



Procedure file

Basic information	
COD - Ordinary legislative procedure (ex-codecision procedure) Directive	2002/0047(COD) Procedure rejected
Patent law: patentability of computer-implemented inventions	
Subject 3.50.16 Industrial property, European patent, Community patent, design and pattern	

Key players			
European Parliament	Committee responsible	Rapporteur	Appointed
	JURI Legal Affairs		14/09/2004
		PSE ROCARD Michel	
	Former committee responsible		
	JURI Legal Affairs and Internal Market		25/05/2000
	PSE MCCARTHY Arlene		
	Former committee for opinion		
	ITRE Industry, External Trade, Research, Energy		27/03/2002
		ELDR PLOOIJ-VAN GORSEL Elly	
	CULT Culture, Youth, Education, Media and Sport		26/03/2002
		PSE ROCARD Michel	
Council of the European Union	Council configuration	Meeting	Date
	Competitiveness (Internal Market, Industry, Research and Space) 2645		07/03/2005
	Competitiveness (Internal Market, Industry, Research and Space) 2583		17/05/2004
	Competitiveness (Internal Market, Industry, Research and Space) 2462		14/11/2002
	Competitiveness (Internal Market, Industry, Research and Space) 2412		01/03/2002
European Commission	Commission DG	Commissioner	
	Financial Stability, Financial Services and Capital Markets Union		

Key events			
20/02/2002	Legislative proposal published	COM(2002)0092	Summary
27/02/2002	Committee referral announced in Parliament, 1st reading		
01/03/2002	Debate in Council	2412	
14/11/2002	Debate in Council	2462	
	Vote in committee, 1st reading		Summary

17/06/2003			
17/06/2003	Committee report tabled for plenary, 1st reading	A5-0238/2003	
23/09/2003	Debate in Parliament		
24/09/2003	Decision by Parliament, 1st reading	T5-0402/2003	Summary
07/03/2005	Council position published	11979/1/2004	Summary
14/04/2005	Committee referral announced in Parliament, 2nd reading		
20/06/2005	Vote in committee, 2nd reading		Summary
21/06/2005	Committee recommendation tabled for plenary, 2nd reading	A6-0207/2005	
05/07/2005	Debate in Parliament		
06/07/2005	Decision by Parliament, 2nd reading	T6-0275/2005	Summary

Technical information

Procedure reference	2002/0047(COD)
Procedure type	COD - Ordinary legislative procedure (ex-codecision procedure)
Procedure subtype	Legislation
Legislative instrument	Directive
Legal basis	EC Treaty (after Amsterdam) EC 095
Stage reached in procedure	Procedure rejected
Committee dossier	JURI/6/27042

Documentation gateway

Document attached to the procedure		COM(2000)0199	10/04/2000	EC	Summary
Legislative proposal		COM(2002)0092 OJ C 151 25.06.2002, p. 0129 E	20/02/2002	EC	Summary
Economic and Social Committee: opinion, report		CES1031/2002 OJ C 061 14.03.2003, p. 0154	18/09/2002	ESC	
Committee opinion	CULT	PE312.545/DEF	29/01/2003	EP	
Committee draft report		PE327.249	14/02/2003	EP	
Committee opinion	ITRE	PE321.981/DEF	11/03/2003	EP	
Amendments tabled in committee		PE327.249/AM	16/04/2003	EP	
Amendments tabled in committee		PE327.249/AC1	15/05/2003	EP	
Amendments tabled in committee		PE327.249/AC4	12/06/2003	EP	
Amendments tabled in committee		PE327.249/AC6	12/06/2003	EP	
Committee report tabled for plenary, 1st reading/single reading		A5-0238/2003	17/06/2003	EP	
Text adopted by Parliament, 1st reading/single reading		T5-0402/2003 OJ C 077 26.03.2004, p. 0087-0229 E	24/09/2003	EP	Summary

