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# DGIM Consultation on Software Patents

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EuroLinux Alliance

2000-12-15

*The following document constitutes the official EuroLinux response to the consultation on the harmonization of software patent Law launched by the European Commission. The body is 9 pages long and includes a proposed interpretation of article 52 of the European Patent Convention for future regulations or directives on the community patent and on software intellectual property. Arguments introduced in the body of this official response are sustained by a 1000+ page appendix including reports, research articles and examples. This appendix has been sent by email to the European Commission on 2000-12-15 and a paper copy has been sent by postal mail.*

## Foreword

### Who is EuroLinux?

The EuroLinux Alliance is an alliance of commercial software publishers and European non profit associations with the goal to promote and protect the use of Open Standards, Open Competition and Open Source Software such as Linux. The EuroLinux Alliance has launched a petition to protect software innovation in Europe which has received 60,000+ signatures in 6 months.

The EuroLinux Alliance 200+ sponsors include:

1. Commercial publishers of proprietary software (ex. Netpresenter, Phaidros, FrontBase)
2. Commercial publishers of free / open source software (ex. MySQL, Troll)
3. Commercial distributors of proprietary or free / open source software (ex. Mandrake, Red Hat, SuSE)
4. Commercial service companies (ex. Alcôve, ID-Pro, Frontsite)
5. Commercial Internet companies (ex. Fluxus, APR jobs)
6. Non profit associations (ex. AFUL, APRIL, Europe Shareware, FFII, ISOC France, LIVE, SSLUG)

For most of these companies, even those which focus on distribution and service, creating and publishing software is an integral part of their activity. The list of 200+ EuroLinux sponsors is provided on the web at the URL: <http://petition.eurolinux.org/sponsors>

### What is open source / free / proprietary / shareware / freeware?

Let us take an example: the Internet browser market. The following commercial software are currently

available:

1. Microsoft Internet Explorer (United States). This software can be downloaded for free on the Internet. It is freeware. However, it is not permitted to distribute copies of this software and its source code is not disclosed. It is proprietary software.
2. Netscape Communicator 4 (United States). This software is also proprietary freeware, just like Microsoft Internet Explorer. It can be downloaded for free but its source code is not available.
3. Mozilla a.k.a. Netscape Communicator 6. This software can be downloaded for free, together with its source code. It is permitted for anyone to modify its source code and redistribute customized versions on the the Internet. It is open source / free software.
4. iCab (Germany). This software can be dowloaded for free but in order to use it, the user must buy a license to its author. It is shareware. Its source code is not disclosed. It is proprietary software.
5. Opera (Norway). Like iCab, this software is also proprietary shareware.
6. Konqueror (France). Like Mozilla, this software is open source / free software. Its main developer, David Faure, is employed by Mandrake SA (France).

A definition of the terms free / open source / proprietary / freeware / shareware follows:

1. Freeware is software protected by copyright which can be downloaded and used for free.
2. Shareware is software protected by copyright which can be downloaded for free and requires the user to pay for a license in order to be used beyond testing.
3. Free / open source software is software protected by copyright, which source code is available and which license allows to use it, adapt it and redistribute it. For the purpose of this document, there is no difference between the term "free software" and the term "open source software".
4. Proprietary software is software protected by copyright and which is not free / open source.

It is important to understand that there is no relation between the terms "commercial" and "proprietary" or between "non commercial" and "free / open source". Some proprietary software is non commercial (ex. slab, a famous digital audio software for Linux). Some freeware is commercial (ex. Microsoft Internet Explorer). Much open source / free software is commercial (ex. MatraDatavision Open Cascade). Obviously, publishing freeware or open source / free software has become a common business strategy to push new standards, to challenge a dominant competitor, to reduce marketing costs or to mutualize development costs.

