mr. Speaker, I offer a motion.

The Clerk read as follows:

MR. KASTENMEIER moves to strike out all after the enacting clause of the Senate bill, S. 1201, and to insert in lieu thereof the provisions of the bill, H.R. 5525, as passed by the House.

The motion was agreed to.

The Senate bill was ordered to be read a third time, was read the third time, and passed.

The title of the Senate bill was amended so as to read: "An act to amend title 17, United States Code, to protect mask works of semiconductor chips against unauthorized duplication, and for other purposes."

A motion to reconsider was laid on the table.

A similar House bill (H.R. 5525) was laid on the table.

GI VE

Mr. KAST r. Speaker, I
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