REPORT

drawn up on behalf of the Committee on Legal Affairs and Citizen's Rights

on the proposal from the Commission of the European Communities to the Council (COM(85) 775 final - Doc. C 2-165/85) for a directive on the legal protection of original topographies of semiconductor products

Rapporteur: Mr Amédée E. TURNER
By letter of 23 January 1986, the President of the Council of the European Communities requested the European Parliament to deliver an opinion, pursuant to Articles 100 and 113 of the Treaty, on the proposal from the Commission of the European Communities to the Council for a directive on the legal protection of original topographies of semiconductor products.

On 17 February 1986, the President of the European Parliament referred this proposal to the Committee on Legal Affairs and Citizens' Rights as the committee responsible; on 12 May 1986 the Committee on Economic and Monetary Affairs and Industrial Policy was requested to give an opinion on this proposal.

At its meeting of 27 February 1986, the Committee on Legal Affairs and Citizens' Rights appointed Mr TURNER rapporteur.

At its meeting of 1 and 2 April 1986, the Committee considered the Commission's proposal and decided to propose the application of Rule 33 of the Rules of Procedure to this proposed Directive. At its plenary sitting of 17 April 1986, Parliament rejected the Committee's proposal.

The Committee examined the draft report on the basis of an oral presentation by the rapporteur at its meeting of 26 and 27 May 1986.

The Committee examined the draft report at its meeting of 25 and 26 June 1986 and decided unanimously to recommend to Parliament that it approve the Commission's proposal with the following amendments.

The Committee then adopted the motion for a resolution as a whole unanimously.

The following took part in the vote: Mrs VAYSSADE, Chairman; Mr DONNEZ, Vice-chairman; Mr TURNER, Rapporteur; Mr BANDRES MOLET, Mr BARZANTI, Mr BRU PURON, Mr EYRAUD (deputizing for Mr GAZIS), Mr GARCIA AMIGO, Mrs MIRANDA DE LAGE, Mr PEGADO LIZ, Mr PRICE, Mr ROGALLA, Mr ROTHLEY, Mr SCHWALBA-HOTH, Graf von STAUFFENBERG and Mr WIJSENBEEK.
Mr DE GUCHT was also present at the time of the vote.

The opinion of the Committee on Economic and Monetary Affairs and Industrial Policy is attached.

The report was tabled on 3 July 1986.

The deadline for tabling amendments to this report will be indicated in the draft agenda for the part-session at which it will be debated.
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Opinion of the Committee on Economic and Monetary Affairs and Industrial Policy
The Committee on Legal Affairs and Citizens' Rights hereby submits to the European Parliament the following amendments to the Commission's proposal and motion for a resolution together with explanatory statement:


Text proposed by the Commission of the European Communities

Amendments tabled by the Committee on Legal Affairs and Citizens' Rights

Preamble and
Chapter 1 headings unchanged

Article 1

For the purposes of this Directive, (a) a "semiconductor product" means the final or an intermediate form of any product,

(1) consisting of a body of material which includes a layer of semi-conducting material; and

(2) having one or more other layers composed of conducting, insulating or semiconducting material, the layers being arranged in accordance with a pre-determined three-dimensional pattern; and

(3) intended to perform, exclusively or in part, an electronic function.
(b) the "topography" of a semiconductor product means a series of related images, however fixed or encoded,

(1) representing the three-dimensional pattern of the layers of which a semiconductor product is composed; and

(2) in which series, each image has the pattern or part of the pattern of the surface of the semiconductor product in its final or any intermediate form.

(c) "commercial exploitation" of the topography of a semiconductor product means to make available to the public by sale, rental, leasing or any other method of commercial distribution the topography or a semiconductor product manufactured by using the topography.

Amendment No. 1

(c) "commercial exploitation" of the topography of a semiconductor product means to make available to the public by sale, rental, leasing or any other method of commercial distribution the topography or a semiconductor product manufactured by using the topography or importation or offer for these purposes.