## **Why is EuroLinux so much concerned about software patents?**

Linux related companies and users are generally much more aware of intellectual property Law than the average computer user, just because understanding the concept of free / open source software requires understanding the basic principles of copyright Law, patent law and the notion of infringement. Linux related companies and users understand that software patents allow a person to steal the original work of a programmer by claiming it is a patent infringement and forcing him or her to stop publishing his or her original work. Because writing software requires a lot of time and investment, and because nearly all software patents which have been granted in Europe or in the US are simply obvious, programmers feel that it is very unfair to let someone who did not invest much R&D in software technology get a patent

and use it against programmers who invested a lot of time and money to produce original, and often innovative, software. As a consequence, the Linux business and user community has been very active in Europe against software patents. They consider that copyright is the appropriate mean to protect software since copyright covers the expression of software - the actual instructions of the programme coded by the programmer - which represents the bulk of the investment in software development. Protection should go where investment lies.

Of course, companies in the Windows or MacOS market should be as much concerned as Linux related companies since the effects of software patents have little relation with Linux and no relation with the concept of "free / open source software". This is for example the case of EuroLinux sponsors such as Netpresenter or Europe-Shareware which develop or market proprietary software for the Windows and MacOS environments and have taken strong positions against software patents. However, there is currently no business association of European independent software publishers besides EuroLinux or Europe Shareware. Most European publishers of proprietary software are not aware that their products are likely to infringe on hundreds software patents. Many European software publishers, including in the Linux community, are afraid to publicly express their opposition to software patents because of their commercial ties with companies such as IBM, Cisco or Microsoft which are aggressively supporting software patents. As a consequence, independent observers have found it very impressive that 100+ companies provided EuroLinux with a public statement against software patents.

A list of 100+ statements against software patents is provided at the URL:  
<http://petition.eurolinux.org/statements>

### **How relevant is the EuroLinux position?**

If we consider again the example of the Internet browser market, it is widely admitted that Konqueror, iCab and Opera, three software mainly designed in Europe, are the most relevant alternatives to Microsoft dominance in this market. Two are shareware and one is open source / free software. The three European software both provide the most relevant, innovative, stable, standard savvy and compact alternatives to Microsoft Internet Explorer. In particular, Opera and Konqueror have been adapted successfully to the embedded market, one of the fastest growing and strategic markets in the IT industry. Opera already provides a much better user experience on handheld device than Windows CE / Internet Explorer. Konqueror, together with Qt and Linux, provides an open alternative to Windows CE / Internet Explorer on multimedia embedded platforms.

The Internet browser market is typical of the European software industry. EuroLinux considers that the European Commission should understand that European blue chips such as Alcatel, Bull, ICL, Olivetti, Siemens, etc., which received massive subsidies from the European Commission, have largely failed in providing a relevant commercial alternative to the dominance of US software players. Not only did these companies often fail in marketing relevant alternatives, but they mostly became strategic distributors in Europe for companies such as Fujitsu, Microsoft or Sun. On the other hand, companies such as TCX, Opera, Mandrake, SuSE, etc., which never benefitted from European subsidies, are successfully challenging the US software dominance on strategic markets and helping the above

European blue chips to gain back their software independence. Those companies would definitely be harmed by the introduction of software patents in Europe.

Therefore, EuroLinux considers its point of view to be the most relevant if the goal of the European Commission is to protect innovation, protect SMEs and stimulate competition in Europe. EuroLinux considers that it would be unwise and unfair to let companies such as Hitachi, IBM, Microsoft or Sun use their software patent portfolio in Europe either to assimilate or to eliminate what EuroLinux considers to be Europe's jewels in the Information Industry.

## **Scope of Harmonization**

The EuroLinux Alliance considers that harmonization on computer related inventions should take place on the basis of a more restrictive and clearer approach than the elements contained in the document "the patentability of computer related inventions" published by DGIM. In particular, the EuroLinux Alliance considers that the elements contained in the document "the patentability of computer related inventions":

1. fail to provide an economic justification to the extension of the patent system,
2. fail to provide a clear definition for the terms "invention", "technicity" and "technique",
3. fail to take into consideration the requirement for "industrial application" which is the core of patent Law,
4. fail to take into consideration the interpretation of the European Patent Convention by national courts and their decisions to cancel software patents granted by the EPO,
5. fail to provide a distinction between "innovative methods to process digital information" and "innovative methods to use the forces of nature",
6. fail to take into consideration the specific nature of software, and in particular the fact that innovative software can be the result of an automatic digital computation which is not the case for traditional inventions,
7. fail to take into consideration legal constraints posed by the European Union treaties in the fields of competition, innovation, cultural diversity, consumer protection, liberties, public security and software interoperability.

