

# A Briefing Document

on

## Software Patentability & EU Directive COD/2002/0047

March 2005

Compiled by and on behalf of



and

# ifso

The Irish Free Software Organisation

# Software Patentability & EU Directive COD/2002/0047

## 0. Background

In February 2002, the European Commission drafted Directive COD/2002/0047 to "harmonise and unify" the patentability criteria of Europe's patent offices. This is a good goal, but the text of the Commission's directive contained some loopholes and undefined terms regarding what constitutes a patentable invention. These loopholes would make all **business methods** and **software ideas** legally patentable.

The idea of allowing patents on software has been strongly criticised among SMEs, scientists and consumer organisations. They inhibit investments in Research and Development and contribute to higher prices. Commentators also fear the rise of a "lawyers' paradise" in Europe such as is found in the USA, where programmers are constantly threatened by lawsuits.

The European Council is using procedural dodges to get around the fact that this directive no longer has a qualified majority, and has pushed it through against the twice-expressed will of Parliament. It's a disaster for the European software industry; we're effectively handing the whole thing on a plate to a handful of U.S. companies.

The purpose of this document is to explain the issues surrounding Software Patentability & EU Directive COD/2002/0047 to our MEPs and any other interested parties.

We will also try and lay out the position of those Irish organisations, including the undersigned, who are against software patents using specific examples where possible. We will draw heavily from a number of sources and these are referenced throughout this document.

This document is organised as follows:

- Introductory Points
- The History of EU Directive COD/2002/0047
- Some Studies and Reports on the Possible Effects
- Ten Reasons Why Software Ideas Must Remain Free From Patentability
- Some Examples of Existing Patents
- References
- Authors and Contact Details

This is a long document and at the very least I would suggest that any interested parties read sections 1 (an introduction as bullet points), 4 (reasons to vote against the patentability of software as bullet points) and 5 (examples of what is/has been patented by the EPO already and will become enforceable through this directive).

The contact details of the authors are included at the end and they would be happy to

clarify any of the details herein or to provide more information to any interested parties.

## **1. Introductory Points**

The proposed directive effectively gives legal force to the current extralegal practices of the European Patent Office (EPO). This is a problem because:

- Large companies have been "prospecting" for several years through the EPO by taking out patents on business methods and algorithms in anticipation of the day when these patents may come into legal effect (see section 5).
- If these patents do come into effect, these companies will gain an enormous advantage over their smaller competitors; the threat of patent litigation alone will be enough to seriously stifle innovation and competition.
- The vast bulk of the companies holding speculative software and business-method patents at the EPO are U.S. and Japanese companies.

## **2. The History of EU Directive COD/2002/0047** [1,3]

As we stated at the beginning of this document, in February 2002 the European Commission drafted Directive COD/2002/0047 to "harmonise and unify" the patentability criteria of Europe's patent offices. The text of the Commission's directive contained some loopholes and undefined terms which would make both business methods and software ideas legally patentable.

In response to this, the Irish Free Software Organisation (IFSO) sent a letter to all the MEPs of Ireland and the UK (Appendix 1 and Ref [2]) which I suggest you read for a good grounding on the issue.

Some paragraphs of particular importance are:

*"When contemplating adding restrictions to software development, we must look at it not only from the point of view of the software industry but every software using industry. Negative effects on the quality or price of software will harm almost every company and individual in the European Union. Patents are private property; if legalised now, it will be impractical to revoke them later."*

*"The need for software packages to inter-operate lends itself to market monopolisation. ... Companies with large patent portfolios would have a legal tool to enforce monopoly status. Governments would have difficulty regulating these legitimate monopolies."*

*"In America, large software developing companies find it impossible to develop new software without infringing a few patents. Companies with large patent portfolios*

*solve this by cross-licensing, thus forming patent sharing agreements. These companies can continue developing software but small and medium sized companies are locked out."*

*"A parasitic class of intellectual property firm is appearing. These small, usually new firms ... start suing anyone that they think they can get money out of. European companies would present an array of new targets for legal action and collection of royalties"*

Some of the new MEPs elected to the current parliament have asked which amendments we refer to, regarding the first time the E.U. Parliament considered this directive. These are covered in this letter also (and a second one with more detail that is reproduced in appendix 6):