Council statement on its position		16120/2004	17/12/2004	CSL	
Council position		11979/1/2004 OJ C 144 14.06.2005, p. 0009-0015 E	07/03/2005	CSL	Summary
Commission communication on Council's position		COM(2005)0083	09/03/2005	EC	Summary
Committee draft report		PE357.776	29/04/2005	EP	
Amendments tabled in committee		PE357.845	04/05/2005	EP	
Amendments tabled in committee		PE360.003	10/06/2005	EP	
Committee recommendation tabled for plenary, 2nd reading		A6-0207/2005	21/06/2005	EP	
Text adopted by Parliament, 2nd reading		T6-0275/2005 OJ C 157 06.07.2006, p. 0095-0265 E	06/07/2005	EP	Summary

Additional information

European Commission

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Patent law: patentability of computer-implemented inventions

This report from the Commission concerns the implementation and effects of Directive 91/250/EEC on the legal protection of computer programs. The present report is substantially based on a study carried out by external consultants and finalised in 1997, together with the Commission's own findings, including comments from interested circles. The overall results show that the objectives of the Directive have been achieved and the effects on the software industry are satisfactory (demonstrated for example by industry growth and decrease in software piracy). On the basis of these results there appears to be no need to amend the Directive. As far as implementation by Member States is concerned, some flaws have become apparent. While not all of these merit attention by the Commission, others may need to be investigated further with a view to possible infringement proceedings. Some specific issues raised by industry (the distribution right and communication to the public, back-up copies, remedies, and technical devices) are also addressed. While the Commission concludes that no amendment of the Directive in these respects is appropriate at present, this is not to rule out the possibility of adjustment at a later stage in the light of other developments. Finally reference is made to related Community initiatives, specifically the patentability of computer software (which would complement the existing copyright protection) and the Green Paper on combating counterfeiting and piracy in the single market, which would be the appropriate context for further action on software piracy. Member States' attention is drawn in particular to the importance of government policies on the use of legal software. ?

Patent law: patentability of computer-implemented inventions

PURPOSE : to lay down rules relating to the patentability of computer-implemented inventions. **CONTENT :** the European Commission has presented a proposal for a Directive on the protection by patents of computer-implemented inventions. The proposed Directive would harmonise the way in which national patent laws deal with inventions using software. Such inventions can already be patented by applying to either the European Patent Office (EPO) or the national patent offices of the Member States, but the detailed conditions for patentability may vary. The Commission's proposal follows extensive consultations since 1997. The proposal takes as its basis the concept of "technical contribution" as an essential requirement of any patentable invention. This approach is consistent with the case law developed over the years in the EPO and the Member States. It implies that a computer-implemented invention which makes a "technical contribution" to the state of the art, which would not be obvious to a person of normal skill in the field concerned, is more than just a computer program "as such" and can therefore be patented. The requirement for a "technical contribution" is fully consistent with the European Patent Convention and the EU's wider international obligations. Such a requirement for a "technical contribution" has been established in case law. The proposed Directive, by creating transparency and legal certainty, would create an environment in which innovation could be most effectively protected and fostered. At the same time, it would put beyond doubt that creations in which the innovative element is not technical in nature, that is to say which make no technical contribution, cannot be patented. The proposal thus addresses concerns that EU patent law might in future be extended to cover fields of human endeavour which have up to now been excluded, in particular business methods and mathematical entities or logical constructs having no relation to the physical world. According to the proposal, a patent would normally cover inventive concepts and principles that underlie particular components of a software program. Just like a complex piece of physical machinery such as a car or a refrigerator, a software application may depend on its proper functioning on many different components, only some of which could be patented. This is an important distinction with copyright law. While copyright protects the entire code of an operating system, game or piece of business software against unauthorised copying, distribution and use, a patent would cover only the specifically-patented components. The proposal would not allow patents to be granted for computer programs on their own, i.e. in isolation from a machine on which they may be run. This marks a different approach to the direction taken until now by the EPO and some case law in Member States. The proposal therefore reflects concerns that if 'isolated' computer programs could be patented, this would blur the distinction between the scope of copyright and patent protection, and that if enforced, patents including such claims could be used to prevent "reverse engineering" and other activities considered legitimate in