The EuroLinux Alliance believes that any harmonization on computer related inventions based on those elements:

1. would lead to the patenting of intellectual methods implemented through computer programmes and extend the patent system to business, management, education and culture in the information society,
2. would thus jeopardize fundamental human rights such as "freedom of speech or communication" or "equal access to education",
3. would generate in Europe even more juridical uncertainty than in the United States because of the lack of clarity of concepts such as "technical contribution" and "further technical effect".
4. would harm innovation, small & medium software publishers, competition, interoperability, consumers and cultural diversity in contradiction with juridical principles of the European Union or industrial policies towards SMEs launched by the European Commission.

## **The EuroLinux harmonization approach**

The EuroLinux Alliance considers that harmonization should take place on the basis of elements contained in the document "Technik, Datenverarbeitung und Patentrecht - Bemerkungen zur Dispositionsprogramm - Entscheidung des Bundesgerichtshofs" by Gert Kolle, on the basis of the elements contained in the document "On the Patent Examination of Programs for Computers" by Dr. Kiesewetter-Köbinge and on the basis of scenario 0 of the document "Protéger l'innovation et la concurrence dans la société de l'information" by Dr. Smets. The EuroLinux Alliance shares much of the analysis provided in these documents and has included an english translations of two documents.

In particular, the EuroLinux Alliance considers that

1. publishing original computer software on a physical media or on the Internet should never be considered as a patent infringement,
2. using computer software on a generic multimedia computer should never be considered as a patent infringement,
3. the interoperability principle introduced in a 1991 directive on software protection should prevail over any other form of industrial property as is now the case,
4. "technical" should be defined as "pertaining to the use of natural forces to directly cause a transformation of matter without intervening operations of mental deliberation"
5. "invention" should be defined as "embodiment of a new technical teaching, i.e. a teaching on how to use natural forces in a new way to directly cause a non-obvious transformation of matter serving an industrial application", which is the same as "a technical solution of a technical problem", the problem consisting in "how to cause a transformation of matter" and the solution consisting in "a teaching on how to use natural forces to solve the problem",
6. "industrial application" should be defined as "application for the production of material goods",
7. "inventivity" or "inventive step" should be understood as the creative experimental activity which leads to a non-obvious technical solution to a technical problem,
8. innovations based on computer programmes may thus be patented if and only if they are not equivalent to the combination of an "innovative method to process digital information", an "existing technique to digitize natural forces" and an "existing digital model of matter".

The underlying principle to the EuroLinux proposed harmonization is that only empirical activity can produce inventive results in the sense that such results are not predictable by means of pure mental activities such as computation. This strict definition of inventivity makes the patent system less prone to produce trivial patents in many fields. Distinguishing between a technical solution and a software solution lies in the requirement for direct causality, also expressed in point 8.

## **Impact of EuroLinux proposed harmonization**

### **Innovation in software**

On the one hand, the EuroLinux restrictive harmonization approach does not prevent from getting a

patent on traditional inventions which include a computer programme, for example in the case of chemical industry or mechanical industry.

On the other hand it guarantees to any author of an original programme meant to be used on a generic multimedia computer the right to publish his or her original work. The EuroLinux harmonization approach protects software authors and publishers from patent disputes. Because innovation in the software economy requires the freedom to combine, within an original work, a few innovative ideas together with many ideas imitated from existing programmes, the EuroLinux harmonization approach provides a higher level of innovation than any approach based on 20 years long software patents as is the case in the United States.

However, EuroLinux recognises that an approach based on "short and weak *sui generis* rights" such as the one described in scenario 3 of Dr. Smets' report may eventually lead to similar or higher levels on innovation, although this is far from certain and needs to be carefully reviewed. In any case, implementing the EuroLinux harmonization approach does not prevent from later introducing *sui generis* rights or negotiating within the WTO in order to reach a global harmonization which would lead for example to the worldwide adoption of "short and weak *sui generis* rights" for software innovation. In particular, EuroLinux suggest the European Commission to study the possibility to protect software innovation through "adapted utility models" based on the forthcoming directive rather than through patents. The protection provided by "utility models" has the great advantage of being flexible enough to adapt the duration parameter (ex. 3 years rather than 20 years), the examination procedure (ex. free filing with deferred examination), include compulsory licensing, etc. which is not possible within patent Law because of constraints posed by the TRIPS agreements.

