



INSTITUT FÜR RECHTSFRAGEN DER FREIEN UND OPEN SOURCE SOFTWARE

27 March 2003

Comment on the draft proposal for a “Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions” (COM(2002) final)

I. Introduction

The European Commission has realized a lack of transparency with respect to the scope of patentability of software and “computer-implemented inventions”. This lack of transparency has led to increasing legal uncertainty, especially for small and medium-sized businesses, and therefore to a detrimental impact on the development of the European software industry.

In the centre of attention is the interpretation of Art. 52 European Patent Convention (EPC) saying computer programs “as such” are excluded from patent protection. Up to this day, a clear distinction between computer programs “as such” and patentable software has not been drawn. It should be the aim of the directive to create criteria easy to understand and to apply for courts and the parties involved.

The directive’s aim of affording more transparency in this important field of economy is to be welcomed. Nevertheless, the current proposal of the European Commission is not sufficient to completely reach that goal. The amendments proposed under section II. are

designed to help in describing a framework for limits of patentability – as intended in Art. 52 EPC – in an unambiguous way.

Besides the transparency problem, software patents are widely criticised as generally harmful for innovation and competition in Europe. Indeed, software is protected by copyright law and it is not proved up to now, that additional protection by patents will result in a higher degree of innovation. As opposed to other fields of technology, the software industry does not benefit from disclosure of inventions, since the source code of an invented computer program has not to be presented. The development of Internet-based technologies is a good example for the fact, that open standards can result in an increased degree of innovation and progress than protected technologies. Software development with its short innovation cycles requires a different legal protection than other fields of technology.

In particular, small and medium-sized businesses as well as developers of Free Software are not able to utilize theoretical opportunities of the patentability of computer programs, since those lack funds for own patent applications and for research of third parties' patents. Thus, patents do not serve the interest of creating an incentive for software development, but – in the contrary – unduly affect innovation.

The following amendments do not refer to the above mentioned issue of the general benefit of software patents, but to a transparent framework for patentability on the basis of Art. 52 EPC. Further research and monitoring on software patents' impact on innovation and competition in Europe is needed to determine the legislative steps to be taken further in this field.

II. Proposed amendments

The draft report of the Committee on Legal Affairs and the Internal Market (2002/0047(COD)) renders several improvements to the proposal of the European Commission. This relates to the following amendments:

- a) Amendment 4 to 6 to Recitals 13a to 13c
- b) Amendment 7 to Recital 14
- c) Amendment 12 to Article 2, point (a)
- d) Amendment 16 to Article 6
- e) Amendment 17 to Article 7
- f) Amendment 18 to Article 8 (d)

1. Recitals

In addition to that, we propose the following amendments:

Amendment 1

Recital 1

Effective and harmonised protection of computer-implemented inventions throughout the Member States is essential in order to maintain and encourage investment in this field.	Transparent and harmonised protection of computer-implemented inventions throughout the Member States is essential in order to maintain and encourage investment in this field.
--	--

Rationale

Investments do not depend on „effective” protection but on transparency.

Amendment 2

Recital 5

Therefore, the legal rules as interpreted by Member States' courts should be harmonised and the law governing the patentability of computer-implemented	Therefore, the legal rules should be harmonised and the law governing the patentability of computer-implemented inventions should be made transparent. The
--	--

inventions should be made transparent. The resulting legal certainty should enable enterprises to derive the maximum advantage from patents for computer-implemented inventions and provide an incentive for investment and innovation.	resulting legal certainty should provide an incentive for investment and innovation without unduly burdening competition .
--	---

Rationale

Legal certainty does not aim at a maximized advantage for enterprises, but at an incentive for innovation and a protection of competition.

Amendment 3

Recital 11

Although computer-implemented inventions are considered to belong to a field of technology, in order to involve an inventive step, in common with inventions in general, they should make a technical contribution to the state of the art.	Computer-implemented inventions do not necessarily belong to a field of technology. As a matter of fact, hardware does belong to this field, but that fact does not entail necessarily, that every computer program shares the characteristics of the used hardware. In accordance with inventions in general, it has to be shown that a computer-implemented invention belongs to a field of technology.
--	--

Rationale

It has to be proven, that a computer program belongs to the field of technology, what is not the rule. The technical aspect of the computer or other hardware is irrelevant for the consideration of a computer-implemented invention, since every software requires a computer to be executed. This effect is comparable to a television program: a television is always needed to watch the program, but this does not mean the program to be technical because the television is.

Amendment 4

Recital 11a

	<p>Computer-implemented solutions for technical problems substituting classical technical products or processes (e.g. mechanical processes) belong to the field of technology as well as new and inventive operating modes of hardware. Solutions for technical problems in the field of software development do not belong to the field of technology as understood in this directive.</p>
--	--

Rationale

In order to involve an inventive step, computer-implemented inventions should be required to render a technical contribution to the state of the art. As shown above it is not true that every computer program belongs to the field of technology just because it is executed on a computer. Since computer programs “as such” are not patentable, inventions in the field of software development are not to be considered as belonging to the field of technology. However, computer-implemented inventions are patentable under the condition that the technical contribution is made outside the scope of classical software development. This is conceivable in two cases: technical solutions in classical fields of technology are substituted by computer-implemented inventions (e.g. a mechanical or physical process by a software solution) or such inventions can result in new operating modes of hardware (e.g. better or faster use of a processor).

