# THE EUROPEAN UNION "SOFTWARE PATENTS" DIRECTIVE: WHAT IS IT? WHY IS IT? WHERE ARE WE NOW?

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## ABSTRACT

*This paper has been adapted from a presentation given by the author at Duke University School of Law's "Hot Topics in Intellectual Property Law Symposium" on April 1, 2005. It first presents an overview of the EU "Software Patents" Directive and many of the amendments that have been proposed and adopted. It then suggests a number of ways in which Europe can lead the world in developing a system that balances the interests of patent protection and open-source software.*

## INTRODUCTION

¶1      I would start by stating that nothing that I shall be saying in this article should be taken as representing the views of the European Parliament, or any of its constituent bodies or Members. What I will be trying to do is present an objective view of what is happening with the legislation currently being proposed for adoption at the level of the European Union.

¶2      I propose (a) to start by setting out a brief description of the differences between the US and the EU approaches to patentability, (b) to describe the directive proposed by the European Commission, (c) to outline the amendments voted in the European Parliaments' Legal Affairs Committee and in plenary and (d) to set forth the essential provisions of the Council's common position. Much of what I have to say will constitute a gross oversimplification and, as a civil servant, I am bound to be strictly neutral on the merits.

¶3      But before I go any further, it will be necessary to sketch out the legislative procedure in the co-decision procedure, which applies in this case by virtue of Article 95 of the Treaty establishing the European Community.

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[1] Principal Administrator, Secretariat, Committee on the Internal Market and Consumer Protection of the European Parliament.

EU LEGISLATIVE PROCEDURE

¶4      The power to initiate legislation is vested only in the European Commission, the Executive of the European Union.  Under the co-decision procedure, it submits its proposal for legislation (which may be a directive, which has to be incorporated into national law by each national legislature, a regulation, which is directly applicable without more in the Member States, or a decision) to the Council, composed of Ministers of the Member States, and to the directly elected European Parliament.  Those two institutions then subject the proposal to a first reading.

¶5      In Parliament, first reading is conducted initially in one of the standing committees – in the case of the proposal for a directive on the patentability of computer-implemented inventions, the Committee on Legal Affairs. That committee appoints a rapporteur[2] and adopts amendments to the Commission's proposal.  The resulting amendments go to a plenary session of the Commission for a final vote, when other amendments may also be made.  The Council then presents its common position, which may or may not adopt Parliament's amendments.  The second reading repeats the process in Parliament, except this time the document amended is the common position.  At the end of the second reading in Parliament, the Council may accept all of Parliament's amendments, in which case the instrument is adopted.  If it does not, a joint conciliation committee tries to reach agreement on compromises and there is a final vote in Parliament.

¶6      It should be noted that there is a strict 3 to 4 month time limit for second reading and if Parliament rejects the common position that is the end of the story, unless the Commission decides to restart the whole procedure. Two additional complications are that the Commission may decide to withdraw its proposal at any time until conciliation and different voting majorities apply at different stages and according to whether the Council wishes to diverge from the Commission's proposal.

¶7      This is an oversimplified picture, but should serve for present purposes.

PATENTS: POSITION IN THE U.S. COMPARED WITH THE EUROPEAN POSITION

¶8      Very crudely, in the U.S., a patentable invention must be *new*, *useful*, *non-obvious* and fall *within one of the classes of patentable subject matter* as defined by the law and interpreted by the courts.[3]  Whereas in the U.S. patents are awarded to the first to invent, in Europe the patent goes to

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[2] At the first reading, the rapporteur was Arlene McCarthy MEP.  The rapporteur for second reading was Michel Rocard MEP.

[3] *See* Patent Act, 35 U.S.C. §§ 101-376 (2000).

the "first to file."  Moreover, in the U.S. an inventor is given a one-year grace period following disclosure to file a patent application, whereas in Europe there would be no patent protection possible if the invention were disclosed in that way prior to filing.  Finally, since the *State Street Bank[4]* case, it has become easy in the U.S. to obtain internet-related patents for pure business methods.  There is the view generally that in the U.S. too many trivial patents are granted.