EuroLinux has provided the DGIM with a collection of research articles related to the economy of software innovation to sustain its position.

### **Ability of SMEs to enter the market**

Two categories of SMEs should be distinguished:

1. SMEs which sell software licenses or services
2. SMEs which sell themselves

In the first case, the target market is the real world software market (license and service). The EuroLinux harmonization approach guarantees that SMEs in this market will not be blocked by juridical hurdles, as it is the case with SMEs in the United States where the risk of patent dispute creates a very unsatisfactory economic environment.

In the second case, the target market is the financial market. The EuroLinux approach does not prevent software publishers from entering this market as long as they can clearly exhibit intagibles assets (ex. original code, trademarks, databases, employment contracts, know-how). However, the EuroLinux harmonization approach may cause difficulties for software companies which do not publish software and do not make profits and try to enter financial markets.

As a result, the EuroLinux harmonization approach requires companies which try to enter financial markets to prove their viability in the real world market first, which is probably desirable if one considers the recent evolution of venture capital and the Internet this year.

### **Creation and dissemination of any software**

The EuroLinux harmonization approach guarantees that any author of original software is free to publish his or her original work. Same stands for any service company which provides commercial service based on proprietary or open source / free software, including in the fast growing embedded market. As a consequence, the dissemination of proprietary or open source / free software as well as the commercial activities based on the use of proprietary or free / open source software are protected.

### **Creation and dissemination of free / open source software**

Same answer as for any software.

As mentioned above, there is little relation between software patents and free / open source software. The opposition between software patents and free / open source software was mainly invented by some patent experts in Europe as a propaganda against EuroLinux.

The European Commission should rather take into account:

1. the impact of software patents on the publication of source code (whatever the copyright license on this source code). In the US, it is safer for a company to keep source code secret rather than disclosing it in order to prevent software patent disputes. Patents in the software economy actually lead to more industrial secret.
2. the impact of software patents on the competitiveness of SMEs. This is the main issue to tackle according to EuroLinux. The EuroLinux Alliance has no doubt that companies with a significant patent portfolio, such as IBM, Microsoft or Sun, will be able to disseminate their software, be it free or proprietary. However, the EuroLinux alliance is concerned that independent software publishers, such as most companies supporting EuroLinux, may not be able to disseminate their software if software patents were legalised in Europe.

### **Position of the European industry in global competition**

The European industry will benefit from the EuroLinux harmonization approach in the global approach.

Three cases should be considered

1. Traditional industry : the approach described above allows to patent traditional inventions, including the ones which are based on computer programmes. It has no effect on the traditional industry except that this industry is guaranteed to be free from potential threats posed by the monopolisation of software and organisational methods .
2. Telecommunication industry : European leaders (Alcatel, Nokia, Ericsson, Siemens, etc.) are big and strong enough to file patents in the United States and use patents as a strategic tool in the US market. Therefore, the EuroLinux harmonization approach has no effect on the telecommunication industry. Moreover, it protects European consumers from potential anti-competitive and anti-innovative strategies in the PABX market and could stimulate

innovation in the European telecommunication market since, like in the desktop market, software patents tend to slow down innovation rather than speed it up. As a consequence, there is no economic need for the European Union to allow those companies to use software patents in the European market.

3. Software publishing economy : State/EC subsidised European blue chips (ex. Bull, Olivetti) mostly act as service companies which do not produce much software innovation and resell a lot of US software. Software innovation in Europe comes from small & medium software publishers, which would benefit from a market in which the "freedom to publish" is guaranteed, as opposed to the US market where publishing original software means taking juridical risks of patent infringement dispute. As a consequence, the EuroLinux approach will make the European software market much more competitive and innovative than its US counterpart.

EuroLinux has provided the DGIM with a collection of research articles related to the economy of software innovation to sustain its position.

