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GREEN PAPER

The Protection of Utility Models in the Single Market

(presented by the Commission)

Contents

Summary and questions..... i-b

I. Introduction..... 1

II. The need for action at Community level ?..... 5

 A. The establishment and functioning of the single market 6

 B. The present situation in the Member States 7

 C. The economic significance of utility model protection 9

 1. The utilization of utility model protection in the European Union..... 9

 (a) The national applications statistics 10

 (b) Cross-border applications..... 11

 (c) A change in the behaviour of applicants in the European Union..... 12

 2. The significance of utility models in comparison with patents 13

 3. The significance of utility model protection by reference to the size of the firm 14

 4. Significance in particular industries 15

 5. Reasons cited for seeking utility model protection..... 16

 (a) Quick, simple registration 17

 (b) Limited requirements 18

 (c) Low cost 19

 (d) Temporary protection..... 22

 6. Economic assessment by users 22

 7. Prospects for the economic significance of utility models 23

 (a) Changes in spending on research and development..... 23

 (b) Changes in product life cycles, times to market and the lifetimes of inventions..... 24

 (c) Changes in the scale of innovation and the length of exploitation of inventions in the European Union 29

 (d) Usefulness of Community utility model protection to industrial companies and independent inventors 29

 D. Effects of the discrepancies on the common market 32

 1. Obstacles to the free movement of goods..... 33

 2. Distortion of competition in the common market..... 35

 3. Effects on industrial companies and independent inventors..... 36

 E. European Union policy and economic need 41

III. What measures should be taken?	43
A. The appropriate form of legislation	44
1. Aligning the national schemes	44
(a) Introduction of new rights	45
(b) Aligning the substance of national utility model law	47
2. A broader alignment	48
3. The introduction of a Community right	49
4. A combination of alignment of laws and the introduction of a Community right	50
5. The views of industrial companies and independent inventors	50
6. The views of patent attorneys	52
B. The substance of Community-level protection of utility models: principles	54
1. Basic design	54
(a) Protection of form or of invention?	55
(b) Dispensing with registration	56
(c) Examination to ensure that requirements are met	57
(d) Principles	59
2. More detailed rules	60
(a) Inventive step	60
(b) Three-dimensional form requirement	62
(c) Excluded inventions	64
(1) Unprotectable inventions	64
(2) Substances and compositions of substances	65
(3) Process inventions	66
(d) Novelty	67
(e) Industrial application	69
(f) Procedure	70
(g) Effects and transfer	73
(h) Duration	73
(i) Infringement	74
(j) Dual protection	75
(k) Relationship to patent law	76
 Bibliography	 i

Summary and questions

Legal protection of industrial property (patents, trademarks, design rights and utility models) in the single market has an important role to play: it has to promote innovative activity in the European Union, so as to ease the path from the initial idea to the successful translation of that idea into practice. The simpler and clearer such arrangements are for the user, the more they will facilitate innovation, providing effective protection for inventions. At the same time they ensure that competitors are kept informed of new developments by publication of the protected invention. This increases the competitiveness of European companies and helps to achieve the objectives of free movement of goods and undistorted competition.

A "utility model" is a registered right which confers exclusive protection for a technical invention. It resembles a patent in that the invention must be new - it must possess "novelty" - and must display a measure of inventive achievement - it must involve an "inventive step", though frequently the level of inventiveness required is not as great as it is in the case of patents. Unlike patents, utility models are granted without a prior search to establish novelty and inventive step. This means that protection can be obtained more rapidly and cheaply, but that the protection conferred is less secure. Utility model protection is at present entirely a matter of domestic law.

The Commission has been looking into whether the establishment and operation of a single market requires measures to be taken in respect of utility models at Community level, and if so what measures are needed to harmonize the law on utility models in the interests of the single market.

The need for action

Some form of utility model protection exists in France, Belgium, Portugal, Ireland, Italy, Spain, Germany, Denmark, Greece, the Netherlands, Finland and Austria. There are no comparable rights in the United Kingdom, in Sweden or in Luxembourg. A comparison of the national systems shows that there are wide differences between the requirements for utility model protection; the differences are such that as things stand it would not be practicable to apply those systems in a cross-border context.

No steps have so far been taken at Community level. This means that for inventions involving only a small inventive step no Community-wide protection is available; indeed no proper protection at all is available in the countries where utility models have not been legislated for. The Commission has accordingly studied the economic significance of utility model protection in order to establish whether these differences have a negative impact on the objectives of free movement of goods and undistorted competition.

The economic significance of utility model protection now and in future

In order to arrive at an estimate of the economic significance of utility model protection the Commission has considered the rate of utilization of the existing systems (looking at frequency, size of firm, and reasons for applying), and developments in innovative activity.

The first observation to be made is that utility models provide a very popular form of protection. There are roughly as many applicants for utility models as there are for patents. A comparison of the various national systems shows that greater use is made of systems which require only a small inventive step than is made of those where the inventive step required is the same as what would be needed for a full-scale patent. As the single market is consolidated we can expect an increase in demand for utility models and especially in cross-border applications.

An industry-by-industry breakdown of utility model applications in the European Union shows that the industries most often concerned are mechanical engineering, electrical engineering, and precision instruments and optics. Interest is even higher among small businesses and individual inventors than it is in big industry.

In a study of applications for utility models the main reasons cited for seeking this form of protection were as follows:

- quick, simple registration;
- less stringent requirements than for patents;
- low cost;
- temporary protection pending the grant of a patent.

The spectrum of reasons is thus very broad. The utility model is sometimes preferred where the applicant is not at all sure he will be able to market the invention, and therefore wants to keep his costs as low as possible. But it is also used for inventions which are particularly exposed to the danger of imitation and consequently of great importance to the performance and competitiveness of the applicant company. And the utility model is used where a patent would provide only inadequate protection or no protection at all, for example because it would take too long to obtain, or because the inventive step is too small. This means that whatever the size of the firm the perceived effects of a utility model are very positive: in the first place an improved market position and in the second place a direct increase in earnings.

An analysis of the perceived importance of inventions reveals that small businesses are particularly conscious of the need to intensify their innovative activity to stand up to increased competition. They feel that inventions involving small inventive steps or short periods of exploitation will grow in importance in future; this would bring an expansion in demand for protection which can best be met by utility models. Only a small proportion - no more than 10% - of those questioned in firms of all sizes and in all industries expected a fall in the proportion of such "petty" inventions in future.

In view of the results so far it is not surprising that manufacturers, inventors and patent lawyers all see a great economic need for a unified system of utility models in the European Union. A breakdown by size of firm shows that there is particularly strong interest among smaller businesses with 500 employees or less.

Effects on the common market

Member States are basically free to design utility model systems as they will, provided the measures they take are not a means of arbitrary discrimination or a disguised restriction on trade between Member States. At present, therefore, different rules may be enacted in different countries, and Member States may decide to do without utility model protection altogether.

An intellectual property right conferred by the law of a Member State provides protection only on the territory of that State. In the absence of any unification of the law, therefore, the holder of such a right can prevent third parties from importing protected goods which have been produced and marketed without his consent. Thus the intellectual property rights conferred by the Member States can of their nature be used to hinder the free movement of goods.

The differences between the systems of protection are outside the control of the right-holder and force him to avoid markets in which he cannot obtain equivalent protection for his invention. Given the economic significance of utility models, this erects barriers between markets inside the European Union. Thus the differences which exist have a direct adverse effect on trade within the Community, and on firms' capacity to treat the common market as a single setting in which to do business. The free movement of goods is obstructed, with practical disadvantages for those concerned.

If firms are to take advantage of the fundamental freedoms laid down in the EC Treaty, the intellectual property rules must allow fair competition between them. Given the differences which exist at present, companies or individual inventors wanting to exploit an invention in several States have to familiarize themselves with a number of different systems or take expensive advice in each of the Member States concerned.

The situation may be bearable in the case of big companies that can invest large sums of money in the promotion and protection of their inventions. For individual inventors and for small businesses the differences they have to deal with and the consequent need for legal advice are an administrative problem and often an insuperable cost factor. This restricts innovative activity on the part of such businesses and consequently distorts competition.

It is not surprising, then, that companies and individual inventors should complain that they encounter serious difficulties in the cross-border enforcement of utility model protection. The problems are growing with increasing export intensity.

Community objectives and economic need

In view of the great economic need the maintenance of the existing situation would not be desirable; it would run counter to the idea of a Europe which is drawing closer together. It would not allow the achievement of free movement of goods and undistorted competition.

To ensure that the single market becomes a reality and operates smoothly, the Commission must respond to the present and future economic need.¹ The development of innovative activity in the European Union, which has been marked by a trend towards smaller inventive steps, greater cost-sensitivity, shorter production and marketing cycles and a shorter lifetime for inventions, is generating increased demand for a form of protection that offers fast, simple and inexpensive protection for technical inventions in the European Union.

To remedy these shortcomings, measures are needed at Community level, with the following main objectives:

- protection to be provided for short-lived technical inventions,
- protection to be provided for technical inventions which involve only a small inventive step,
- protection to be obtainable rapidly,
- protection to be obtainable simply,
- protection to be inexpensive, and
- publication to be rapid, so that the public is informed quickly.

¹ This approach has already produced measures to protect new technologies, as in the case of biotechnology, and to adapt existing systems of protection to changing needs, as in the case of pharmaceuticals.

Measures required

The European Commission is required to put forward those proposals for the approximation of laws which are needed for the establishment of the internal market. The Commission has accordingly considered both the form which any legislation might take and the substance of any Community-level arrangements in respect of utility model protection.

Form of legislation to harmonize utility model protection

Several options are open here.

Firstly, the national systems of protection could be brought into line by means of a directive. Harmonization of this kind would not be confined to removing the differences between the existing rules, but would also introduce utility model protection in those countries where it does not currently exist. This would establish a package of national rights. Each of these rights would continue to be confined to the territory of one Member State.

The results so far obtained in surveys of patent lawyers acting as advisers and of companies and individual inventors show that a majority would like to see a user-friendly system whereby protection could be secured in three to five Member States by means of a single application. This cannot be achieved simply by aligning national law.

The Commission takes the view, therefore, that harmonization of national systems would go some way towards improving the situation, but would not solve all the problems which arise.

The Commission accordingly feels that consideration should be given to measures which go beyond straightforward harmonization.

One possibility would be to supplement the harmonization of domestic law with mutual recognition of the protection granted by Member States. National rights and national registration offices would continue in being, but cross-border protection in the European Union could now be obtained by means of a single application.

Another possibility would be to adopt a regulation establishing a new Community protection right; as Community law, such a regulation would rank above the national systems, but would not replace them. A right obtained under Community law would be valid directly in all Member States. Protection throughout a territory comprising all the Member States could then be secured by means of one application and one set of proceedings at one Community office.