Amendments tabled by the Committee on Legal Affairs and Citizens' Rights

Unchanged
Text proposed by the Commission of the European Communities

Amendments tabled by the Committee on Legal Affairs and Citizens' Rights

Chapter 2 headings Unchanged

Article 2

1. The Member States shall protect the topographies of semiconductor products by conferring exclusive right in accordance with the provisions of this Directive.

2. Exclusive rights may be conferred by the provisions of national copyright laws, by provisions enacted for the specific purpose of protecting the topographies of semiconductor products, or by a combination of these provisions.

1. Unchanged

2. Unchanged
3. However, the topography of a semiconductor product shall not be protected unless it satisfies the condition that it be original in the sense that it is the result of its creator's own intellectual effort. Where the topography of a semiconductor product consists of elements that are commonplace in the semiconductor industry, it shall not be considered original unless the combination of such elements, taken as a whole, is original and not commonplace.

Amendment No 2

3. The topography of a semiconductor product shall be protected insofar as it satisfies the conditions that it is the result of its creator's own effort and is not commonplace in the semiconductor industry. Where the topography of a semiconductor product consists of elements that are commonplace in the semiconductor industry, it shall be protected to the extent that the combination of such elements, taken as a whole, fulfills the above-mentioned conditions.

Article 3

Amendment No 3

1. The right to protection shall apply at least in favour of natural persons who are the creators of the original topographies of semiconductor products and who are nationals of and resident in a Member State and their successors in title.

1. Protection shall apply at least in favour of natural persons who are the creators of the original topographies of semiconductor products and who are nationals of and resident in a Member State and their successors in title.
2. However, where Member States provide for registration in accordance with Article 4, they may alternatively provide that protection shall apply at least to persons registering original topographies who are either nationals and residents of a Member State or companies and firms within the meaning of Article 58 of the Treaty.

Paragraphs 3 and 4 Unchanged.

Article 4

1. The Member States may provide that protection shall no longer apply to the topography of a semiconductor product unless it has been registered with a public authority within two years of its first commercial exploitation. Member States may require in addition to such registration that material identifying, describing or exemplifying the topography or any combination thereof has been deposited with a public authority.

Amendments tabled by the Committee on Legal Affairs and Citizens' Rights

Amendment No. 4

2. (Two words deleted) Member States (Nine words deleted) may also provide that protection shall apply (Two words deleted) to persons registering (One word deleted) topographies who are either nationals and residents of a Member State or companies and firms (Nine words deleted) having a real and effective industrial or commercial establishment in the territory of the Community.

Paragraphs 3 and 4 Unchanged.

Article 4

Amendment No. 5

1. The Member States may provide that protection shall no longer apply to the topography of a semiconductor product unless an application for registration has been entered with a public authority within two years of its first commercial exploitation. Member States may require in addition to such registration that material identifying (One word deleted) or exemplifying the topography or any combination thereof has been deposited with a public authority. Any identifying or exemplifying material for the
Paragraphs 2 and 3 Unchanged

Article 5

Amendment No 6

1. The exclusive rights referred to in Article 2 shall include the rights to authorize any of the following acts:
   (a) reproduction of the topographies in whole or in part;
   (b) the sale, rental or leasing, or the offering for sale, rental or leasing, or any other method of commercial distribution, or the importation of the topographies or of semiconductor products manufactured by using the topographies.

1. The exclusive rights referred to in Article 2 shall include the rights to authorize any of the following acts:
   (a) reproduction of the topographies in whole or in part;
   (b) commercial exploitation of the topographies.
3. The exclusive rights to authorize the acts specified in paragraph 1 shall not extend to any such act in relation to an original topography created on the basis of an analysis and evaluation of another topography carried out in conformity with paragraph 2.

4. The exclusive right to authorize the acts specified in paragraph 1(b) shall not apply to any such act:
(a) committed after the topography or the semiconductor product has been put on the market in a Member State by the person entitled to authorize its marketing or with his consent; or
(b) committed by a person who has purchased a semiconductor product without reasonable grounds to believe that its manufacture infringed the exclusive right specified in paragraph 1(a).
5. Where paragraph 4(b) applies, the Member States may subject the acts specified in paragraph 1(b) to the payment of royalties.