¶9          In Europe, the situation is governed at the European level by the European Patent Convention (EPC).[5] This convention provides that, in order to be patentable, an invention has to be susceptible to industrial application, new and involve an inventive step.[6]  An invention is considered to be new if it does not form part of the state of the art[7] and is an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.[8]  Industrial application means that the invention can be made or used in any kind of industry, including agriculture.[9]  If the European Patent Organization's examiners are satisfied these conditions are met, a patent may be granted for 20 years, which compares with life plus 70 years in the case of copyright.  It should be noted that the EPC expressly provides that discoveries, mathematical methods, . . . schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers and presentations of information are not patentable.

¶10          It should also be noted that a procedure exists for objecting to the grant of European patents, hence the existence of the EPO Boards of Appeal and a substantial body of case law.  The U.S. has no similar pre-grant review process.

¶11          Despite these strictures, the European Patent Office has granted more than 30,000 software-related patents since 1978 and it is alleged that many of these relate to business method type inventions and algorithms by viewing the invention as a process. It has done this on the basis of Article 52 of the European Patent Convention, which provides that "The provisions of paragraph 2 [of that article] shall exclude patentability of the subject-

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[4] State Street Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998).

[5] The EPC entered into force on July 10, 1977. Contracting States include all of the EU States, with the exception of Malta and Latvia, which are expected to accede in due course, but also Bulgaria, Iceland, Liechtenstein, Monaco, Romania, Switzerland and Turkey.  Albania, Bosnia and Herzegovina, Croatia, the FYR of Macedonia and Serbia and Montenegro are also expected to become members in due course. See www.european-patent-office.org.

[6] EPC, Art. 52(1).

[7] EPC, Art. 54(1).

[8] EPC, Art. 56.

[9] EPC, Art. 57.

matter or activities referred to in that provision [e.g. software, business methods, etc] only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such."[10] Consequently, Article 52 is construed as precluding only the patentability of software *as such*.

¶12     An example is the *Viacom* case,*[11]* where the Board of Appeal granted a patent for a method and apparatus for improved digital image processing. The patent was granted on the ground that the claim was directed to a technical process in which the method used does not seek protection for the mathematical method *as such*. In fact, the EPO Boards of Appeal and national courts took the view that computer-implemented inventions can be regarded as patentable when they have a *technical character*, that is to say, when they belong to a field of technology.  Indeed, in the *Computer Program Product I* and *II* cases,[12] the Board of Appeals held that if a program on a data carrier has the potential to produce a technical effect when run on a computer, the program itself should not be excluded from patentability.

¶13     While they may appear significant, it is considered by many that the differences between the U.S. and E.U. approaches are superficial. [13]

## THE PROPOSAL FOR A DIRECTIVE AND SOME OF THE BACKGROUND

¶14     The European Commission's proposal for a directive[14] sought to create a uniform set of rules, based on the practice of the EPO Boards of Appeal, in order to avoid divergences in the interpretation of the EPC and in patents granted through the purely national route (i.e. not through the European Patent Office) and to conduce to greater legal certainty. The Commission also argued that this would also allow the EU to satisfy its obligations under TRIPs.

¶15     It is also considered by many that the shift in traditional industries to the East means that European society needs the protection of intellectual

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[10] EPC, Art. 52(3).

[11] T208/84 (15.7.1986) [1987] O.J. EPO 14 ("Viacom").

[12] T1173/97 1.7.1998, 1999 O.J. WPO [609] ("Computer program product I"); T0935/97 of 4.2.1999, [1999] R.P.C. 861 ("Computer program product II"). The holdings of these cases are largely similar.

[13] *See, e.g.,* Sandra R. Paulsson, *Patenting Software vs Free Software. What Should the European Union Do?* (Feb. 2005) (briefing paper written for the Policy Department for Economics and Science, DG 2, European Parliament), *available at* http://www.ffii.org/~jmaebe/epecosci0502/SoftwarePatent.pdf.