### **General development of the information society**

EuroLinux believes that the information society develops faster and better whenever hurdles are removed and competition stimulated. Comparing proprietary models such as Prestel in the UK, Btx/Datex in Germany and the Minitel in France with open models such as the Internet clearly demonstrates the economic efficiency of open models. The EuroLinux Alliance believes that the information society should therefore not be patented because patents tend to stimulate financial concentrations and act as protectionist barriers.

The EuroLinux approach guarantees that the information society may not be patented and in particular that intellectual methods may not be patented even for those which are based on the use of computer programmes.

## Proposed interpretation of article 52 of the European Patent Convention

The principle of non patentability of computer programmes was very clear for the legislators and authors of the European Patent Convention. However, the brief and abstract formulation in Art 52 EPC has led to misunderstandings, inconsistencies and legal insecurity. In particular, new rules created by some organs of patent jurisdiction could lead to undesired social and economic effects.

In order to prevent such effects, we propose the following clarification:

1. The term "programs for computers", in short "computer programs" refers to the program at all design levels from the conceptual plan to an instruction executable by a human or by a processor. A computer program is a plan and an instruction, a literary work and a virtual machine, an interface and an implementation, a problem and a solution, a process and a product, all in one.
2. A technical invention described by means of a computer program can, at a conceptual level, be distinguished from the program as such. Likewise a "method for the production of chessboards" can be distinguished from the chess game as such. The particle "as such" in Art 52 (3) EPC is to be understood only from its syntactic function in the above sentences: it serves to differentiate between two mutually independent categories by which a potentially patentable object could be described. A "computer program with a further technical effect" belongs to the category of computer programs and can therefore not be distinguished from a "computer program as such".
3. Computer Programs are not inventions in the sense of European patent law. Chemical processes, tyre braking processes and other technical processes controlled by computer programs can be inventions, as far as they are distinguishable from the computer program not only at a conceptual but also at a practical level. I.e. the solution of the problem must lie in a technical realm beyond the realm of programming, and the exclusion rights derived therefrom must be directed to material objects outside of the program, such as e.g. chemicals or automobile engines. The same applies to all categories of non-patentable object listed in Art 52 (2) EPC.
4. A "technical" process is one that uses natural forces to directly cause a transformation of matter. Objects that contain both technical and non-technical features are inventions only if the part that is claimed to be new and inventive, i.e. the core of the invention, lies in the technical realm. A technical process controlled by a computer program on known hardware is an invention if and only if it uses natural forces in a new way to directly cause a success in production of material goods that could not have been predicted by mere computation based on prior knowledge.

# Appendix

## Research Articles on Economy

Sequential innovation, patents and imitation. James Bessen & Eric Maskin.

What is behind the recent surge in patenting. Samuel Kortum & Josh Lerner.

Are weak patent rights a barrier to US exports? Pamela J. Smith.

Optimal patent breadth and length with costly imitation. Donald J. Wright.

The benefits and costs of strong patent protection: a contribution to the current debate. Roberto Mazzoleni & Richard R. Nelson.

The optimal life of a patent when the timing of innovation is stochastic. Vincenzo Denicolo.

Abstraction oriented property of software and its relation to patentability. Tetsu Tamai.

Acceptable protection of software intellectual property: a survey of software developers and lawyers. Effy Oz.

Nonobviousness and the incentive to innovate: an economic analysis of intellectual property reform. Robert Hunt.

Patent reform: a mixed blessing for the US economy. Robert Hunt.

An auction model of intellectual property protection: patent versus copyright.

Brevets et normes. Pierre Breese.

Software Useright: Solving Inconsistencies of Software Patents. Jean-Paul Smets-Solanes.

## General reports

Stimuler l'innovation et la concurrence dans la société de l'information. Jean-Paul Smets-Solanes.

Computersoftware und Patentrecht - Thomas Winischhofer.

Patent and Innovation in the International Context. OECD.

## Testimony and comments

EuroLinux petition public statements (politicians & corporate managers).

Software Patents - A Software Developers View. Ron Mc Quaker.

Why Software Shouldn't be covered by patents. Tord Jansson.

Answer from the association SSLUG (Skåne Sjælland Linux User Group) concerning the EU-hearing

on software patents.