respect of computer programs already protected under copyright law. The proposal would require the Commission to monitor the impact of computer-implemented inventions and to report to the Parliament and the Council on the operation of the Directive within three years of its implementation by Member States. This provides an important safeguard which would allow any necessary adjustments to be made. The Directive would have no direct legal effect on the European Patent Office. However, once the Directive was implemented, the Commission would consider taking action to resolve any inconsistencies in the context of the European Patent Convention. This has already been done on a previous occasion (with the Biotechnology Patents Directive 98/44/EC), with no particular difficulty. In any case, European Patents, once granted, become subject to national laws, so any patents granted after the Directive took effect and which were inconsistent with its provisions would need to be amended to bring them into conformity (or be revoked).?

Patent law: patentability of computer-implemented inventions

The committee adopted the report by Arlene McCARTHY (PES, UK) broadly approving the proposal, subject to a number of amendments under the first reading of the codecision procedure. While approving the general idea of patentability for computerised inventions, the committee sought to clarify and tighten up the wording of the Commission's proposed directive and at the same time strike a balance between MEPs' sharply differing views. It said that, in order to be patentable, a computerised invention should be one that could have an industrial application. Moreover, it should involve a technologically inventive step. MEPs also argued that a computerised invention should not be regarded as making a technical contribution just because it involves the use of computer technology. In other words, patents must not be allowed for every simple computer program. The Commission was asked to produce a report at a future date on how the new directive had been taken into account by the European Patent Office and also to assess whether the European Patent Convention might have to be revised. Other amendments sought to protect the interests of SMEs, saying the Commission must monitor the impact on these firms of the patentability of computerised inventions. ?

Patent law: patentability of computer-implemented inventions

The European Parliament voted 361 votes in favour, 157 against and 28 abstentions on the resolution regarding patentability of computer-implemented inventions. The rapporteur was Arlene McCARTHY (PES, United Kingdom). Please see the previous document. The following principal amendments were made to the Commission's proposal: - this Directive simply clarifies the present legal position with a view to securing legal certainty, transparency, and clarity of the law and avoiding any drift towards the patentability of unpatentable methods such as trivial procedures and business methods; - in order to be patentable, inventions in general and computer-implemented inventions in particular must be susceptible of industrial application, new and involve an inventive step. In order to involve an inventive step, computer implemented inventions must in addition make a new technical contribution to the state of the art, in order to distinguish them from pure software; - a computer-implemented business method, data processing method or other method in which the only contribution to the state of the art is non-technical cannot constitute a patentable invention; - an algorithm is inherently non-technical and therefore cannot constitute a technical invention. Nonetheless, a method involving the use of an algorithm might be patentable provided that the method is used to solve a technical problem. However, any patent granted for such a method should not monopolise the algorithm itself or its use in contexts not foreseen in the patent; - "computer-implemented invention" means any invention within the meaning of the European Patent Convention the performance of which involves the use of a computer, computer network or other programmable apparatus and having in its implementations one or more non-technical features which are realised wholly or partly by a computer program, besides the technical features that any invention must possess; - to limit the scope of the directive, Parliament also defined what is meant by the "technical contribution", also called "invention". The term means a contribution to the state of the art in a technical field. The technical character of the contribution is one of the four requirements for patentability. Additionally, to deserve a patent, the technical contribution has to be new, non-obvious, and susceptible of industrial application; - in determining whether a given computer-implemented invention makes a technical contribution, the following test will be used: whether it constitutes a new teaching on cause-effect relations in the use of controllable forces of nature and has an industrial application in the strict sense of the expression, in terms of both method and result. Parliament went on to define what was not patentable: - a computer-implemented invention is not making a technical contribution merely because it involves the use of a computer, network or other programmable apparatus. Accordingly, inventions involving computer programs which implement business, mathematical or other methods and do not produce any technical effects beyond the normal physical interactions between a program and the computer, network or other programmable apparatus in which it is run is not patentable; - Member States must ensure that computer-implemented solutions to technical problems are not considered to be patentable inventions merely because they improve efficiency in the use of resources within the data processing system. Additionally, Member States must ensure that, wherever the use of a patented technique is needed for a significant purpose such as ensuring conversion of the conventions used in two different computer systems or networks so as to allow communication and exchange of data content between them, such use is not considered to be a patent infringement. Finally, Parliament also wanted the Commission to investigate whether it would be desirable and legally possible to introduce a "grace period" in respect of elements of a patent application for any type of invention disclosed prior to the date of the application. It has been strongly argued that a grace period is necessary to avoid an inventor being deprived of his or her invention when it has been made public before applying for a patent, for instance in order to test its attractiveness to the market. It is maintained that this would be particularly useful for innovative SMEs and cooperation between universities and industry. However, such an innovation could not be introduced solely for patents for computer-implemented inventions without a prior study of its impact and its compatibility with the Community's international obligations under the TRIPs Agreement.?