[14] *See* Proposal for a Directive of the European Parliament and of the Council on the Patentability of Computer-Implemented Inventions, COM(02)92 final, *available at* http://www2.europarl.eu.int/oeil/file.jsp?id=219592 [hereinafter Proposal on the Patentability of Computer-Implemented Inventions].

property, particularly patents. Some even go so far as to suggest that the present battle is merely a repetition of previous resistance to patentability (chemicals, biotechnological inventions and so on) and that all inventions satisfying the requirements of patentability should be patentable even if they consist of pure software.

¶16      The Commission's proposal was not *that* radical. However, it certainly raised considerable fears amongst small and medium-sized software developers that their livelihoods and the free software and open source models, sometimes referred to as "copyleft," could be threatened by patents taken out by large industry or purchased by speculators. They take the view that software should be protected by copyright alone. They point to the high costs of obtaining and defending patents and to phenomena such as patent thickets. They also identify a number of patents granted by the EPO as being contrary, in their view, to the EPC and amounting to pure software or business methods patenting.  In the view of many protagonists of open source, the main beneficiaries of the patent system are lawyers. Many critics of the directive consider that the term of protection of patents is too long having regard to the nature of software and the rapid evolution of the software sector.  The pressure group's site, [www.ffii.org](www.ffii.org), is exhaustive and worth visiting.

¶17      The Commission's proposal consisted of a mere ten articles (I have omitted the preamble), the most important of which read as follows:[15]

Article 2

Definitions

For the purposes of this Directive the following definitions shall apply:

(a) "computer-implemented invention" means any invention the performance of which involves the use of a computer, computer network or other programmable apparatus and having one or more prima facie novel features which are realized wholly or partly by means of a computer program or computer programs;

(b) "technical contribution" means a contribution to the state of the art in a technical field which is not obvious to a person skilled in the art.

Article 3

Computer-implemented inventions as a field of technology

Member States shall ensure that a computer-implemented invention is considered to belong to a field of technology.

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[15] For the full text of the Commission's proposal see *id.* at 17.

Article 4

Conditions for patentability

1. Member States shall ensure that a computer-implemented invention is patentable on the condition that it is susceptible of industrial application, is new, and involves an inventive step.

2. Member States shall ensure that it is a condition of involving an inventive step that a computer-implemented invention must make a technical contribution.

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 the art.

Article 5

Form of claims

Member States shall ensure that a computer-implemented invention may be claimed as a product, that is as a programmed computer, a programmed computer network or other programmed apparatus, or as a process carried out by such a computer, computer network or apparatus through the execution of software.

Article 6

Relationship with Directive 91/250 EC

Acts permitted under Directive 91/250/EEC on the legal protection of computer programs by copyright, in particular provisions thereof relating to decompilation and interoperability, or the provisions concerning semiconductor topographies or trade marks, shall not be affected through the protection granted by patents for inventions within the scope of this Directive.

¶18      Consequently, the proposal sought to enshrine in legislation the practice of the EPO's Boards of Appeal (i.e. by providing that in order for there to be an inventive step, the invention must make a "technical contribution").   But it appeared to many critics that the "technical contribution" requirement could be satisfied by just running the program on a computer.

¶19      Interestingly, Article 6 provided that the provisions of EU copyright law relating to decompilation and interoperability should apply.

FIRST READING IN THE EUROPEAN PARLIAMENT

¶20      The first reading took a long time.  The Commission's proposal was dated February 2002 and the final legislative resolution was not adopted until September 24, 2003.  Arlene McCarthy MEP, as rapporteur for the Legal Affairs Committee, made considerable efforts to reach what she considered to be a tighter set of rules and a public hearing was held in November 2002.  In particular, she sought to make it clear that an invention which involved the use of a computer should not suffice in order to satisfy the "technical contribution" test.  She also sought to make it plain that business methods making no non-technical contribution to the state of the art should not be patentable and the importance of specifying the circumstances in which algorithms could be part of a patentable invention (albeit not patentable in themselves). She also endeavored to deal with the question of patent claims in this field.

¶21      All of this has to be seen against the background of fierce and unconventional, but extremely effective, lobbying by the open source community.