But it must be borne in mind that the unification of the common market is a process which is still going on, particularly as the European Union has been recently enlarged to take in Austria, Sweden and Finland. A combination of different possibilities might be the best way of ensuring that a future system was even better tailored to the needs of the single market. As with trade marks and designs, then, a directive harmonizing national systems of protection might be combined with a regulation establishing a new single utility model right.

Substance of Community-level protection of utility models

Utility model protection exists in twelve out of fifteen Member States. All these systems provide for a registered right for technical inventions without prior search to establish novelty and inventive step. The Commission is of the opinion that these common features should form the basis of a Community-level scheme.

In other respects the existing systems differ widely, and the Commission takes the view that here all the possibilities will have to be considered. The critical points are the level of inventiveness; the three-dimensional form requirement; excluded inventions; novelty; industrial applicability; procedure; effect of the protection right; transfer; continuance; infringement; and dual protection (where an invention is protected both by a patent and by a utility model).

At this stage in its inquiries the Commission feels it would be reasonable to deal with these points as follows :

- The level of inventiveness required could be lower than in the case of patents; this is the only way of allowing for the changing demands of inventive activity.
- The three-dimensional form requirement could be abolished: the reasons for its introduction are historical, and it does not meet any modern need.
- Compositions of substances could be eligible for utility model protection; as regards substances proper, and process inventions, the Commission proposes to await the reaction of interested parties.
- The novelty of an invention could be determined by reference to the state of the art; this should not be restricted to the territory of a particular Member State, as that would run counter to the objective of a single market.
- There could be a twelve-month grace period for novelty, along the lines of Article 8 in the Community design proposal.
- Industrial applicability could be regulated in accordance with Article 57 of the European Patent Convention.
- The procedure for the grant of the right could be based on Articles 78 to 85 of the European Patent Convention; there would be no prior search to establish that all the requirements are met, but the application would be examined to establish that *prima facie* it may qualify for protection.
- An optional search would be possible, however, in order to increase certainty as to the legal position.
- Rights of use and of prohibition and their exhaustion could be regulated in line with what is done in patent law in the Member States; a limit to the number of claims might be envisaged.
- A registered right could be transferred without restriction.
- The grounds for extinction and nullity could be regulated in line with patent law in the Member States.
- The term of protection should be short: the maximum duration could be 10 years, which could be reached by renewal in steps of several years. This would be an effective way of offsetting the less stringent admissibility requirements.
- Where it is claimed that a utility model has been infringed it should be open to the court to order a search report, in order to establish whether the disputed invention qualified for protection; this would help to fill the gap left by the absence of a prior search.
- In order to avoid placing the right-holder in too strong a position, there could either be a prohibition on dual protection by both a patent and a utility model, or a ban on invoking the two successively.

The scheme being proposed here is intended for inventions where the innovative element is fairly modest. The inventive step may be small; or the period of protection needed may be short; or the possibility of industrial application may be limited.

The Commission takes the view that a system of this kind would be a useful complement to patent protection, and would help to boost innovative activity and hence the competitiveness of European companies doing business on the single market. This would further improve the operation of the single market.

The Commission has not yet reached a definitive view. The results arrived at so far will have to be discussed with interested parties before the Commission takes any further action at Community level.

Questions to interested parties are set out below; full answers to these questions will enable the Commission to make a better assessment of whether any action should be taken at Community level, and if so what form it should take.

The Commission therefore asks interested parties to take the trouble to answer the questions carefully.

QUESTION 1: *On the basis of its inquiries so far the Commission has come to the following assessment of the economic significance of utility model protection.*

(a) System of protection: *Among the existing systems of protection, the one most readily accepted is that which calls for a smaller inventive step than does a patent and which largely dispenses with the requirement that the invention be embodied in three-dimensional form.*

(b) Economic sector: *Utility model protection is most frequently taken advantage of in the mechanical engineering, electrical engineering and precision instruments and optics industries.*

(c) Size of firm: *Interest in utility model protection is somewhat greater among small and medium-sized firms and individual inventors than it is among large companies.*

(d) Reasons for applying: *Studies have identified the following as the main reasons for seeking utility model protection:*

- * quick, simple registration
- * less stringent requirements than for patents
- * low cost
- * temporary protection pending the grant of a patent.

(e) Future developments: *In the industries which file most utility model applications, the protection of inventions involving only a small inventive step and with a short lifetime will grow in importance in future, especially for small and medium-sized businesses, but for large companies too.*

The Commission asks interested parties to comment.

QUESTION 2: *The Commission asks interested parties to say whether in their view the wide discrepancy between the economic significance of utility models in different Member States, and the differing rules governing them, obstruct the free movement of goods and distort competition in ways which cause them practical disadvantage.*

QUESTION 3: *In the Commission's view the development of innovative activity in the European Union is generating a growing need for a form of protection which would complement patent protection by providing a rapid, simple and inexpensive form of protection for technical inventions.*

The Commission asks interested parties to comment.

QUESTION 4: *If action is in fact needed, there are a number of possibilities open to the Commission.*

(a) The first course would be to seek an alignment of the various national systems by means of a directive, which would also mean introducing this form of protection in countries which do not possess it; this would produce an array of similar national systems of utility model protection.

(b) Such a directive might also provide that Member States were to recognize the rights conferred by one another's systems. National protection rights and national registration offices would continue to exist, but cross-border protection valid throughout the European Union could be obtained by means of a single application.

(c) A further possibility would be to enact a regulation creating a new Community protection right governed by Community law, which would have precedence over national systems of protection but would not replace them. This would allow protection which was valid throughout the European Union to be obtained in a single set of proceedings at a joint registration office.

(d) Lastly, as in the case of trade marks and design, the alignment of national law could be combined with the creation of a new single protection right, in order to tailor the new system even better to the requirements of the internal market.

The Commission asks interested parties to say which of these systems would best ensure the operation of the single market.

QUESTION 5: *If action is needed at Community level, and if it is to take the form of European Community legislation, it has to be decided what the substance of utility model protection should be. All of the existing systems provide protection for technical inventions by means of a registered right which requires no examination of novelty and inventive step.*

The Commission asks interested parties to say whether these common features could form the basis of a scheme of utility model protection at Community level.

QUESTION 6: *The existing systems of utility model protection differ in their substance.*

The Commission asks interested parties to say whether the following points should be included in a Community system of utility model protection:

- *The level of inventiveness required should be lower than in the case of patents.*
- *Three-dimensional form should not be required.*
- *Process inventions and substances should be excluded.*
- *The novelty required should be determined by reference to the state of the art, which should be restricted to the territory of the European Union.*
- *There should be a twelve-month period of grace for novelty.*
- *There should be an industrial application requirement, based on Article 57 of the European Patent Convention.*
- *The procedure for applications should be based on Articles 78 to 85 of the European Patent Convention.*
- *There should be a formal check on protectability but no general examination of compliance with the requirements.*
- *Optional searches should be possible.*
- *Rights of use and of prohibition and their exhaustion should be based on the existing rules of patent law.*
- *The term of protection should be renewable in steps of several years, the maximum term being ten years.*
- *A search report would be drawn up in the event of legal proceedings for infringement.*
- *So as to avoid conferring too great a measure of protection, combined use of patent and utility model rights for the same invention should be ruled out.*

I. INTRODUCTION

The achievement of a single market was for a long time the European Community's main aim. The conditions for the functioning of the single market were established over a period which ended on 31 December 1992². The internal market can and it must be improved further, if we are to have the certainty that goods will be able to move freely, and that competition will not be distorted. The date of 1 January 1993 was not the end; it was the beginning of a long-term process, in the course of which further changes will be needed in the legal structures and administrative practices we are used to in our own countries.

At the end of 1993 the Commission took the decision to publish a Strategic Programme for the single market, in order to establish clear priorities for the years to come.³ Priorities had to be set if the potential offered by the single market was to be properly harnessed so as to boost economic growth, competitiveness and employment.⁴

Without a common market in goods a "single" market or "internal" market is unthinkable.⁵ A common market in goods requires free movement of goods and fair competition. But even today free movement can be obstructed and competition can be distorted by the rules which may apply in this or that Member State. Industrial property rights, for example, often have to be applied for in the individual country, and confer exclusive protection only on that country's territory. Member States are free to decide whether they wish to provide such protection, and if so what form it should take. The terms of competition may vary as a result, and this can lead to distortion. It can happen, too, that holders of industrial property rights will avoid certain markets where no adequate protection is available. This has an adverse effect on trade and restricts the free movement of goods.

² Article 7a of the EC Treaty.

³ *Making the Most of the Internal Market: Strategic Programme*, COM(93) 632 final, 22 December 1993.

⁴ European Commission, *The Internal Market in 1993 - Summary*, Official Publications Office of the European Communities, Luxembourg, ISBN 92-826-7644-7.

⁵ Judgment of the Court of Justice in Case 78/70 *Deutsche Grammophon v Metro* [1971] ECR 487, paragraph 6, last sentence.

Given the close cross-border cooperation there is between companies in the European Union it is particularly important that industrial property rights should be brought more closely into line. This is the only way to eliminate the difficulties under which businesses have to suffer if there are wide discrepancies between different systems. In almost all areas of industrial property, therefore, action has been taken or has at least been initiated at Community level.⁶ Nothing has been done with respect to the "utility model", the industrial property right which forms the subject-matter of this Green Paper.

A "utility model" is a registered right which confers exclusive protection for a technical invention.⁷ It resembles a patent, in that the invention must be new - it must possess "novelty" - and must display a measure of inventive achievement - it must involve an "inventive step", though frequently the level of inventiveness required is not as great as it is in the case of patents. Unlike patents, utility models are granted without a prior search to establish novelty and inventive step. This means that protection can be obtained more rapidly and cheaply, but that the protection conferred is less secure. Utility model protection is at present entirely a matter of domestic law.

Different Member States have different schemes, which call the rights they confer by a variety of names: "utility model", "utility certificate", "six-year patent", "short-term patent", "petty patent" or "utility model certificate". As one might imagine from the range of terms used, the systems diverge widely, but they all provide protection for technical inventions alongside what is available under patent law. All the schemes in existence are intended to boost the innovative capacity of companies.

Legally speaking there is no objection to Member States' operating different systems of utility model protection, always provided they are not misused.⁸ But the present situation is not consistent with the objectives of free movement of goods and undistorted competition. And it discourages innovative activity in European companies. A high

⁶ E.g. Council Regulation (EC) No 40/94 of 20 December 1993 on the Community trade mark (OJ No L 11, 14.1.1994); amended proposal for a Council Directive on the legal protection of biotechnological inventions (COM(92) 589 final; OJ No C 44, 16.2.1993); Council Regulation (EEC) No 1768/92 of 18 June 1992 concerning the creation of a supplementary protection certificate for medicinal products (OJ No 182, 2.7.1992); proposal for a European Parliament and Council Regulation on Community design (COM(93) 342 final; OJ No C 29, 31.1.1994).

⁷ This distinguishes utility models from design rights, which protect the outward form of an object rather than a technical invention embodied in it.