Comments on "The Economic Impact of Patentability of Computer Programs" by VOSN.

Informatiker fordern klare Grenzen der Patentierbarkeit und wirksame Kontrolle des Patentwesens: Oener Brief zum "Basisvorschlag für die Revision des Europäischen Patentübereinkommens": FFII e.V. Virtueller Ortsverein der SPD Verein für Internet-Benutzer Österreichs (VIBE!AT) Swiss Internet Users Group (SIUG) Linux-Verband LiVe e.V. Linux User Group Switzerland (LUGS) Linux User Group Austria (LUGA) Intradat AG Phaidros AG SuSE Linux AG Frontsite AG Skyrix Software AG Oberon.net GmbH Intevation GmbH.

Anregungen des FFII zur BMWi-Konferenz. SWPAT-AG des FFII.

Positionspapier Software-Patente. Dr. rer. nat. Peter Gerwinski

Adobe - Software Patent Policy.

Oracle Corporation - Patent Policy.

Roland Dyroff. SuSE Linux AG. (NOT PUBLIC - DO NOT DISCLOSE)

Gerhard Herlos. Infomatec AG. (NOT PUBLIC - DO NOT DISCLOSE)

Dr. Volker Ossenkopf.

FFII letter to Karel Van Miert.

## **Law**

Technik, Datenverarbeitung und Patentrecht - - Bemerkungen zur Dispositionsprogramm - Entscheidung des Bundesgerichtshofs. Gert Kollé

Lamy Informatique - le recours à la propriété industrielle.

Muddy Rules for Cyberspace - Dan L. Burk.

Needed : a new system of intellectual property. Lester C. Thurrow.

Chairman' Opening Remarks. Paul Hartnack.

Article 7 and 8 of TRIPS agreements.

Software Related Inventions - "Up-to-date" views of the European Commission.

The TRIPS treaty and Software Patents. FFII SWPAT working group.

## **Patent examination**

On the Patent Examination of Programs for Computers. Swen Kiesewetter-Köbinger

Examination of "business method" applications. Trilateral Commission of Patent Offices.

Report on Comparative Study Carried Out under Trilateral Project 24.2. Trilateral Commission of Patent Offices.

US Patent Examination System is Intellectually Corrupts. Gregory Aharonian.

Inadequacy of PCT / PTO / EPO / JPO software prior art searches. Gregory Aharonian.

Trivial/obnoxious business method patents. Gregory Aharonian.

1998 software patent statistics. Gregory Aharonian.

## **Software Patent Examples**

European Software Patent Horror Gallery. [swpat.ffii.org](http://swpat.ffii.org)

Education Patents. [www.freepatents.org](http://www.freepatents.org)

L'AFUL brevète le passage aux 35 heures. [www.iful.org](http://www.iful.org)

## **International Policy**

A framework for global electronic commerce. William J. Clinton & Albert Gore Jr.

## **Press Articles**

Patent nonsense. The Economist.

Patent wars. The Economist.

I'm gonna sue your ass! How industry leaders are putting startups through legal hell - - and dampening innovation. By Luc Hatlestad. Red Herring.

Copying law would be a mistake. Lawrence Lessig.

Software patents: will Europe roll over for the multinationals? Graham Lea.

Software Patents - No Thanks ! Anne Østergaard.

Software Patents Tangle the Web. Seth Shulman.

## **EuroLinux Press Releases**

NO ePATENTS. A Petition to Save Software Innovation in Europe.

Thank You BT! EuroLinux Congratulates British Telecom for Demonstrating the Absurdity of Software Patent.

EuroLinux Warns. Software Patents Still on EC Agenda.

Massive Support for the EuroLinux Petition. 20,000 citizens and 50 companies call for a Software Patent Free Europe.

EuroLinux Petition Reaches 55.000. EuroLinux Calls for European Governments to Take Control of the European Patent Office or to Leave the European Patent Convention!

EC To Research the Dangers of Software Patents. EuroLinux Provides a Public Forum and a Rich Knowledge Base.

European Software Patents: More Trivial than in the US. EuroLinux Publishes European Software Patent Horror Gallery.

Software Patent Decision Postponed in Europe European Governments Wait for a Democratic Debate.