¶22      The report adopted by the Legal Affairs Committee[16] amended the Commission's proposal  (including the preamble) as follows:

Amendment 5[17]

Recital 12

(12) Accordingly, ***even though a computer-implemented invention belongs by virtue of its very nature to a field of technology, it is important to make it clear that*** 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 technical character, the invention will lack an inventive step and thus will not be patentable. ***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.***

Amendment 6

Recital 13a (new)

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[16] A5-0238/2003.

[17] Proposal on the Patentability of Computer-Implemented Inventions, *supra* note 14.

*(13a) However, the mere implementation of an otherwise unpatentable method on an apparatus such as a computer is not in itself sufficient to warrant a finding that a technical contribution is present. Accordingly, a computer-implemented business method or other method in which the only contribution to the state of the art is non-technical cannot constitute a patentable invention.*

Amendment 7

Recital 13b (new)

*(13b) If the contribution to the state of the art relates solely to unpatentable matter, there can be no patentable invention irrespective of how the matter is presented in the claims. For example, the requirement for technical contribution cannot be circumvented merely by specifying technical means in the patent claims.*

Amendment 8

Recital 13c (new)

*(13c) Furthermore, 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 would not monopolise the algorithm itself or its use in contexts not foreseen in the patent.*

Amendment 9

Recital 13d (new)

*(13d) The scope of the exclusive rights conferred by any patent is defined by the claims. Computer-implemented inventions must be claimed with reference to either a product such as a programmed apparatus, or to a process carried out in such an apparatus. Accordingly, 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.*

Amendment 13

Recital 18

(18) *The rights conferred by patents granted for inventions within the scope of this Directive shall not affect acts permitted under Articles 5 and 6 of* Directive 91/250/EEC on the legal protection of

computer programs by copyright, in particular **under the** provisions thereof **in respect of** decompilation and interoperability. **In particular, acts which, under Articles 5 and 6 of Directive 91/250/EEC, do not require authorisation of the rightholder with respect to the rightholder's copyrights in or pertaining to a computer program, and which, but for Articles 5 or 6 of Directive 91/250/EEC, would require such authorisation, shall not require authorisation of the rightholder with respect to the rightholder's patent rights in or pertaining to the computer program.**

Amendment 16

Article 4

*1. Member States shall ensure that a computer-implemented invention is patentable on the condition that it is susceptible of industrial application, is new, and involves an inventive step. In order to be patentable, a computer-implemented invention must be susceptible of industrial application and new and involve an inventive step. In order to involve an inventive step, a computer-implemented invention must make a technical contribution.*

**2.** Member States shall ensure that **it is a condition of involving an inventive step that** a computer-implemented invention **must make** a technical contribution. Member States shall ensure that a computer-implemented invention **making** a technical contribution **constitutes a necessary condition of involving an inventive step.**

*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 the art. The technical contribution shall be assessed by considering the state of the art and the scope of the patent claim considered as a whole, which must comprise technical features, irrespective whether or not such features are accompanied by non-technical features.*

Amendment 17

Article 4a (new)

*Exclusions from patentability:*

*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.*

Amendment 18

Article 5

*1. Member States shall ensure that a computer-implemented invention may be claimed as a product, that is as a programmed computer, a programmed computer network or other programmed apparatus, or as a process carried out by such a computer, computer network or apparatus through the execution of software.*

*2. A claim to a computer program, on its own, on a carrier or as a signal, shall be allowable only if such program would, when loaded or run on a computer, computer network or other programmable apparatus, implement a product or carry out a process patentable under Articles 4 and 4a.*

Amendment 20

Article 6 a (new)

*Member States shall ensure that wherever the use of a patented technique is needed for the sole purpose of ensuring conversion of the conventions used in two different computer systems or network so as to allow communication and exchange of data content between them, such use is not considered to be a patent infringement.*

¶23     Ms. McCarthy also advocated considering the introduction of grace periods, which would, however, necessitate amendment of the European Patent Convention – only possible by intergovernmental conference.  She also advocated having regard to the EPO's examination guidelines and the paying of particular attention to small and medium-sized businesses.  She raised with the Commission the possibility of using some of the funds raised by the EPO in order to assist small business to obtain and defend patents.

¶24     Ms. McCarthy's explanatory statement is worth reading in order to understand the rationale for her amendments, although much of it is contested by the free software and open source movements.