⁸ See the second sentence of Article 36 of the EEC Treaty.

level of innovative activity gives a business a technological advantage, which is an important factor in its competitiveness.⁹ Today, the competitiveness of European companies is more important than ever before.

It is important, then, that measures be taken to promote innovative activity, so as to ease the path from the initial idea to the successful translation of that idea into practice. The legal protection available in the single market has a major role to play.¹⁰ The simpler and clearer such arrangements are for the user, the more they will facilitate innovation, providing effective safeguards for inventors while at the same time ensuring that the public is kept informed of new developments. This would increase the competitiveness of European companies and help to achieve the objectives of free movement of goods and undistorted competition.

In the last four years five more countries have introduced a system of the kind under discussion,¹¹ thus bringing to twelve out of fifteen the number of Member States in which such a system exists; and against this background voices have been raised in industry and trade associations calling for harmonization of utility model protection.¹² In the course of 1994 the European Parliament's interest in the matter was reflected in written questions asking the Commission to draw up proposals.¹³ In its Strategic Programme¹⁴ the Commission accordingly undertook to put forward a Green Paper on utility model protection.

This Green Paper seeks to assess the need for action by the European Union with respect to utility models, and to set out a number of options; the Commission will be in a position to decide between these possible courses once it has had a chance to study the comments of interested parties.

⁹ *European Industrial Policy for the 1990s*, Supplement 3/91 - Bulletin of the European Communities, p.23.

¹⁰ Alongside such things as the technological development programmes of the European Union and of the Member States.

¹¹ Ireland, Denmark, Greece, Finland and Austria.

¹² E.g. *Action européenne pour l'Éducation, l'Invention et l'Innovation*, petition to the European Parliament, No 1012/93; International Federation of Industrial Property Attorneys (FICPI), Resolution No 6, September 1994.

¹³ Written Questions Nos 1552/94 and 2536/94, Hearing on the petition to the European Parliament, No 1012/93.

¹⁴ *Making the Most of the Internal Market: Strategic Programme*, COM(93) 632 final, 22 December 1993.

Building on the approach outlined here in Chapter I, Chapter II examines the need for action at Community level. Bearing in mind the scope of the powers transferred to the European Community, it studies the economic significance of utility model protection and the negative impact on the common market of the differences which currently exist.¹⁵ Chapter III then goes on to discuss the type of legislation which would be suitable and the form which a Community scheme might take.

The results of two studies are drawn upon throughout the Green Paper to provide evidence of adverse effects on the free movement of goods and fair competition and an empirical foundation for the possible form of any Community action. An initial pilot study asked a total of 905 patent attorneys in Germany, France, Spain and the United Kingdom for their views on the economic significance of the existing systems and of possible developments.¹⁶ In the full-scale study which followed, 3 793 industrial companies and independent inventors were questioned, and statistics were drawn up and evaluated.¹⁷

The Green Paper begins with a summary of the most important findings and a questionnaire on the need for Community action and the form any Community action might take.

The Commission asks all interested parties to take an active part in this consultation process.

¹⁵ See the comparative study of the law in Annex 1.

¹⁶ Weitzel, G., Ifo Institute, *Pilotstudie - Die Wirtschaftliche Bedeutung des Gebrauchsmusterschutzes*, C.1, p.9.

¹⁷ Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.1.

II. THE NEED FOR ACTION AT COMMUNITY LEVEL

The Commission has to assess the need for action at Community level in terms of the establishment and functioning of the single market. It has accordingly considered whether the differences between the national systems of utility model protection hinder the achievement of these objectives.

The Commission has likewise studied the economic significance of this type of protection. It has to be determined whether the differences in the schemes operating in some countries, and the absence of similar schemes in others, have adverse effects on the common market; and a finding that utility model protection was of considerable economic significance in the single market would support this hypothesis. In the Commission's view the degree of economic importance of utility models and the scale of any adverse effects on the single market will affect the answer to the question whether harmonization is needed and if so to what extent.

A. The establishment and functioning of the single market

The Community is required to take measures "with the aim of progressively establishing the internal market". This internal market (or "single" market or "common" market) is to comprise an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured. This definition does not mention undistorted competition as an objective, but the concept of an internal market itself means that the provision is comprehensive in scope.

In the field of industrial property the establishment and functioning of a common market is primarily a matter of removing any remaining obstacles to the free movement of goods and services, and further improving the system of undistorted competition.¹⁸

Systems of utility model protection which differ from one country to another may interfere with the free movement of goods and undistorted competition. In that event the Community is called upon to take the necessary measures to approximate the provisions laid down by law, regulation or administrative action in Member States in order to remove the obstacles and further to improve the functioning of the common market.

¹⁸ See Article 7a TUE.

B. The present situation in the Member States

Some form of utility model protection exists in *France, Belgium, Portugal, Italy, Spain, Germany, Denmark, Ireland, Greece, Austria, Finland and the Netherlands*; these systems sometimes differ quite widely. The introduction of a similar system is under consideration in the United Kingdom, in Luxembourg and in Sweden.

All of these systems protect technical inventions, so that they can be described as forms of "*additional protection for technical inventions*". All of them permit registration without the need for examination to establish novelty and inventive step, which makes them quick and inexpensive to obtain.

There are wide differences in their requirements, which allow them to be divided into three groups.

The first group comprises rights which do complement patent law but whose requirements are the same as those for patents. The inventive step required here would also qualify the invention for patent protection ("full inventive step requirement"). Whether or not the invention possesses novelty is determined by reference to the state of the art internationally ("absolute novelty"). Embodiment in three-dimensional form is not a fundamental requirement.

Systems of this kind are the French *certificat d'utilité*, the Belgian *brevet de courte durée*, the Dutch *zesjarig octrooi*, and the "second-tier patent" which was at one time proposed in the United Kingdom.

The second group comprises those rights whose requirements are different from those of patent law. Here the inventive step required is smaller, allowing protection to be extended to minor inventions ("diminished inventive step requirement"). The number of inventions qualifying is reduced by a requirement that the invention be embodied in three-dimensional form.

Systems in this group are the Greek utility model certificate, the Spanish *modelo de utilidad*, the Portuguese *modelo de utilidade*, the Italian *brevetto per modelli di utilità* and the Finnish *nyttighetsmodell*. These systems can be graded further on the basis of the

degree of novelty called for: absolute novelty is required in Italy, Portugal, Finland and Greece, while relative novelty is sufficient in Spain.

The third group likewise has a diminished inventive step requirement. But here the three-dimensional form requirement plays only a secondary role, or is absent entirely, so that protection is available both for process inventions and for all those inventions where the inventive step is only small.

This group includes the German *Gebrauchsmuster*, which was subject to a three-dimensional form requirement in the past: the legislation has recently been amended, and no longer makes any reference to such a requirement, so that the right is available for all minor inventions, including process inventions. The Danish *brugsmodel*, the Austrian *Gebrauchsmuster* and the Irish "short-term patent" fall into the same category. Unlike the other systems, the German system requires only relative novelty.

These are all systems which grant a registered right without prior examination; but the differences between them are such that as things stand it would not be practicable to allow them to apply on a cross-border basis.

No steps to improve the situation have so far been taken at Community level. Nothing is yet planned in the context of the unification of intellectual property law, nor is there any other right which might cover the same area. This means that particularly for inventions involving only a small inventive step no Community-wide protection is available; indeed no proper protection at all is available in those countries where utility models have not been legislated for.

The Green Paper on the Protection of Industrial Design describes this as a "lacuna [which] represents a major problem in establishing a Community system of protection of industrial property".¹⁹

¹⁹ Commission staff working paper, point 11.5.2.3, p. 155.

C. The economic significance of utility model protection

The study of the economic significance of utility model protection can begin with innovative activity among firms in the single market. A high level of innovative activity gives a business a technological advantage, which is an important factor in its competitiveness.²⁰ Today, the competitiveness of European companies is more important than ever before. Innovation as a catalyst of competitiveness has accordingly been made a component in European industrial policy for the 90s.²¹

The level of innovation among firms in the common market is reflected in the rate of utilization of property rights for technical inventions, which are intended to promote and reward innovation.²² This investigation first looks at the utilization of utility model protection in the individual Member States and across their borders. These figures are then compared with those for patents, in order to clarify the importance of utility models in the individual countries.

The study then examines the types of firm and the particular industries which make most use of utility model protection, and considers the possible reasons.

The section ends with an industry-by-industry analysis of the development of innovative activity. This allows a forecast to be made of the likely economic significance of utility model protection in the future.

²⁰ *European Industrial Policy for the 1990s*, Supplement 3/91 - Bulletin of the European Communities, p. 23.

²¹ *Industrial Policy in an Open and Competitive Environment: Guidelines for a Community Approach*, COM(90) 556.

²² *Promoting the Competitive Environment for the Industrial Activities based on Biotechnology within the Community*, SEC(91) 629.

1. The utilization of utility model protection in the European Union

In looking at the rate of utilization a distinction has to be drawn between domestic applications and cross-border applications. The latter show the level of interest in utility model protection in industry in the common market in general, outside the borders of the particular country.

(a) The national applications statistics

An important indication of the economic significance of utility models in the individual Member States is provided by the national applications statistics. They show which systems arouse particular interest among business people. For many countries figures of this kind can be found in the annual statistics published by WIPO²³ and in the databases of the European Patent Office.²⁴ Only for France and Belgium are no such figures available.²⁵ This may be due to the different classification in the Paris Convention, in accordance with which utility model protection in France and Belgium is governed by the rules on patents and is not classed with "utility models" within the meaning of the Convention.²⁶ For this study, however, figures for applications for short-term patents were been obtained from the Belgian Patent Office. In the case of France the figures for applications at least in 1988, 1989 and 1990 were assembled by means of inquiries at the annual meeting of the *Fédération des Conseils en Propriété Intellectuelle*. Ireland and Denmark introduced utility model protection only in 1992, and no official figures are yet available. According to the Danish Patent Office, however, more than 1 000 applications were received between July 1992, when the utility model was introduced, and 1 June 1993. The following picture emerges:²⁷

²³ The World Intellectual Property Organization, based in Geneva.

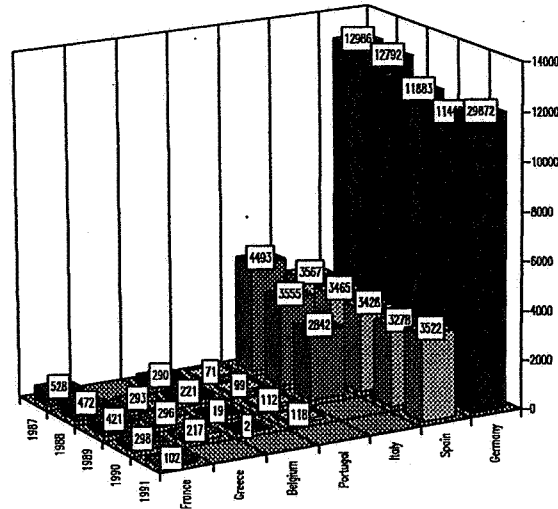
²⁴ The Epidos and Inpadoc bases.