Amendment 5

Recital 12

<p>Accordingly, where an invention does not make a technical contribution to the state of the art, as would be the case, for example, where its specific contribution</p>	<p>Where an invention does not make a technical contribution to the state of the art, as would be the case, for example, where its specific contribution lacks a</p>
--	--

<p>lacks a technical character, the invention will lack an inventive step and thus will not be patentable.</p>	<p>technical character, the invention will lack an inventive step and thus will not be patentable.</p> <p><i>When assessing whether an inventive step is involved, it is usual to apply the problem and solution approach in order to establish that there is a technical problem to be solved. If no technical problem is present, then the invention cannot be considered to make a technical contribution to the state of the art. If an invention consists of a mixture of technical and non-technical features, the technical part of the invention is the crucial factor for determining whether an inventive step is involved.</i></p>
--	---

Rationale

Even if an invention is made in the field of technology, this invention is not patentable unless a technical contribution is made to the state of the art. The technical contribution has to be made in the field of technology as understood in Amendment 4. Phrase 2 corresponds with the proposal of the Committee on Legal Affairs and the Internal Market (2002/0047(COD)). The need of a technical contribution shall not be circumvented by combining technical and non-technical features.

2. Articles

The following amendments correspond to the amendments of said recitals:

Amendment 6

Article 3

<p>Computer-implemented inventions as a field of technology</p> <p>Member States shall ensure that a computer-implemented invention is considered to belong to</p>	<p>Field of technology</p> <p>A computer-implemented invention is considered to belong to a field of technology, if</p> <p>(a) it substitutes a technical solution of a</p>
--	--

a field of technology.	technical problem outside the scope of mere software development, or (b) it constitutes a new and inventive operating mode of a computer.
------------------------	--

Rationale

It is crucial for transparency to include a positive definition of what can be deemed as an invention in the field of technology. Current problems of interpretation as to what constitutes a computer program “as such” stem from the fact that is not clear what belongs to the field of technology and what is outside of its scope. In accordance with Art. 52 EPC a computer-implemented invention can not always be considered as belonging to the field of technology. Additionally, mere software development can never be considered as belonging to the field of technology. To vitalize the exclusion in Article 52(2) – inventions are considered not to relate to programs for computers “as such” – with a significant subject matter and in order to define clear limits of patentability, only substitution of technical solutions outside the scope of software development should be considered as belonging to the field of technology. This allows a simple check of patentability by reviewing whether the technical solution can be substituted by a process or product without the use of software. To enable patents in the field of computer technology, it has to be clarified that new and inventive operating modes of a computer are patentable because in this field software development can not be substituted.

Amendment 7

Article 4 (3)

<p>Conditions for patentability</p> <p>1. (...)</p> <p>2. (...)</p> <p>3. The technical contribution shall be assessed by consideration of the difference between the scope of the patent claim considered as a whole, elements of which may comprise both technical and non technical features, and the state of art.</p>	<p>Conditions for patentability</p> <p>1. (...)</p> <p>2. (...)</p> <p>3. The technical contribution shall be assessed by consideration of the difference between the scope of the patent claim considered as a whole and the state of art. There is no patentable subject-matter, if the contribution to the state of art is located predominantly in non-technical aspects.</p>
---	--

Rationale

Art. 4 (3) of the commission draft proposal would enable patent claims for inventions which contributes predominantly non-technical features while technical contributions remain unimportant. This provision would facilitate the patentability of wide range patent claims on business-methods. A small technical contribution would be sufficient to claim a wide range non-technical patent. In order to avoid this effect, restrictive criteria must be introduced. Patent claims with predominantly non-technical contributions should to be excluded.

Amendment 8

Article 4 a (Draft Report of the Committee on Legal Affairs)

<p>Exclusions from patentability</p> <p>A computer-implemented invention shall not be regarded as 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 shall not be patentable.</p>	<p>Exclusions from patentability</p> <p>A computer-implemented invention shall not be regarded as 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 or algorithms 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 shall not be patentable.</p>
---	--

Rationale

Recital 13 c of the Draft Report of the Committee on Legal Affairs clarifies, that an algorithm is non-technical and therefore cannot constitute a technical invention. With respect to the question, whether an invention establishes technical character, an algorithm is nothing else than a business method or a mathematical method. Therefore the exclusion of the patentability of mere algorithms should be shifted to Art. 4 a.

Amendment 9

Article 5 (2) (Draft proposal of the Council, Permanent Representatives Committee, 8 November 2002, Doc. 14017/02)

<p>Form of Claims</p> <p>1. (...)</p> <p>2. A claim to a computer program, either on its own or on a carrier, shall not be allowed unless that program would, when loaded and executed in a computer, programmes network or other programmable apparatus, put into force a product or process claimed in the same patent application in accordance with paragraph 1.</p>	<p>Exclusions from patentability</p> <p>1. (...)</p> <p>2. (deleted)</p>
---	---

Rationale

The proposal of the Council follows the practice of the EPO permitting claims to computer program products either in their own or on a carrier. In contrast, the Commission proposal has decided consciously not to follow this practise, because allowing patents for computer program products can be regarded as allowing patents for computer programs “as such”. We agree to this position and for that reason, the European Parliament should follow the position of the Commission and not the position of the Council.

Dr. Till Jaeger

Dr. Axel Metzger