¶25     In the plenary session, however, the following amendments in particular were adopted in addition or instead of those contained in the McCarthy report:

Article 2

Definitions

For the purposes of this Directive the following definitions shall apply:

(a) "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 or computer programs, ***besides the technical features that any invention must contribute;***

(b) "technical contribution***", also called "invention",*** means a contribution to the state of the art in a field of technology. ***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. The use of natural forces to control physical effects beyond the digital representation of information belongs to a field of technology. The processing, handling, and presentation of information do not belong to a field of technology, even where technical devices are employed for such purposes;***

***(c) "field of technology" means an industrial application domain requiring the use of controllable forces of nature to achieve predictable results. "Technical" means "belonging to a field of technology";***

***(d) "industry*** within the meaning of patent law means the automated production of material goods.***

### *Article 3*

### *Data-processing and patent law*

***Member States shall ensure that data processing is not considered to be a field of technology within the meaning of patent law, and that innovations in the field of data processing are not considered to be inventions within the meaning of patent law.***

### Article 4

### Conditions for patentability

1. ***In order to be patentable, a computer-implemented invention must be susceptible of industrial application, new and involve an inventive step. In order to involve an inventive step, a computer-implemented invention must make a technical contribution.***

2. Member States shall ensure *that a* computer-implemented invention *making* a technical contribution *constitutes a necessary condition of involving an inventive step.*

3. *The significant extent of* the technical contribution shall be assessed by consideration of the difference between *all of the technical features included in* the scope of the patent claim considered as a *whole and* the state of the art, *irrespective of whether or not such features are accompanied by non-technical features.*

*4. In determining whether a given computer-implemented invention makes a technical contribution, the following test shall 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.*

### Article 5

### Exclusions from patentability

*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.*

### Article 6

### Patentability of solutions to technical problems

*Member States shall 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.*

Article 7

Form of claims

*1*. Member States shall ensure that a computer-implemented invention may be claimed *only* as a product, that is as a programmed *device*, or as a *technical production process.*

*2. Member States shall ensure that patent claims granted in respect of computer-implemented inventions include only the technical*

*contribution which justifies the patent claim. A patent claim to a computer program, either on its own or on a carrier, shall not be allowed.*

*3. Member States shall ensure that the production, handling, processing, distribution and publication of information, in whatever form, can never constitute direct or indirect infringement of a patent, even when a technical apparatus is used for that purpose.*

*4. Member States shall ensure that the use of a computer program for purposes that do not belong to the scope of the patent cannot constitute a direct or indirect patent infringement.*

*5. Member States shall ensure that whenever a patent claim names features that imply the use of a computer program, a well-functioning and well documented reference implementation of such a program shall be published as a part of description without any restricting licensing terms.*

*Article 9*

*Use of patented techniques*

*Member States shall 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.*

¶26     This represented a significant shift towards the position of the open source movement. The amendments draw on the German Rote Taube case-law (the "forces of nature" test) and seek to produce maximum disclosure while protecting programmers against restrictive licenses. At their most extreme, the amendments could be read as precluding the grant of a patent for a novel data processing system.

## THE COMMON POSITION

¶27     On May 17, 2004 the Council reached political agreement on a common position. However, the common position itself was not adopted by the Council until March 7, 2005, following attempts by national parliaments in Germany, the Netherlands, Spain and Denmark to have their ministers withdraw their agreement and a large measure of disagreement in the Council itself. Indeed, the European Parliament itself, following a virtually unanimous vote in the Legal Affairs Committee, called on the Council to restart the consultation process. This, which some have termed a

constitutional crisis (and worse), will make for a difficult second reading, to say the least.