²⁵ According to information supplied on 4 August 1992 by Mr Ludwig Baeumer, Director of WIPO's Industrial Property Division, WIPO's figures for applications in Belgium include patents. France has so far supplied no data on utility certificate applications and registrations. It can be assumed that the figures for patents include utility certificates.

²⁶ See Annex 1, the comparative study, at point A.2(a).

²⁷ The Italian statistics include applications from abroad. The Belgian statistics were kindly provided by the Belgian Patent Office; the figures for applications in 1990 show the position at 30 November 1990. The French INPI was unable to supply any figures for utility certificate applications. The statistics for Greece are taken from the annual reports of the Industrial Property Organization, the OBI.

Statistics for utility model applications in the EU Member States



(Source: European Patent Office, Epidos/Inpadoc, position at 9.7.1993, and Ifo patent statistics)

It will be seen that Germany, Spain and Italy are the countries with the highest numbers of applications. The systems in these countries have a diminished inventive step requirement. Greece also has such a system, but there the figures are less significant, as the system was introduced only in 1987. All the newer systems have the diminished inventive step requirement,²⁸ so that without going any further into the reasons at this stage one can say that systems with a diminished inventive step requirement have greater appeal than those where the inventive step requirement is the same as that for a patent.²⁹

(b) Cross-border applications

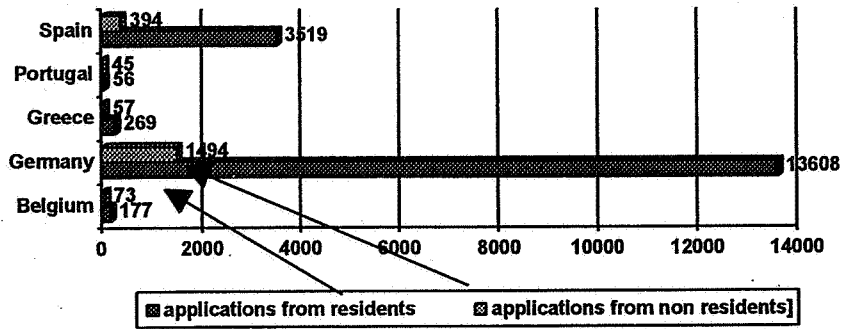
Figures showing the extent to which existing systems are used domestically do not tell us whether applications for such rights are being made across borders. As has been explained above,³⁰ given the variations between utility model systems in the European Union a large number of cross-border applications is not to be expected.

²⁸ The most recent being those introduced in Ireland, Denmark, Austria and Finland.

²⁹ The reasons for this preference are considered in Chapter III at B.2.

³⁰ See Chapter II at D.3, "Effects on industrial companies and independent inventors".

The following table shows the numbers of utility model applications from residents in the home country in comparison with the number of applications from other EC countries, from 1987 to 1991:



(Source: Industrial Property Statistics, publication A and B, WIPO, and Belgian Patent Office)

The fact that the number of registrations is so small is to be attributed to the difficulties which stand in the way of cross-border applications.

(c) A change in the behaviour of applicants in the European Union

When firms engage in innovative product development as a way of improving their competitiveness, they will need cross-border protection for their inventions. It can be difficult to make a realistic estimate of future, long-term sales potential, and at the same time of any additional competition which may emerge. Questions put to firms here are for the most part hypothetical. In a survey of patent attorneys, however, questions were nevertheless asked about the possible repercussions of the single market on the procedure for utility model applications, in an attempt to obtain some indication of future trends.³¹

Despite the present situation the results show that at least in Germany and Spain there is a majority of patent attorneys which expects the number of utility model applications in other EU countries to increase as a result of the single market; both large and small firms would be involved, in roughly equal measures. In the United Kingdom the results are not quite so clear-cut: 56% of the respondents expected an increase, but 44% said they expected no increase. French patent attorneys were distinctly sceptical: given the present

³¹ Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, 2.6, p. 26.

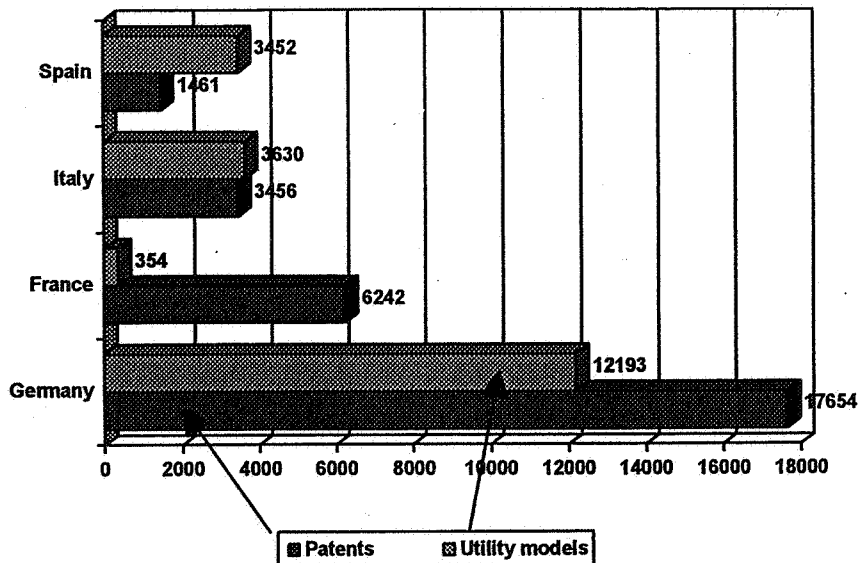
situation 76% expected no increase in applications, and consequently did not anticipate that the firms they advised would be needing greater protection.

But the patent attorneys expressed very positive expectations in the event that the fundamental legal position were to change. A clear majority of the German, Spanish and French attorneys questioned, 82% on average, expected an increase in applications if protection could be secured in several EC Member States by means of a single application. A decisive simplification of the process of obtaining utility model rights along these lines, according to the survey results, would lead to greater utilization of the utility model, the size of the firm being of little importance. The position was different in the United Kingdom, where only 56% of the patent attorneys questioned expected a development of this kind. These are plausible figures, given that there are no utility models to apply for in the United Kingdom, so that the utility model may be unknown to firms.

2. The significance of utility models in comparison with patents

The significance of the utility model as compared with the patent is to a great extent dependent on the way the system is designed. A comparison of national figures for applications for patents and utility models in Germany, France, Italy and Spain gives the following picture.³²

³² No comparable figures were available for other countries.



(Source: European Patent Office, Epidos/Inpadoc, position at 9.7.1993; Ifo patent statistics; and European Commission calculations)

It will be seen that in the case of Germany, Spain and Italy, where the inventive step required for a utility model is smaller than what is needed for a patent, the utility model plays a more important role by comparison with the patent than it does in the case of France, where the inventive step requirement is the same as that for a patent.

The reason is that in the systems where the inventive step looked for is smaller the requirements which must be satisfied in order to qualify for protection are lower; each of the two types of right then has its own *raison d'être*.

Utility model systems with the same requirements as patents have less appeal because they are in competition with patents, which many applicants prefer because of their greater security.

3. The significance of utility model protection by reference to the size of the firm

Utility model protection is not equally important to all firms: it depends where the firm's interests lie. A study of the relationship between the German patent system and

innovative activity in firms has been carried out in Germany,³³ which among other things looks at the importance of industrial property rights³⁴ in relation to the size of the firm.³⁵ The study finds that of these industrial property rights utility model protection is third in order of importance after patents and trade marks. When applicants are sorted by type of business, utility model protection is second in order of importance, after patents, among independent inventors and craft firms. Among industrial and manufacturing companies and research institutes it ranks at least third. It is striking that for all categories of applicant industrial design protection came in last place.³⁶ When applicants are sorted by size of business, it is found that there is higher demand for utility models among firms with an annual turnover of ECU 5 million or less, that is to say among small and medium-sized enterprises.³⁷ In this category utility model protection comes in second place after patents. But even among companies with a turnover up to ECU 1.25 billion and over utility models are in third place. In Germany, then, utility models are of importance especially to small and medium-sized industry with an annual turnover of up to ECU 5 million. The reasons cited are for the most part to do with savings in costs, time and administration. These are arguments which hold good for all the existing utility model systems, and in the Commission's view it can be concluded that utility model protection is useful to big industry, but even more so to small and medium-sized industry.

4. Significance in particular industries

After the rate of utilization and the importance of utility models to firms of different sizes, the Commission has attempted to establish which industries make particularly frequent use of utility model protection. The results obtained allow developments in individual industries to be studied and inferences to be drawn regarding the behaviour of applicants in future. An industry-by-industry analysis of applications for utility model

³³ Täger, U.C., with the collaboration of Seyler, H., *Probleme des deutschen Patentwesens im Hinblick auf die Innovationstätigkeiten der Wirtschaft*, study carried out by the Ifo Institute for the German Federal Ministry of Economic Affairs, May 1989.

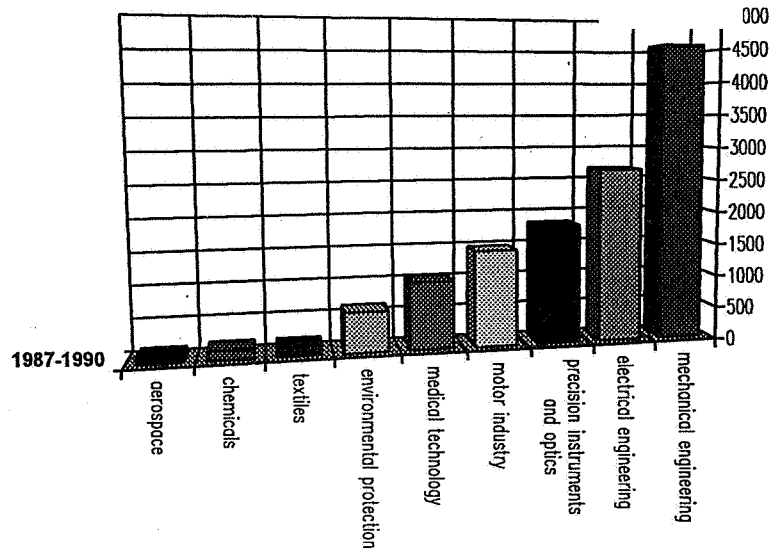
³⁴ Patents, utility models, industrial designs and trade marks.

³⁵ *Loc. cit.*, p. 142, at 7.3.

³⁶ *Loc. cit.*, p. 144.

³⁷ See European Commission, *Report from the Commission to the Council on the Definitions of Small and Medium-sized Enterprises (SMEs) used in the context of Community Measures*, SEC(92) 351 final.

protection in the European Community, ignoring differences between systems, gives the following picture:



(Source: European Patent Office, Vienna Sub-office, position at 8 January 1993)

The industry which makes most use of utility models is thus mechanical engineering. This also bears out the results of a survey of firms in Denmark which was conducted with a view to the introduction of such a system.³⁸ That survey found that utility model protection would be used mainly in mechanical and electrical engineering. After the mechanical engineering industry the main users are electrical engineering, precision instruments and optics, and the motor industry.