Patent law: patentability of computer-implemented inventions

The Council, acting by qualified majority, has adopted a common position which incorporates the substance of some 25 of Parliament's amendments at first reading. The Council has amended or merged a number of recitals appearing in the Commission's proposal and has adopted a few additional ones.

Throughout the common position, the Council has sought to strike a reasonable and workable balance between the interests of rightholders and those of other parties concerned.

The Council's main amendments are as follows:

- it has partly followed the European Parliament's amendments on definitions by deleting the words "one or more prima facie novel" from the definition of computer implemented invention, on the grounds that these are redundant and risk creating confusion as regards their relationship with the novelty test, which applies at the stage of the examination of the patentability of any invention. In addition, the Council replaced "technical field" with "field of technology", which is the term commonly used in international agreements on patent law, such as the TRIPS Agreement; inserted the words "new and", in order to clarify the criteria for "technical contribution"; added a second sentence, which is basically the provision of Article 4(3) of the Commission proposal slightly amended in order to clarify that even if non-technical features may be taken into consideration when assessing the technical contribution of a given computer implemented invention, it is indispensable that any patent claim comprises technical features as well;
- it includes an Article which obliges Member States to ensure in their national law that computer-implemented inventions are considered to belong to a field of technology. In accordance with Parliament's amendment, the Council has decided to delete the Article which considers that a general obligation of this nature would be difficult to transpose into national law;
- in order to avoid any misunderstanding, the Council has included a paragraph which comprises a clear statement to the effect that a computer program as such cannot constitute a patentable invention;
- it includes a paragraph was added in order to clarify that in certain circumstances and under strict conditions a patent can cover a claim to a computer program, be it on its own or on a carrier. The Council considers that this would align the Directive on standard current practice both at the European Patent Office and in Member States;
- the Council has taken on board European Parliament's amendment as regards the relationship with Directive 91/250/EC, considering that this is clearer than the text of the Commission's proposal. It has removed references to provisions concerning semiconductor topographies or trade marks as these were considered as irrelevant in this context;
- Council has maintained the text of the Commission proposal concerning the report on the effects of the Directive. In addition, it also added a reference to the Community's international obligations. This is understood as primarily a reference to the TRIPS Agreement. The reference to the Community Patent was deleted as this is beyond the scope of the current Directive;
- the Council stipulated a transposition period of twenty four months (not defined in the Commission's proposal). Parliament envisaged eighteen months.

Patent law: patentability of computer-implemented inventions

The Commission has indicated that it accepts the common position, even though this differs from the Commission's original proposal in certain respects. In general, the Commission believes that the common position strikes an acceptable balance between the interests of right holders and those of competitors and consumers (including in the open source community). This balance is further safeguarded by the new requirements for the Commission to monitor the impact of computer-implemented inventions in particular on small and medium-sized enterprises and on the open source community.

As far as the Commission is concerned, the directive continues to address the key objective stated in the explanatory memorandum of the Commission's proposal, namely the harmonisation of patent law between the Member States and the resolution of legal uncertainty in this field. It is crucial to note that there is to date no Community legislative instrument which affects general patent law either in a horizontal manner or specifically relating to computer-implemented inventions. The adoption of this directive would therefore have the effect of bringing patent law in this field, for the very first time, explicitly within Community jurisdiction.