Amendment No 9

5. Where paragraph 4(b) applies, the Member States may, in accordance with their legal systems, subject the acts specified in paragraph 1 to the payment of royalties to the protected persons, insofar and as long as the acts have not been carried out innocently in ignorance of the protection.

Paragraph 6 Unchanged

Article 6

Amendment No 10

1. The exclusive rights to which reference is made in Article 2 shall come to an end on a date ten years from the date on which the topography is first commercially exploited or, where registration is a condition for the subsistence of protection, from the date on which the topography is first commercially exploited or the date on which it is registered, whichever is the later.
2. The exclusive rights shall come to an end not later than fifteen years from the date on which the topography is first fixed or encoded. This provision shall be without prejudice to rights conferred by the Member States in fulfilment of their obligations under the Berne Convention for the Protection of Literary and Artistic Works and the Universal Copyright Convention and to corresponding rights conferred on a Member State's nationals or persons resident on its territory.

Amendments tabled by the Committee on Legal Affairs and Citizens' Rights

Amendment No 1

2. The exclusive rights in a topography which has not been commercially exploited or registered shall come to an end not later than ten years from the date on which the topography is first fixed or encoded. This provision shall be without prejudice to rights conferred by the Member States in fulfilment of their obligations under the Berne Convention for the Protection of Literary and Artistic Works and the Universal Copyright Convention and to corresponding rights conferred on a Member State's nationals or persons resident on its territory.

Article 7

The protection granted to the topographies of semiconductor products in accordance with Article 2 shall not extend to any concept, process, system or technique embodied in the topography other than the topography itself.

Amendment No 12

The protection granted to the topographies (Three words deleted) in accordance with Article 2 shall not extend to any concept, process, system or technique associated with the topography nor to encoded information not ascertainable by visual sense.
Article 8 unchanged

Chapter 3 headings unchanged
MOTION FOR A RESOLUTION

closing the procedure for consultation of the European Parliament on the
proposal from the Commission of the European Communities to the Council
for a directive on the legal protection of original topographies of
semiconductor products

The European Parliament
- having regard to the proposal from the Commission to the Council\(^1\),
- having been consulted by the Council pursuant to Articles 100 and 113 of
  the Treaty establishing the European Economic Community (Doc. C2-165/85),
- having regard to the report of the Committee on Legal Affairs and Citizens' Rights
  and the opinion of the Committee on Economic and Monetary Affairs and
  Industrial Policy (Doc. A 2-88/86),
- having regard to the result of the vote on the Commission's proposals,

(a) whereas both the United States and Japan have already adopted legislation
to provide for the legal protection of the design of integrated circuits,

(b) whereas the absence of a coordinated response at Community level would
hinder the creation of a common market in such products,

1. Takes the view that the protection for topographies of semiconductors is
desirable per se, and, in view of US protection and the need for
reciprocity if European companies are not to be at a disadvantage, is
urgent: notes however that in principle other industries could call for

\(^1\) OJ No C 360, 31.12.1985, page 14
similar types of protection for the design aspects of their innovations; considers that it is vital that the essential features of the protection of topographies of semiconductors should be harmonized in the Community;

2. Calls on the Commission to adopt, on the basis of Article 149, second paragraph, of the EEC Treaty, the amendments which it has tabled to the Commission's proposal;

3. Takes the view that technical advance shall not be a ground for amendment by the Council without the prior opinion of Parliament;

4. Instructs its President to forward to the Council and Commission, as Parliament's opinion, the Commission's proposal as voted by Parliament and the present resolution.
b.

EXPLANATORY STATEMENT

Topographies of Semiconductor Products

1. This expression is to mean the configuration of circuitry either incorporated in a semiconductor integrated circuit chip or designed to be incorporated in a chip. The expression covers the material embodiment and the design for it.

The Problem

2. The reason for the hurried production of a draft directive on the protection of chip topographies is that the USA gave legal protection to them from 1 October 1985, and required reciprocity for its citizens in other parts of the world if non-US citizens were to obtain protection in the USA. Interim protection has been given by the USA to citizens of Member States until 12 September 1986 provided that the Member States in their turn are actively taking steps to grant protection to US citizens.

3. It is rightly felt that any new legal right of protection for chip topographies should be harmonized throughout the Community.