5. Reasons cited for seeking utility model protection

The reasons cited for seeking utility model protection are an important factor in a proper assessment of its economic significance. They provide concrete evidence of the features of the system which are regarded as particularly useful. In a survey of industrial

³⁸ 'Legal and Economic Significance of Protection by Utility Models', in *AIPPI Yearbook* 1986, 1-4, Q 83, pp. 45-47.

companies, independent inventors³⁹ and patent attorneys⁴⁰ in Germany, France, Italy, the United Kingdom and Spain the main reasons cited for seeking this form of protection were:

- quick, simple registration
- limited requirements
- low cost
- temporary protection pending the grant of a patent.

(a) Quick, simple registration

An applicant has to wait an average of four years for a European patent,⁴¹ and an average of two and a half years for a national patent,⁴² but the average wait for the registration of a utility model is six months, as no examination has to be carried out to establish novelty and inventive step. Of the reasons given by firms, independent inventors and patent attorneys for seeking utility model protection, by far the most frequently cited is quick and simple registration and protection against imitation.

This reason was most often cited by SMEs (67%), and only half as often by larger companies (33)%. The result tends to confirm that quick and simple registration is one of the main features which patent attorneys and firms demand of a serviceable utility model system. If registration is in fact quick and simple, therefore, that will be the main perceived advantage over patents.

Rapid protection against imitation is not an end in itself. Its main purpose is to consolidate a competitive position and to safeguard any competitive lead. This enables the producers of investment goods and consumer goods to pursue a marketing policy based on quality. Protection against imitation plays a particularly important role in Germany (where 58% regard it as "very important"). Spain and France follow. In Italy

³⁹ Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.7.

⁴⁰ Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, D, 2.1, p. 12.

⁴¹ Annual Report of the European Patent Office 1991, Chapter III, 1, p. 28.

⁴² Where a prior examination is carried out.

and the United Kingdom only a little over a third of respondents cite this reason. This may be partly due to the somewhat limited protection available under their legislation or administrative practice. A breakdown by size of firm shows that smaller firms are especially inclined to cite protection against imitation as a very important reason for applying for utility model protection.

In the case of large companies protection against imitation is somewhat less important. This may be because large companies are more often in a position to make effective use of the whole range of available legal weapons to protect their position against competitors.

Rapid registration leading to rapid commercial exploitation - whether under licence or by the applicant himself - is rated as "very important" or "important" by about 40% of respondents. This is the second most frequently cited reason. The assessment is broadly the same for all sizes of firm.

Utility model protection is thus a competitive weapon in its own right; it is used by firms of all sizes primarily as an indirect way of protecting or strengthening a market position, but also as a direct way of improving the commercial exploitation of inventions.

(b) Limited requirements

Among the main requirements for patentability are inventive step and absolute novelty. Most utility model systems require a smaller inventive step than is needed for patentability, and also limit the concept of novelty, so that the requirements are easier to satisfy. This is another important reason for seeking utility model protection.

The survey shows that inventions which involve only a minor inventive step are important not only to small firms but to large ones too. This was borne out by the patent attorneys questioned: a large majority considered the lower inventive step requirement an important reason for seeking utility model protection. The differences in the results here are reasonable given that patent attorneys are often confronted with legal problems of this kind in the day-to-day work of handling applications.

In France and the United Kingdom the question on the reasons for applying for utility models had to be hypothetical: if such a system existed, why might you apply? It was difficult to answer, because firms and independent inventors only very rarely had any

practical experience of applying for utility models abroad. Nevertheless, the answers do reflect the different legal background in the two countries adequately for present purposes.

Thus in the United Kingdom, where the only protection available for technical inventions is the patent, which necessitates prior examination, while functional designs qualify for the unregistered design right introduced in 1988, 50% of respondents regarded the less stringent legal requirements as a "very important" or "important" reason for a hypothetical application.

As an important interim finding, then, we can say that there is clearly an economic need for a form of protection with requirements less stringent than those for patentability.

(c) Low cost

Unlike patents, utility models are granted without a prior examination to establish novelty and inventive step. This makes them cheaper to obtain than patents. The following table summarizes the costs which will be incurred under the various national utility model schemes.

Fees for filing, grant and renewal (for ten years, in ECU)

	<i>Filing</i> (~ECUs)	<i>Grant</i> (~ECUs)	<i>Renewal</i> (~ECUs)	<i>Total</i> (~ECUs 10 years)
<i>Germany</i>	24.5		906.5	931
<i>Spain</i>	52.21	20.9	586.04	659.15
<i>Italy</i>	13.65	319.8		333.45
<i>Portugal</i>	19.6		151.2	170.8
<i>Greece</i>	60	40	162	262
<i>Belgium</i>	48		182.4	230.4
<i>Denmark</i>	260		650	910
<i>France</i>	37.5	97.5	136.5	271.5

(Based on the national fee regulations^{43, 44, 45, 46, 47, 48, 49, 50}, ECU: 1.5.1993)

⁴³ Germany: Patent Office and Patent Court Fees Act of 18 August 1976 as amended on 7 March 1990.

⁴⁴ France: Fundamental rules on fees are to be found in various provisions of the Patents Act, an example being Section 41. These are clarified by Regulation No 79-822, at Article 94 *et seq.* The precise amounts of fees are determined by on Order of 17 December 1985 on fees charged by the National Industrial Property Institute (INPI).

⁴⁵ Spain: Under Sections 454 and 160(1) of the Patents Act, fees are to be regulated in accordance with the schedule to the Act.

⁴⁶ Italy: under Article 11(1) of the Industrial Models Order, filing and grant fees are to be paid for utility models. The amounts of these fees are regulated by schedules A and C to the Order. Act No 60 of 14 February 1987 increased the fees substantially. Under Article 12 of the Order the grant fee may be paid in its entirety or in two instalments, the first providing protection for five years and the second for another five. Article 12 states that in other respects utility model fees are to be subject to Article 46 of the Patents Order. Article 46(1) of the Patents Order provides that the filing fee, at least the first half of the grant fee, and the printing fee are to be paid before the application is filed.

⁴⁷ In Portugal the fees for the registration of a utility model are set afresh each year in a special order (Section 255 of the Industrial Property Code). Section 257 of the Code lays down the rule that periodic fees for the renewal of the registration of a utility model are to be paid every five years.

⁴⁸ Greece: Fees Order, DS/A/2/89 of 26 January 1989.

⁴⁹ Belgium: Sections 71 and 72 of the Patents Act are supplemented by a Royal Order of 18 December 1986, amended in 1990.

⁵⁰ Denmark: Østerburg, 'Endlich ein Gebrauchsmuster- modellgesetz in Dänemark', in *GRUR Int.* 6/1993, p. 453.

Low cost is the third most frequently cited reason for seeking utility model protection. Particularly those firms which attempt to protect themselves as comprehensively as possible against the danger of imitation can find that a large number of applications generates problems of cost. From patent statistics it is well known that the policy of submitting large numbers of applications is especially important in the patent field. Large companies in particular may apply for over a hundred patents in one year at home and abroad. In Germany, for example, these big applicants account for over 20% of all patent applications, even though in the nature of things there are not very many of them - about 30 German and foreign firms. Utility models are completely different in this respect. With a few exceptions, even large companies apply for no more than thirty utility models a year.⁵¹

However, uncertainty as to the commercial value of inventions tends to increase the number of utility model applications, because of the low cost of applying. Putting an invention to use can involve a considerable commercial risk, because the new product or process will often fail to establish itself on the market. Where the success of an invention is very uncertain, therefore, the low cost of applying for a utility model will be a decisive factor in the choice of this form of protection.

SMEs have particular difficulty in determining the sales prospects of new products, and thus the value of inventions, because they have inadequate information from market observation and market research. Big companies can make use of tried and tested planning and forecasting machinery; this does not mean that they never have product failures, but they can limit their risk to some extent at least.

The distinctions are clearly reflected in the survey results. Among large companies only 11% of respondents cited the uncertain commercial value of an invention as a "very important" reason applying for utility model protection, while in small firms with 100 employees or less the figure was 26%.

Because utility model applications are inexpensive, therefore, this form of protection can serve to reduce the risk of launching an invention, and thus lead to increased innovative activity.

⁵¹ Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 3.1.

(d) Temporary protection

Rapid registration means that a utility model can be used to bridge the relatively long period which passes before a patent is granted, always supposing that the invention qualifies for both forms of protection. In answers to the survey this reason for applying is given roughly the same measure of importance as the low cost of application where the applicant is uncertain of the invention's commercial value.

Temporary protection is useful mainly in countries where a comprehensive examination is carried out in order to establish novelty and inventive step before a patent is granted. In countries where there is no automatic examination temporary protection is largely unnecessary, as it does not usually take long to process a patent application, and a patent can be obtained almost as quickly as a utility model.

6. Economic assessment by users

In Germany, Italy and Spain, where utility model protection already exists, industrial companies and independent inventors were asked to assess the this form of protection from an economic point of view.⁵² The question specifically asked respondents to consider both costs and benefits.

The overwhelming majority of both companies and inventors confirm that the effects of utility model protection are seen as positive; this applies across the board, with little variation between firms of different sizes (from 87% to 96%), or between the three countries (from 73% to 89%).

The main positive effect cited is an improvement in market position. Once again there are no great differences between firms of different sizes or between countries. An average 60% of respondents marked the statement outlining this effect "true", 24% as "partly true", and only 2% "false".

According to the survey results companies and inventors are already aware that they can hold on to a competitive lead only by invoking legal measures to keep their competitors

⁵² Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.7.

from imitating their innovations for a certain time, for example by applying to register their inventions as utility models. Through their innovations in products and processes they seek to display originality and to distance themselves from the competition, so that customers develop a positive image of their technological capability. In addition, 40% of respondents believe that utility model protection improves earnings directly, which allows the cost of innovation to be recovered more quickly and makes research and development more profitable.

7. Prospects for the economic significance of utility models

On the basis of the analysis of the existing situation the Commission has considered changes and developments in innovative activity in order to arrive at a forecast of the economic need for utility models in future.

Inferences regarding the further development of innovative activity can be drawn from changes in spending on research and development, the nature of new inventions, production cycles, the time when a protected product is marketed, and the lifetime of inventions.

(a) Changes in spending on research and development

Beginning in the United States in the 1950s, research and development ("R&D") in the individual firm and in the economy as a whole has become a focus of economic research. It was realized that there was a chain of causality which started with R&D and which largely determined how much and what sort of innovation would take place; this in turn to a great extent decided the pace of technological progress and ultimately of economic growth. One section of this chain stretches between R&D at one end and innovation at the other.