¶28     The core provisions of the common position, which accepts most of the amendments contained in the McCarthy report, but ignores the most radical amendments adopted by Parliament in plenary session, are as follows:

*Article 2*

*Definitions*

*For the purposes of this Directive the following definitions shall apply:*

*(a) "computer-implemented invention" means any invention the performance of which involves the use of a computer, computer network or other programmable apparatus, the invention having one or more features which are realised wholly or partly by means of a computer program or computer programs;*

*(b) "technical contribution" means a contribution to the state of the art in a field of technology which is new and not obvious to a person skilled in the art. The technical contribution shall be assessed by consideration of the difference between the state of the art and the scope of the patent claim considered as a whole, which must comprise technical features, irrespective of whether or not these are accompanied by non-technical features.*

*Article 3*

*Computer-implemented inventions as a field of technology*

*– Deleted –*

*Article 4*

*Conditions for patentability*

*In order to be patentable, a computer-implemented invention must be susceptible of industrial application and new and involve an inventive step. In order to involve an inventive step, a computer-implemented invention must make a technical contribution.*

*Article 4a*

*Exclusions from patentability*

*1.(new) A computer program as such cannot constitute a patentable invention.*

*2. 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, whether expressed as source code, as object code or in any other form, 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.*

### Article 5

### Form of claims

*1. Member States shall ensure that a computer-implemented invention may be claimed as a product, that is as a programmed computer, a programmed computer network or other programmed apparatus, or as a process carried out by such a computer, computer network or apparatus through the execution of software.*

*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, programmed computer network or other programmable apparatus, put into force a product or process claimed in the same patent application in accordance with paragraph 1.*

### Article 6

### Relationship with Directive 91/250 EC

*The rights conferred by patents granted for inventions within the scope of this Directive shall not affect acts permitted under Articles 5 and 6 of Directive 91/250/EEC on the legal protection of computer programs by copyright, in particular under the provisions thereof in respect of decompilation and interoperability.*

### Article 7

### Monitoring

*The Commission shall monitor the impact of computer-implemented inventions on innovation and competition, both within Europe and internationally, and on European businesses, especially small and medium-sized enterprises, and the open source community, and electronic commerce.*

### Article 8

### Report on the effects of the Directive

*The Commission shall report to the European Parliament and the Council by [DATE (three years from the date specified in Article 9(1))] at the latest on*

*(a) the impact of patents for computer-implemented inventions on the factors referred in Article 7;*

*(b) whether the rules governing the term of the patent and the determination of the patentability requirements, and more specifically novelty, inventive step and the proper scope of claims are adequate, and whether it would be desirable and legally possible having regard to the Community's international obligations to make modifications to such rules;*

*(c) whether difficulties have been experienced in respect of Member States where the requirements of novelty and inventive step are not examined prior to issuance of a patent, and if so, whether any steps are desirable to address such difficulties;*

*(ca) whether difficulties have been experienced in respect of the relationship between the protection by patent of computer-implemented inventions and the protection by copyright of computer programs as provided for in Directive 91/250/EEC and whether any abuse of the patent system has occurred in relation to computer-implemented inventions;*

*(cb) how the requirements of this Directive have been taken into account in the practice of the European Patent Office and in its examination guidelines;*

*(cc) the aspects in respect of which it may be necessary to prepare for a diplomatic conference to revise the European Patent Convention;*

*(cd) the impact of patents for computer-implemented inventions on the development and commercialisation of interoperable computer programs and systems;*

## WHAT NEXT?

¶29     It is not for me to attempt to predict what the outcome will be. But it is obvious that the Luxembourg and UK Presidencies will not have an easy ride, especially after the Council has been seen to disregard Parliament's wish to restart the procedure.

¶30     The free software and open source communities wish to see the common position radically amended, whereas many industrial pressure groups welcome it and fear amendments which might preclude software patents altogether. For them, the status quo (i.e. no directive at all) might be

preferable.    This is possible given Parliament's power to reject the legislation.

¶31      To give a personal view, I consider that it would be excellent if Europe could give a lead to the rest of the world in resolving this extremely difficult problem.  A possible answer might lie in raising the hurdle for the inventive step, which would probably require a revision of the examination guidelines, coupled with financial and other assistance for small and medium-sized businesses.  A tight definition of "technical contribution" is difficult to find, but this is what lies at the root of the problem, namely what constitutes a "patentable invention" in this field.

¶32      Whatever ensues, I am sure that this controversy will be followed closely in the U.S., since it faces a similar dilemma and there may be lessons for you to draw.