Protection for Topographies

4. It has long been recognized that literary and artistic works should be protected by a copyright, that new industrial designs intended to appeal to the eye should be protected and that inventions should be protected by patent. There has been a grey area in industrial and intellectual property law as far as original utilitarian designs are concerned for use in industry and which are not intended to appeal to the eye, and which may not be inventive, but are of industrial value.
Varying degrees of protection have been accorded by case law in some countries (for example, in Holland and Britain) on the basis of copyright. The extent of such rights has not been clear.

5. It is certainly desirable in the economically important field of integrated circuitry design of semiconductors that protection should exist, and that it should be clearly defined. The USA is to be congratulated on having acted first.

6. The nature of the right given by the new US law is that valuable time with effort put into designing an original integrated circuit should be protected from copying (with one important reservation relating to 'reverse engineering' discussed below in paragraph 13) for a relatively short period of time, viz. ten years. The purpose of this is to prevent a copier getting the advantage of work done by the originator. In this sense, the new right is closely akin to copyright, where protection is given not for the meritorious nature of artistic or literary work, but for the time and effort put in, regardless of whether the work is 'good'. The only requirement is originality. Two writers could write the same work and both obtain copyright protection, so long as each was original (that is not copied from each other or from elsewhere).

7. The same principle is applied to the protection of topographies, and it is this which distinguishes the new right from patent rights which depend on the merit of the invention, regardless of time spent in arriving at it. For this reason, a grant of the new right is simple because there is no need for an enquiry as to novelty in the objective sense, there only is a requirement for originality in the subjective sense. However, there is one proviso to this, that even if the topography is original in the sense that the designer did not copy another, if it is in fact commonplace, no protection is given. This proviso essentially follows common principles in copyright. Provisions of the draft directive generally follow those of the American provisions closely enough in principle to make it unnecessary to consider the American proposals further.
A Wider Principle at Stake

8. It must be pointed out that the above principles of protection can be applied equally well to all kinds of utilitarian industrial designs (and many have been considered by case law under the heading of copyright in some countries, for example boats, engineering components, etc), and it would be difficult in principle to deny similar protection to other fields than integrated circuit semiconductors, if other industries requested similar treatment. It can be commented however, that the expense of the work of designing an original topography is substantial compared to the cost of producing industrially prepared copies of the original; therefore, topographies are particularly vulnerable to copying. This will, however, be the case with some other products too; but for many products the cost of manufacture and materials is proportionately greater than that of the original design work. Thus integrated circuit semiconductors are a reasonable candidate for early protection, though not differing from other industrial fields in principle.

The Legal Nature of the Protection

9. It is immaterial to basic harmonization how the new right is grafted on to Member States' national laws. As there is no requirement for a substantive investigation into the nature of the topography for which protection is claimed (unlike patents or indeed trademarks), formal registration of the existence of the topography is satisfactory. This, in fact, is how copyright is treated in the USA, but not in Europe. Some Member States, for instance, France and Italy, are considering this procedure. An automatic right to the protection without registration (as for copyright in Europe at present) is equally suitable. Britain and Ireland are considering this procedure. In the long run, it may be that if most Member States opt for registration a need would arise for a European registration system as is already proposed for Community patents and trademarks. However, there is no justification for the consideration of this aspect for some time.
Protection Is For "Effort" Of The Originator

10. As mentioned above (Paragraph 6) the intention is to protect the value of work done in designing a topography from copiers who can otherwise obtain the benefit of this effort. There is no requirement for invention or other measure of merit. At present the craft directive (Article 2.3) requires it to be original in the sense that it is the result of its creator's own intellectual effort. The word 'intellectual' however, adds nothing necessary to the concept, and indeed may be confusing, as much topography is designed by computer and this will increasingly be the case, and the intellectual 'effort' will then be at least once removed from the actual creation. The word 'original' is not necessary in defining protection relating to effort because 'commonplace' results are excluded in any case. Therefore, Article 2.3 should be amended to remove unnecessary complication from the definition. The requirement for protection is then the existence of design 'effort' (however achieved), with a proviso that the result shall not be commonplace in the art.