The survey of companies firms and independent inventors^{53,54} suggests that R&D spending will tend to hold firm in future, which is in line with the answers to questions on the future significance of minor inventions; this firmness is particularly clear in the case of high-technology industries and big companies. Thus in mechanical engineering, vehicles and accessories, electrical/electronics and precision mechanics, optics and medical engineering, between 50% and 58% of respondents felt that the level of R&D spending would remain the same in future. Given the intensive efforts to cut costs currently being made in all branches of industry, a stable level of R&D is to be welcomed.

Scope for increasing R&D spending is discernible in the packaging and materials handling industry, in the wood and furniture products industry, and among manufacturers of domestic appliances. The last two in particular are rather "low-tech" industries, which according to the respondents have fallen behind in R&D and have some catching up to do. When the figures are broken down by size of firm a similar pattern emerges for smaller firms. About one third of respondents in this category expect an increase in R&D spending in future; the figure for large companies is 17%.

This clear trend suggests that utility model protection will indeed grow more important in future.

(b) Changes in product life cycles, times to market and the lifetimes of inventions

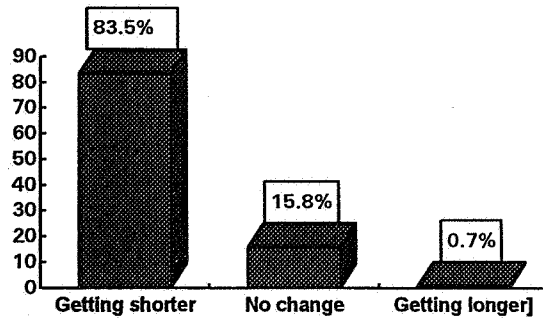
A Japanese study has found that product life cycles are shrinking worldwide. Leaving aside the possible reasons, time-lags between invention, marketing and the next generation of products are growing shorter. A comparison of product life cycles between 1981 and 1991 gives the following picture:⁵⁵

⁵³ Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.4.

⁵⁴ The Ifo Institute has been carrying out a regular innovation survey since 1979; since the mid-80s this proportion has remained within narrow bands "around the 5.5% mark" in all the industries studied. In the other EU countries studied in the survey this average is probably somewhat lower: Schmalholz and Penzkofer (1993), p. 88.

⁵⁵ *Questionnaire relating to Legal Protection of the Fruits of R&D*, Japan Institute of Intellectual Property, 1991.

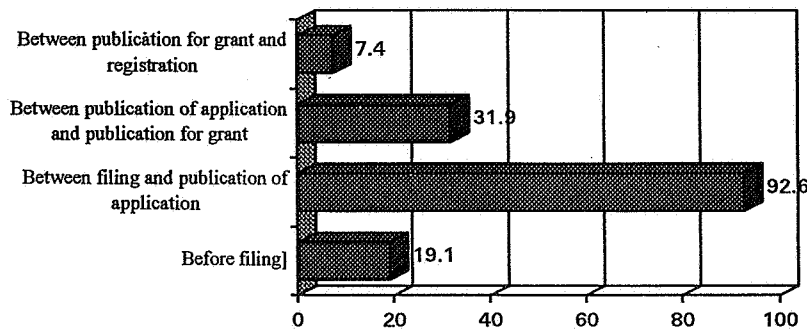
Changes in product life cycles between 1981 and 1991



(Source: Japan Institute of Intellectual Property, 1991)

This shortening of product life cycles creates a need for rapidly obtainable protection; it is less important that the protection obtained should last for a long time. In Japan, therefore, the marketing of articles protected by utility models usually begins in the interval between application and publication.⁵⁶

Marketing of utility-model protected goods, in %



(Source: Questionnaire relating to Legal Protection of the Fruits of R&D, Japan Institute of Intellectual Property, 1991)⁵⁷

⁵⁶ Questionnaire relating to Legal Protection of the Fruits of R&D, Japan Institute of Intellectual Property, 1991.

⁵⁷ The total exceeds 100%, as more than one answer was possible.

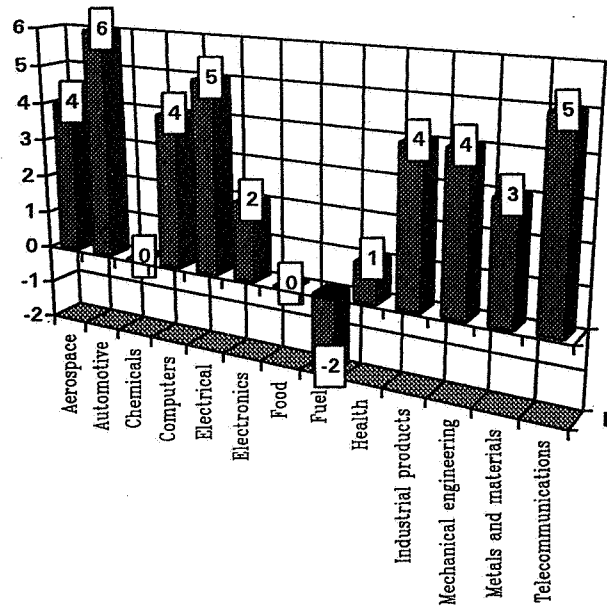
Searches to establish novelty are accordingly to be done away with in Japan in the near future. This is the only way to meet the need for quick protection of short-lived inventions.⁵⁸

In the United States the US Patent Office has carried out a study of changes in the lifetimes of inventions. The figures are broken down industry by industry, and show percentage changes in the time in which a firm will replace a generation of inventions by new inventions. The greater the value shown for the change the more the industry is tending to shorten the generation replacement time.⁵⁹

⁵⁸ *Subcommittee Report on Patent and Utility Models Laws and their Practices leading to International Harmonization*, Industrial Property Council of MITI, 1991.

⁵⁹ *Business Week, Science and Technology*, 3 August 1992, McGraw-Hill Inc.

Trend towards shorter lifetimes for inventions, 1987-91, in %⁶⁰



(Source: *Business Week, Science and Technology*, 3 August 1992, CHI Research Inc.)

These figures show that in all industries with the exception of fuel, food and chemicals there is a tendency for new inventions to be developed more rapidly.

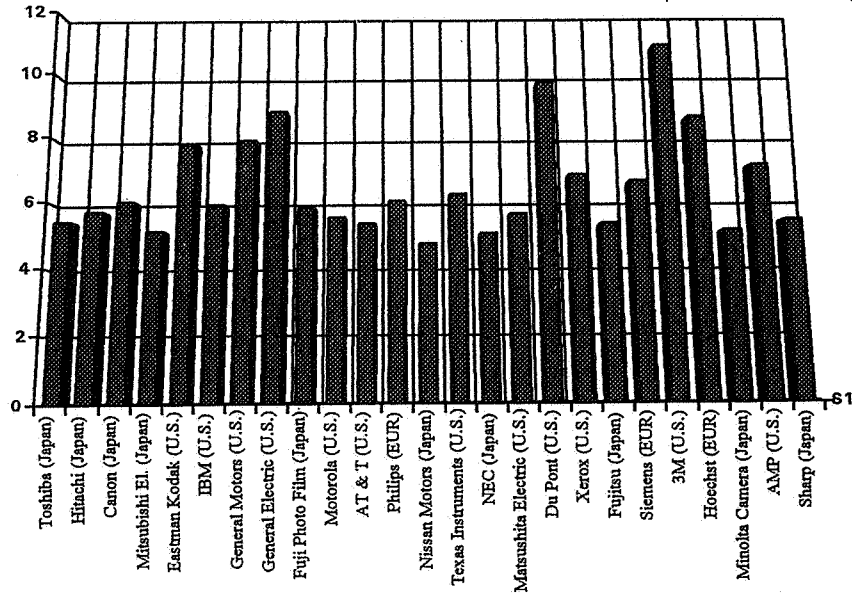
The result is that the average lifetime of an invention today is not more than six years.⁶¹ A study of innovation among the world's largest companies confirms these figures.⁶²

⁶⁰ The lifetime of an invention ends with a new invention which technically supersedes the old one. Thus the lifetime of an invention is frequently shorter than the duration of the patent, which can be maintained for longer.

⁶¹ *Business Week, Science and Technology*, 3 August 1992, CHI Research Inc.

⁶² *Business Week, Science and Technology*, 3 August 1992, CHI Research Inc.

Lifetime of inventions, in years



(Source: Business Week, Science and Technology, 3 August 1992, CHI Research Inc.)

If one tries to bring these shorter product life cycles and invention lifetimes into relation with the industries which make most use of utility model protection, one finds a striking degree of correlation. Not only do mechanical engineering, electrical engineering and the automotive industry account for the most utility model applications: they are also the industries in which there is the strongest trend towards further reduction of product life cycles and the lifetimes of inventions.

In 1991 the time which elapsed between submission of a patent application to the European Patent Office and the grant or refusal of a patent after examination was 44 months in half of all cases.⁶³ If we compare this figure with the average lifetime of inventions, we can conclude that innovation cycles will shorten still further in future, and that this will increase demand for a form of protection which can be obtained quickly for short-lived inventions, separately from patent protection. The utility model provides the best way of meeting this demand.

⁶³ Annual Report of the European Patent Office, 1991, p. 28.

(c) Changes in the scale of innovation and the length of exploitation of inventions in the European Union

In order to obtain a clearer picture of the protection needed by industrial companies and independent inventors, they were asked how they graded the inventive step involved in their inventions - high, medium or low - and whether short-term protection and short-life products were involved.⁶⁴

Large companies in particular (over 1 000 employees: 6% of those surveyed) expect the proportion of inventions involving a small inventive step or a short period of exploitation to remain the same. Thus these companies do not for the most part expect innovative activity to increase substantially, over and above the regular renewal of their product ranges, or product lifetimes to fall any further.

Smaller firms take a different view: they accept that they need to do more in this area if they want to hold their own in competition. A majority consequently expects an increase in the proportion of "small" inventions and inventions with a short period of exploitation.

SMEs often express the view that given the tougher competition they must intensify their innovative activities. They therefore feel that inventions involving a small inventive step or having a short period of exploitation will play a greater role in future, so that the need will grow for an appropriate form of protection, which can best be provided by the utility model.

For an assessment of future needs it must be noted that only a small proportion of respondents in all sizes of firm and all industries (not more than 10%) expected the proportion of "small" inventions to fall.