A failure to adopt a directive would prevent Community institutions from exercising control in this strategic area of the European economy, which would thus remain within the remit only of national patent offices and courts and the European Patent Office in Munich.

The following statement is entered in the minutes of the Council adopting the common position : the Commission considers that Article 6, read in conjunction with Recital 22, permits any acts as described by Articles 5 and 6 of Directive 91/250/EEC on the legal protection of computer programs by copyright, including any acts necessary to ensure interoperability, without the need for authorisation from the patent's right holder.

Patent law: patentability of computer-implemented inventions

The committee adopted the report by Michel ROCARD (PES, FR) broadly approving the Council's common position under the 2nd reading of the codecision procedure, subject to a number of amendments. The report was adopted by 16 votes to 10 with no abstentions, following a lively debate which mirrored the diverging views on this controversial topic. The main amendments were as follows:

- a clearer definition of "technical contribution" as laid down in Article 2: "The technical contribution is the set of features by which the scope of the patent claim as a whole is considered to differ from the state of the art.....The technical contribution must fulfil the conditions for patentability. In particular, it must be novel and not obvious to a person skilled in the art";
- introduction of an improved version of Parliament's 1st reading amendment clarifying the term "field of technology" based on Article 27 of the TRIPS agreement: "an application domain requiring the use of controllable forces of nature to achieve predictable results in the physical world";
- a new definition was introduced into Article 2, namely, "interoperability" and the operations required to achieve it;
- MEPs clarified expressly in Article 3 that a patent application has to disclose an invention clearly and comprehensively so that it can be implemented by someone working in the field;
- a new clause in Article 5 specified that, "where individual elements of software are used in contexts which do not involve the realisation of any validly claimed product or process, such use will not constitute patent infringement";
- a new Article 6a required Member States to ensure that licences are available to use a patented computer-implemented invention "on reasonable and non-discriminatory terms and conditions" when such use is indispensable for achieving interoperability between computer programs and is in the public interest;

- when monitoring the impact of computer-implemented inventions on small and medium-sized enterprises (SMEs), the Commission should consider the effects not only on innovation and competition but also on employment in such businesses;
- a new Article 7a proposed setting up a committee focused on SME-related issues to ensure compliance with the monitoring requirements laid down in the directive. The committee would have a mandate to recommend necessary reforms;
- a new Article 7b proposed that the Commission conduct a feasibility study into a Fund to provide financial, technical and administrative support for SMEs dealing with issues related to the patentability of computer-implemented inventions;
- the Commission should report to Parliament and the Council on the effects of the directive within 3 years rather than 5 years as proposed;
- MEPs wanted to see a single patent system across the EU, in the interests of legal certainty, and therefore introduced a new clause into Article 8 requiring the Commission to submit a proposal within a year for an effective European Community patent which provides for democratic control by the European Parliament over the European Patent Office (EPO) and the European Patent Convention (EPC). Moreover, in a new Article 8a, the Council was required to report to Parliament each year on the activities of Member States that are Contracting States to the EPC in the administrative council of the EPO.

Patent law: patentability of computer-implemented inventions

The European Parliament rejected, by 648 votes to 14 with 18 abstentions, the Council's common position on the software patent directive. Before the vote, rapporteur Michel ROCARD (PES, FR) said Parliament was split fifty-fifty on the issue and all political groups decided to reject the text rather than risk a result they could not accept.

The common position, if approved, would have allowed patenting of computer-implemented inventions. This outcome was advocated by big software firms, which argued that patents would encourage research spending and defend European inventions from US competition. On the contrary, the directive was criticised by supporters of "open source" software, mainly smaller companies, who claimed copyright already protects their inventions and were afraid that patenting would raise legal costs.

The rejection of the common position means the end of the legislative procedure and the fall of the directive.

Attention now moves to the proposed directive for a Community patent, currently in discussion in the Council, mentioned by a number of MEPs as the appropriate legislative instrument to address the issue of software patentability.