Who May Obtain Protection

11. Clearly natural persons who are nationals or who have their habitual residence in a Member State should have protection in accordance with Article 3, but there should be the option to give protection to companies who have a real and effective establishment in the Community, when the designer worked under contract of employment, or otherwise, for the purpose of design work.

12. It has been suggested that where a Member State wishes to make a speedy international agreement with a third country to give reciprocal rights it may do so, provided that the Council does not decide by a qualified majority against such an agreement within a limited period, and provided that the Council may subsequently modify the agreement acting on a qualified majority. This proposal appears reasonable.
Infringing Acts And 'Reverse Engineering'

13. It is an infringement of the rights to copy the topography, but the industry recognizes the legitimacy of what is called 'reverse engineering', i.e. analysing the topographies in a semiconductor chip which has been put on the market by the originator. This is universally done in order to understand what the competitor is selling. Furthermore, it is commonly recognized that one is entitled to make use of the information gained when designing one's own topographies. The question is, however, how much of what is not 'commonplace' in the chip that one has analysed can one use in the design of one's own chip? Clearly one cannot merely copy the topography without making a true analysis and evaluation of the purpose and logic of the competitor's chip. But some persons in industry say that if you have followed the logic and purpose of the other chip and fully understand the reasoning behind it, you should then be entitled to use the same topography. In other words, if you can prove that you have put in considerable work in analysis and mastered the topography you are studying, you are then free to use substantially the same topography yourself because you have repeated, in effect, the effort of the originator at considerable expense.

14. Others in industry say that even exhaustive analysis through reverse engineering should not permit the second-comer to reproduce a significant part of the originator's topography, and specifically that it would be wrong to permit the second-comer to reproduce a substantial part even though with other and different additions. In fact even the hardest reverse engineering with full analysis probably will not cost more than half the effort put in by the originator. According to the new American law one only avoids infringement by creating an original work oneself, even though using fully the information obtained by reverse engineering.
According to this view of the law, proof of expensive and thorough analysis on reverse engineering yet leading to the adoption of substantial parts of the first-comer's topography, would not be justifiable.

15. The latter position is that adopted by the Commission's draft (Article 5.3). It is highly desirable not unnecessarily to create differences in principle between US law and European law, and on this basis the proposals the Commission, being essentially the same as those in the USA, are best. No doubt there will be uncertainty in industry at first, but this would be the case whatever definitions were adopted.

Length of Protection

16. Protection of a topography should commence at the time of creation (as with copyright) but in countries where registration is required, this can conveniently be retrospectively granted upon registration to date back to such creation. Normally the topography will then be commercially exploited and in this case such date (being more certain) can conveniently be used for the start of the running of the time or alternatively from the date of registration. Thus, if the topography is never developed it will be protected equally with topographies which are developed and commercially exploited. It has been suggested that the earlier date of exploitation or registration should be the effective one, and this appears reasonable. In addition, there seems to be no reason why an exploited topography should have a markedly different period of protection from an exploited one. Nor does there seem any real reason why public commercial exploitation should be required for this purpose, as commercial exploitation, public or not, should be readily ascertainable to identify the starting date and it is undesirable to introduce a further criterion unnecessarily. Nor is there any reason why exploitation of the topography rather than of semiconductor chips should be required, as the act in either case should be readily identifiable. Amendments have been made for these purposes.
Limitation Of Protection To Visual Appearance Of Integrated Circuit

17. There may well be superimposed on an integrated circuit pattern (of which the topography will be an image) various changed states in the logic elements. These will not be ascertainable by visual sense (at whatever magnification) and are in any case not intended to be part of the topography. It is therefore necessary to add a reference to 'encoded information'.

Concurrent Rights

18. It is rightly intended that the new right shall not nullify any existing rights which may exist in national laws because of protection of know how, etc, but at the same time your rapporteur considered it reasonable that a proprietor should not be entitled to sue for such other rights after the expiry of the topography right in so far as the two rights (during the currency of the latter) are overlapping. An amendment proposed by the rapporteur to Article 9 (which attempts to maintain such other rights) to include the prevention of overlapping after expiry of the rights given by Article 2.2 was rejected, as a result of which the Committee felt unable to accept the amendment to Article 9 which had been proposed by the Committee on Economic and Monetary Affairs and Industrial Policy in paragraph 7 (iv) of its opinion (annexed).
NOTE ON THE AMENDMENTS TO THE DRAFT DIRECTIVE

Article 1(c)
Commercial exploitation should include offers for sale, etc.