(d) Usefulness of Community utility model protection to industrial companies and independent inventors

Against the background of developments in innovative activity, industrial companies and independent inventors in France, Spain, Germany, the United Kingdom and Italy were asked whether they would be interested in a specific form of protection to facilitate

⁶⁴ Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.3.

marketing their "minor" inventions which compared with patents would make less stringent requirements for protection, which would not involve examination and would consequently be cheaper, but which would afford protection for a shorter time.⁶⁵

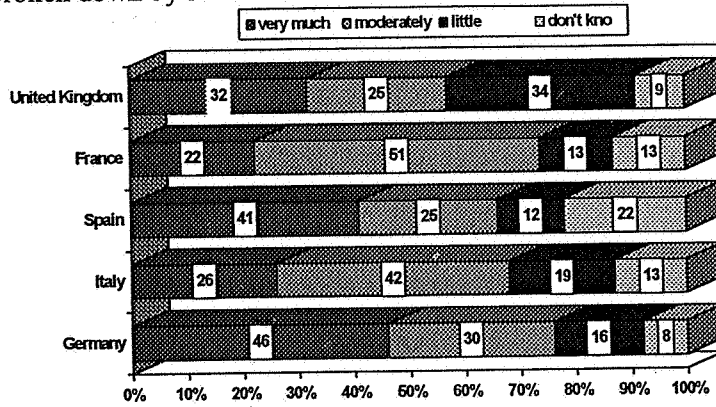
The survey results leave no doubt that there is fairly strong demand for such a form of protection. An average 39% said they would be "very much" interested, 32% said they would be "moderately" interested and only 20% said they would have "little" interest. "Don't knows" amounted to 9%, which is a small proportion.

A breakdown by size of firm shows that interest is greatest among smaller firms with up to 500 employees. Here almost every second firm questioned would be very interested. Interest is somewhat lower among big companies with over 1 000 employees.

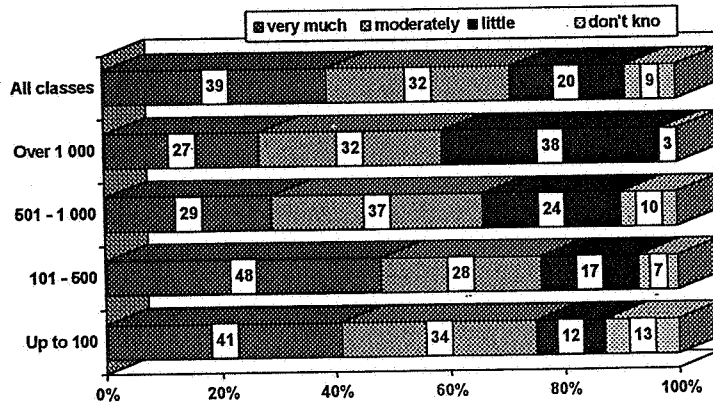
⁶⁵ Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.10.

Interest in utility model protection in the European Union (%)

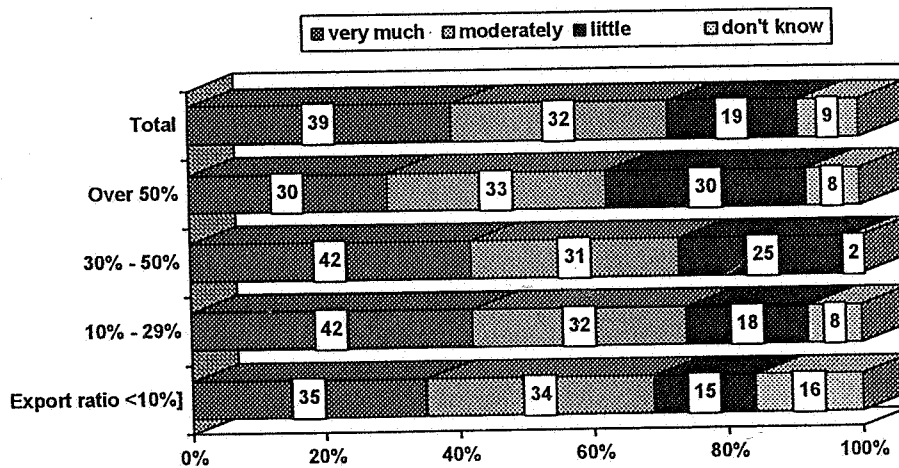
Broken down by selected Member State



Broken down by size of firm



By export ratio



(Source: Ifo Institute survey in selected EU countries in 1993; European Commission calculations, 1994)

The country-by-country breakdown shows that interest in a special right additional to patent protection is particularly strong in Germany. Of German firms and independent inventors 46% said they would be very interested, and a further 30% would be moderately interested. The results in Spain are similar. Such a form of protection would be fairly well received in both countries. One contributory factor is no doubt the fact that in these countries utility model systems already have long traditions behind them, and are intensively used. Respondents already have practical experience, and are better able to imagine an extension of protection to other EU countries and to evaluate its usefulness in their marketing activities abroad.

In the other selected EU countries respondents who said they would be "very much" interested in utility model protection are somewhat less well represented. But if we add the figures for "very much" interested and "moderately" interested together, there is no appreciable difference between the results for different countries.

Only in the United Kingdom is there a noticeable polarization in views offered. About one third of industrial companies and independent inventors would be "very much" interested, and about the same proportion would have "little" interest. This may be due to the fact that utility models do not at present exist in the United Kingdom. Firms can see the economic advantages, but are sceptical at the idea of a European arrangement because they have no experience in the area.

A breakdown by the proportion of exports to the firm's total sales shows that firms with a ratio of between 10% and 50% are only slightly more likely to be very interested than firms which export less and have an export ratio of less than 10%. Thus interest in EU utility model protection is largely independent of export ratio.

This uniform response suggests that regardless of what sales they may have at present in the single market, industrial companies and independent inventors want at least to keep open the option of expanding their market in the future, and are interested in EU-wide utility model protection for that reason.

D. Effects of the discrepancies on the common market

The economic significance of utility model protection means that the discrepancies between the existing national schemes have practical repercussions; the Commission has

accordingly considered whether this causes obstacles to the free movement of goods and distortions of competition which stand in the way of the establishment of the internal market called for in Article 7a of the EC Treaty.

1. Obstacles to the free movement of goods

Free movement of goods and a customs union are the basis of the Community. They are intended to facilitate the achievement of the objectives set out in Article 2 of the EC Treaty by establishing a single market⁶⁶ in which the markets of the separate countries are fused and the economic policies of the Member States are gradually aligned. A common market is inconceivable without a single market in goods. The Treaty provisions on the free movement of goods seek to promote integration by freeing private parties to move goods across borders as they see fit, with as little hindrance as possible. The EEC Treaty therefore listed the free movement of goods among the "foundations of the Community". The Court of Justice has spoken of "the essential purpose of the Treaty, which is to unite national markets into a single market".⁶⁷

A national intellectual property right registered under the law of a Member State provides protection only on the territory of that State. In the absence of any unification of the law, therefore, the holder of such a right can prevent third parties from importing protected goods which have been produced and marketed without his consent. Thus the intellectual property rights conferred by the Member States can of their nature be used to hinder the free movement of goods.

This conflict between industrial property rights and the principle of the free movement of goods has been resolved by the Court of Justice in its interpretation of Articles 30 and 36 of the EC Treaty. The central finding in this interpretation is that the Treaty does not affect the *existence* of the industrial and commercial property rights conferred by national law, but that their *exercise* can be restricted by the prohibitions imposed by the Treaty: the free movement of goods may be restricted only where this is "justified for the

⁶⁶ See Article 7a of the EC Treaty.

⁶⁷ Case 78/70 *Deutsche Grammophon v Metro* [1971] ECR 487, paragraph 6, last sentence.

purpose of safeguarding rights that constitute the specific subject-matter" of the property right.⁶⁸

Utility model protection confers additional protection for technical inventions, and by analogy with patent protection⁶⁹ it can be included in the "industrial and commercial property" referred to in Article 36 of the EC Treaty. Given the differences which exist between the protection conferred by the various national schemes, however, there are a number of special features in the way the free movement principles apply.

Member States are basically free to design utility model systems as they will, provided the measures they take are not a means of arbitrary discrimination or a disguised restriction on trade between Member States.⁷⁰ A country may do without utility models altogether, as the United Kingdom, Sweden and Luxembourg have done, and where it does provide a system of utility model protection it may lay down requirements different from those of its neighbours. An invention involving a small inventive step is protectable only in those countries where utility model protection exists. The relative novelty which suffices in Spain means that inventions which have already been published in other Member States will nevertheless qualify for utility model protection in Spain. Even a right acquired under these circumstances falls within the scope of the exceptions to the free movement principle in Article 30 which are allowed by Article 36.⁷¹ The differences between the systems of protection are outside the control of the right-holder, and force him to avoid markets where he cannot obtain equivalent protection for his invention. Since the new design right was introduced in the United Kingdom⁷² it has not been possible to register a right in goods whose form is determined solely by their technical function.⁷³ This creates a barrier between the UK and other markets.

Thus the differences which exist have a direct adverse effect on trade within the Community, and on firms' capacity to treat the common market as a single setting in

⁶⁸ See e.g. Case 192/73 *Van Zuylen v Hag* [1974] ECR 731, and Case 15/74 *Centrafarm v Sterling Drug* [1974] ECR 1147.

⁶⁹ E.g. *Centrafarm, supra*.

⁷⁰ Case 53/87 *Consorzio Italiano v Renault* [1988] ECR 6039, paragraph 12.

⁷¹ Case 35/87 *Thetford v Fiamma* [1988] ECR 3585.

⁷² Copyright, Designs and Patents Act 1988.

⁷³ Cornish, *Intellectual Property*, 1989, Chapter 14, 14-106.

which to do business.⁷⁴ The free movement of goods is obstructed and, as the Court of Justice has repeatedly remarked, this is an unavoidable consequence of the lack of harmonization of the law.⁷⁵

2. Distortion of competition in the common market

Article 3(g) of the EC Treaty calls for the establishment of a system ensuring that competition in the internal market is not distorted. This objective is related to the phrase in Article 2 which requires "a harmonious and balanced development of economic activities" throughout the Community.⁷⁶ If firms are to take advantage of the fundamental freedoms laid down in the EC Treaty, the intellectual property rules must allow fair competition between them.⁷⁷

Given the differences which exist at present, companies or individual inventors wanting to exploit an invention in several Member States have to familiarize themselves with a number of different systems or take expensive advice in each of the Member States concerned. The situation may be bearable in the case of big companies that can invest large sums of money in the promotion and protection of their inventions. For individual inventors and for SMEs the differences they have to deal with and the consequent need for legal advice are a source of administrative difficulty and often an insuperable cost factor. This restricts innovative activity on the part of such businesses and consequently distorts competition.

In those countries which demand the same level of inventiveness for utility models as they do for inventions, there is no proper protection for inventions whose level of inventiveness is small. In the United Kingdom, Sweden and Luxembourg there is no utility model protection at all. In countries without adequate protection goods can be imitated, and no redress is available.

⁷⁴ From the Commission's White Paper on Completing the Internal Market, June 1985, paragraph 145: "Differences in intellectual property laws have a direct and negative impact on intra-Community trade and on the ability of enterprises to treat the common market as a single environment for their economic activities."

⁷⁵ E.g. Case 53/87 *Conorzio Italiano v Renault*, *supra*, paragraph 10, with further references.

⁷⁶ Manfred Zuleeg in Groeben, *Kommentar zum EWG-Vertrag*, fourth edition, Rdnr. 9 zu Artikel 3.

⁷⁷ Langheine in Grabitz, Art. 100a, Rdnr. 20; Pipkorn in Groeben, Art. 100a, Rdnr. 17.

Copies can usually be manufactured more cheaply than the originals, because the manufacturer does not need to cover the innovation costs, and they can consequently be sold more cheaply than the originals too.⁷⁸ There is thus a danger that in countries with low levels of protection the imitation may secure a larger share of the market than the original. And as the single market grows more integrated it may well become easier to import the imitation into Member States where the level of protection is high. Indeed the importer may be acting quite innocently, and be unaware of the differences between the two systems of protection. The right-holder's only remedy is then to bring legal proceedings against parties who will often have been acting in good faith.

This runs counter to European Union policy, which seeks to prevent the misappropriation of rights resulting from the creative effort of European inventors and substantial investments on the part of European business,⁷⁹ and constitutes a distortion of competition. To prevent it the terms of competition must be the same for all enterprises doing business in the common market.⁸⁰

3. Effects on industrial companies and independent inventors

The national patent systems in Europe have generally been aligned on European patent law. The European Patent Convention was specifically designed to leave the national systems unaffected, but there followed a process of voluntary harmonization⁸¹ which has greatly simplified the practical requirements for cross-border applications.

The position with regard to utility models is very different. There is a wide variety of utility model systems in the European Union. They are used primarily by domestic applicants, less often by applicants from other countries in the single market, and still less often by applicants from non-member countries.

⁷⁸ Green Paper on the Legal Protection of Industrial Design, June 1991, 3.3.4, p. 31.

⁷⁹ Green Paper on the Legal Protection of Industrial Design, June 1991, point 3.5, p. 33.

⁸⁰ Green Paper on the Legal Protection of Industrial Design, June 1991, point 3.3.1, p. 31.

⁸¹ See van Benthem in *Grur Int.*, 1993.

Given that international trade in goods is increasing, as the international division of labour grows stronger, this is not what one might have expected. There ought to be an increase in the number of applications for patents and other forms of protection for technical inventions, not just in the applicants' own countries but on foreign markets as well. Information is also being exchanged more and more rapidly, with international fairs providing an important platform for the presentation of innovations, and this creates an even greater need for protection against competitors who are prepared to imitate a manufacturer's product.

But in fact European Union applicants rarely seek utility model protection on markets outside the Union, and the same applies in the opposite direction. An analysis of applications in Asiatic countries which have provision for utility model protection shows that European firms make no use of it. Asian firms likewise make only very limited use of the possibilities offered by European utility model schemes. Even on markets in which they are very interested, such as the German market for example, they account for very few utility model applications.

Comparison of domestic and foreign utility model applications in 1991

	From residents	From non-residents
Germany	13920	1633
Korea	25125	770
China	33157	125
Japan	113340	1334

(Source: Intellectual Property Statistics 1991, publication A, WIPO, Geneva)

Country-by-country breakdown of applications made abroad

	Applications by German firms in	Applications by Japanese firms in
Germany	-	64
Japan	145	-
Spain	48	5
Portugal	20	-
Brazil	1	5
China	4	14
Mexico	2	-
Poland	3	-

(Source: Industrial Property Statistics 1991, publication A, WIPO, Geneva)

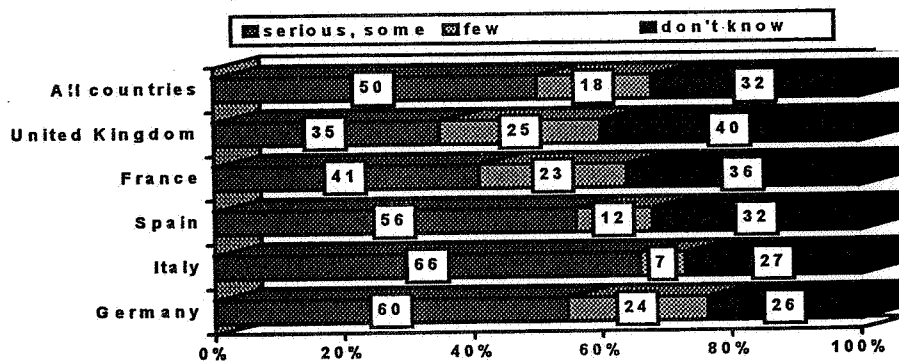
In the Commission's view, therefore, utility model protection has to be looked at in terms of the domestic market. In the European Union the domestic market is fast becoming a Union-wide single market rather than the market of the particular Member State.

But even in the single market cross-border applications are fairly exceptional. In order to investigate the causes of the small number of cross-border applications, industrial companies and independent inventors in selected EU countries were asked whether the differences between the national utility model systems gave rise to practical difficulties when seeking protection.⁸²

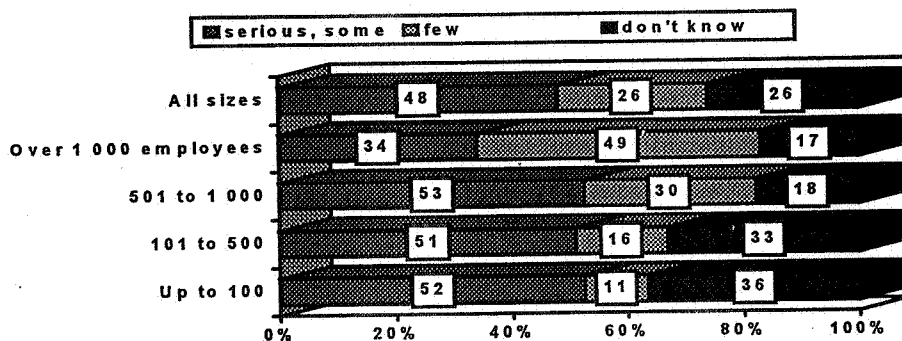
⁸² Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.7.

Difficulties with the protection of innovation caused by varying utility model laws in the European Union (%)

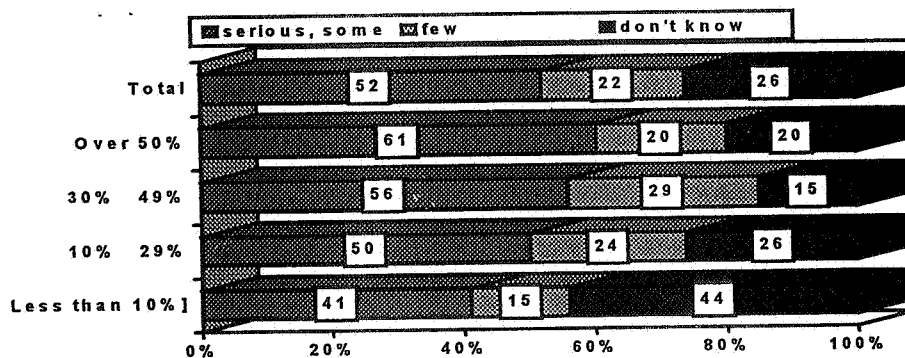
By selected EU country



By size of firm



By export ratio of firm



(Source: Ifo Institute survey in selected EU countries, 1993; European Commission calculations, 1994)

An average 50% of all firms questioned reported "serious" or "some" difficulties with cross-border applications for utility models in the single market.

It is striking that the number of "don't knows" is fairly high. This is due to the fact that the different systems vary so widely in their effects that companies and independent inventors are unable to form an opinion. The number of don't knows is accordingly highest in the United Kingdom and France. In the United Kingdom the only protection available is the patent, which necessitates a prior examination, or the registered design right for functional designs, and in France the *certificat d'utilité* takes a form largely identical to that of the patent; firms in those countries often have no very clear idea of a scheme of protection which stands alongside the patent system and can be used either alone or in addition to a patent to protect technical inventions involving a small step in development or a short period of exploitation.

Despite this there is still a substantial proportion of respondents in the United Kingdom and France who consider that the current situation causes difficulty (United Kingdom 35%, France 41%).

The breakdown by size of firm shows that there are difficulties with the protection of innovation in the opinion of something over 50% of firms with up to 1 000 employees, but only 34% of very large companies with more than 1 000 employees. The smaller the enterprise the more frequently it considers that the present situation is causing it difficulty. The reason may be that small businesses do not have the necessary expertise inside the firm, and for reasons of cost can have recourse to outside consultants only in special cases. The patent departments of large companies clearly have less difficulty in applying for utility models wherever the system exists and the market position makes it necessary.

It is also true that small businesses are more likely to express no opinion, while large companies have already formed a view of the question. This suggests that small firms and independent inventors in the European single market have not yet developed any great need for protection, because they continue to sell primarily to established local markets.

This view of the matter is borne out when the answers to the question are broken down by the export ratio of the firm questioned. As the export ratio rises, the firm will more and more frequently report difficulties with the protection of innovations. There is a very strong correlation between export ratio and size of firm, so that it is mainly large companies which are affected. Nevertheless, even in the category with a low export ratio (proportion of exports to total sales below 10%), 41% of respondents reported difficulties.

In the view of the respondents, therefore, the variations between utility model schemes make it more difficult to protect innovation in the single market. These difficulties also go a long way towards explaining why the use of the systems which already exist remains confined to domestic markets.

E. European Union policy and economic need

It has become clear, then, that the Member States have different systems of utility model protection, and that utility model protection is of considerable economic significance now and will continue to be so in future. The differences between the national systems are an obstacle to the free movement of goods and undistorted competition. The present situation is undesirable, and to maintain it would run counter to the concept of a Europe which is drawing closer together.

The European Community has a duty to take steps to remedy a situation on which is detrimental to the single market, and thus to improve the operation of the market.

In the Commission's view, however, any harmonization undertaken in order to establish a single market and ensure that it functions properly must respond to present and future economic need. The development of innovative activity in the European Union, which has been marked by a trend towards smaller inventive steps, greater cost-sensitivity, shorter product and marketing cycles and a shorter lifetime for inventions, is generating increased demand for a form of protection that offers fast, simple and inexpensive protection for technical inventions in the common market.

The national schemes of utility model protection do not achieve this. The Member States are in no way to blame: first, they are free to design their systems as they will; and second, the difficulties noted here do not emerge clearly inside the confines of the individual Member State, but rather in cross-border dealings in the single market.

In order to ensure that the single market becomes a reality and operates smoothly, therefore, steps should be taken to remedy these shortcomings at Community level, with the following main objectives:

- protection to be provided for technical inventions which involve only a small inventive step,
- protection to be provided for short-lived technical inventions,
- protection to be obtainable rapidly,
- protection to be obtainable simply,
- protection to be inexpensive, and
- publication to be rapid, so that the public is informed quickly.

III. WHAT MEASURES SHOULD BE TAKEN?

This investigation has found, therefore, that the variety of the forms taken by utility model protection has an adverse effect on the establishment and the functioning of the single market. The conclusion was that only a harmonization of the different systems of protection would adequately meet the needs of the economy and satisfy the requirements of a common market. If it is accepted that Community action is needed, it has then to be considered what options are open; there are two aspects to be looked at here:

- what form any legislation should take, and
- the substance of the arrangements to be introduced.