Article 2.3
See Paragraph 10 of the explanatory memorandum.

Article 3
As to 'original' see Paragraph 10 of the explanatory memorandum; as to the rest, see Paragraph 11.

Article 4
The obligation should be to apply to register within a prescribed term because the registration itself may be delayed for reasons other than those which are the applicant's fault.
In view of the difficulty of 'describing' a topography, this word should be omitted.
As the period of protection can appropriately run from commercial exploitation, if the latter precedes registration, the amended form is required. The conditions for confidence as to the exemplification required to be registered are self-explanatory.
Article 5

Paragraph 1

The wording of (b) unnecessarily repeats that of Article 1(c).

Paragraph 3

See Paragraph 10 of the explanatory memorandum.

Paragraph 4 and Indent (a)

These cover the principle of 'exhaustion' and require re-wording to make it clear that putting a topography on the market, for instance in the form of a semiconductor or a computer or other form of code or in any other fixation, does not extend the exhaustion to other embodiments of the topography which are not the subject of the exhausting act.

Paragraph 5

The addition is necessary to avoid payment for innocent acts.

Article 7

It is confusing to add the qualification 'of semiconductor products' in this particular case. For 'encoded information' see Paragraph 16 of the explanatory memorandum. The expression 'other than the topography itself' is tautologous, while 'embodied in' is inappropriate to an 'image'.
OPINION
(Rule 101 of the Rules of Procedure)

of the Committee on Economic and Monetary Affairs and Industrial Policy

Draftsman: Mr F. HERMAN

At its meeting of 23.5.86 the Committee on Economic and Monetary Affairs and Industrial Policy appointed Mr HERMAN draftsman of the opinion.

The committee considered the draft opinion at its meeting of 18-20 June 1986 and adopted its conclusions unanimously with 2 abstentions.

The following took part in the vote:

SEAL (Chairman); HERMAN (Draftsman); BAILLOT; BEIROCO; BEUMER; BOWACCINI; CASSIDY; CHANTERIE (replacing Franz); CHRISTIANSEN (present according to Art. 93.2 replacing Gredal); COLLINOT; METTEN; MIHR; PATTERSON; RAFTERY; van ROOY (replacing Starita); VAN HEMELDONCK; VANLEREN BERGHE (present according to Art. 93.2 replacing Abelin); WEDEKIND;
1. The draft directive (COM(85) 775) proposed by the Commission is a response to a real need felt by the European integrated circuits industry.

The creation and development of new integrated circuits, particularly the most advanced circuits, call for high levels of investment which can only be recouped by long production runs. At the same time, it is relatively easy to copy them. Without effective protection of the topography of integrated circuits pirate companies can therefore easily exploit someone else's inventiveness without having to pay royalties, and thus cream off available markets at little cost.

This situation is such as to discourage European companies from making the necessary investment to keep up with their competitors, when they are already handicapped by the limited size of markets and rigid employment legislation.

2. National regulations in this new and rapidly changing field are incomplete or inconsistent. If they are strengthened or improved, for lack of harmonization they are likely to create fresh barriers between the national markets within the Community. In addition, if it is to be effective such protection must operate in all the major world markets, i.e. there must be reciprocal protection between them. The United States and Japan have already introduced legislation and if the Community decides to do so soon, it will be able to enjoy the same protection in these two major markets, as a matter of reciprocity.

There is therefore an urgent need for this proposed directive. At international level, the World Intellectual Property Organization started work in November 1985, but it will take years for its efforts to bear fruit, if they ever do.

3. Given the complexity of this field and the urgent need for legislation the Commission has restricted itself to essentials and has sought to deal with the most urgent aspects first. It has therefore left the Member States considerable freedom as regards the detailed provisions for protection, which it has merely outlined (framework directive).