*"Please vote Yes for all amendments from the CULT committee. Vote Yes for thirty-three of ITRE committee's forty-six amendments, vote No on numbers 2, 5, 6, 7, 20, 27, 30, 31, 34, 35, 36, 41, and 42. When amendments voting is over, if CULT/Rocard, Greens/EFA and EDD don't all endorse the amended directive, vote No. If any of the CULT committee's amendments are rejected, vote No."*

After numerous delays and sustained lobbying, the European Parliament heavily amended the directive to unambiguously confirm that software ideas should not be patentable in September 2003. Unfortunately, in May 2004 the European Council discarded most of the Parliament's amendments, returning the text to an unclear state relying on undefined terminology. The loopholes of the Council's text would again allow business methods and software ideas to be patented.

The directive was then delayed through various E.U. procedures and by the Presidency of Poland who were against the patentability of software. On July 1 2004, the Dutch parliament withdrew their support for the Council of Ministers support for the directive after finding that they had been misinformed (see the Foundation for a Free Information Infrastructure (FFII) press release for more information (Appendix 2 and Ref [4]).

On December 20 2004 the directive was to be approved as an A list ("uncontroversial") item by the Environment committee(!) [5]. On that same day, Włodzimierz Marcinksi (Poland's Minister of Science and Computerisation) appeared in person at the committee to remove the item from the agenda [6-9]. This was the second time Poland acted to ensure the democratic process is followed on this matter.

This brings us to this year where, on February 2 2005, JURI asked the Commission for a restart, referring the Directive again to the Parliament [10]. The Parliament will now have to heavily amend it, again, to fix it. **However, it should be noted that an absolute majority will be required, irrespective of abstentions and absences and so it is vital that our MEPs are present in parliament for this vote.**

We have attached (appendices 5 and 7) the text of two interesting articles from The Guardian and the Observer that were recently published and which summarise the history of this directive, mention the Irish presidency's unfortunate role on this issue and discuss a

number of issues relating to the implications of the directive and democracy in the E.U. They are both interesting and factual articles which we recommend reading.

### **3. Some Studies and Reports on the Possible Effects**

The only way to truly find out the effects of software patentability would be to legalise them. The next best thing would be to look at an economy that does allow software patents.

In October 2003, the Federal Trade Commission of the USA released its Report On Innovation - a review of the USA's patent system. The report contains a 13 page section on patents in the field of software.

The conclusion says:

*"Many panelists and participants expressed the view that software and Internet patents are impeding innovation. They stated that such patents are impairing follow-on incentives, increasing entry barriers, creating uncertainty that harms incentives to invest in innovation, and producing patent thickets. Panelists discussed how defensive patenting increases the complexity of patent thickets and forces companies to divert resources from R&D into obtaining patents. Commentators noted that patent thickets make it more difficult to commercialize new products and raise uncertainty and investment risks. Some panelists also noted that hold-up has become a problem that can result in higher prices being passed along to consumers."*

The report itself is available online at:

<http://www.ftc.gov/os/2003/10/innovationrpt.pdf>

At the May 2003 conference on the software patents directive in the European Parliament, venture capitalist Laura Creighton (of AB Strakt) said that software patents would make it difficult for her to invest in small companies because a cash injection would make them worthy targets for patent litigation claims.

She also mentioned that she would have less to invest since she would have to hold back a cash reserve for the inevitable lawsuits.

Another talk given by Ms. Creighton is freely available on the internet at:

[http://www.vrijschrift.org/swpat/030508\\_1/](http://www.vrijschrift.org/swpat/030508_1/)

An excerpt from an open letter by 14 respected economists from European universities claims that small and medium sized enterprises will be hurt:

*"Software patents damage innovation by raising costs and uncertainties in assembling the many components needed for complex computer programs and constraining the speed and effectiveness of innovation. These risks and liabilities are particularly burdensome for small and medium sized enterprises, which play a central role in software innovation in Europe as well as North America."*

The full text of this open letter is reproduced in Appendix 3.

#### **4. Ten Reasons Why Software Ideas Must Remain Free From Patentability**

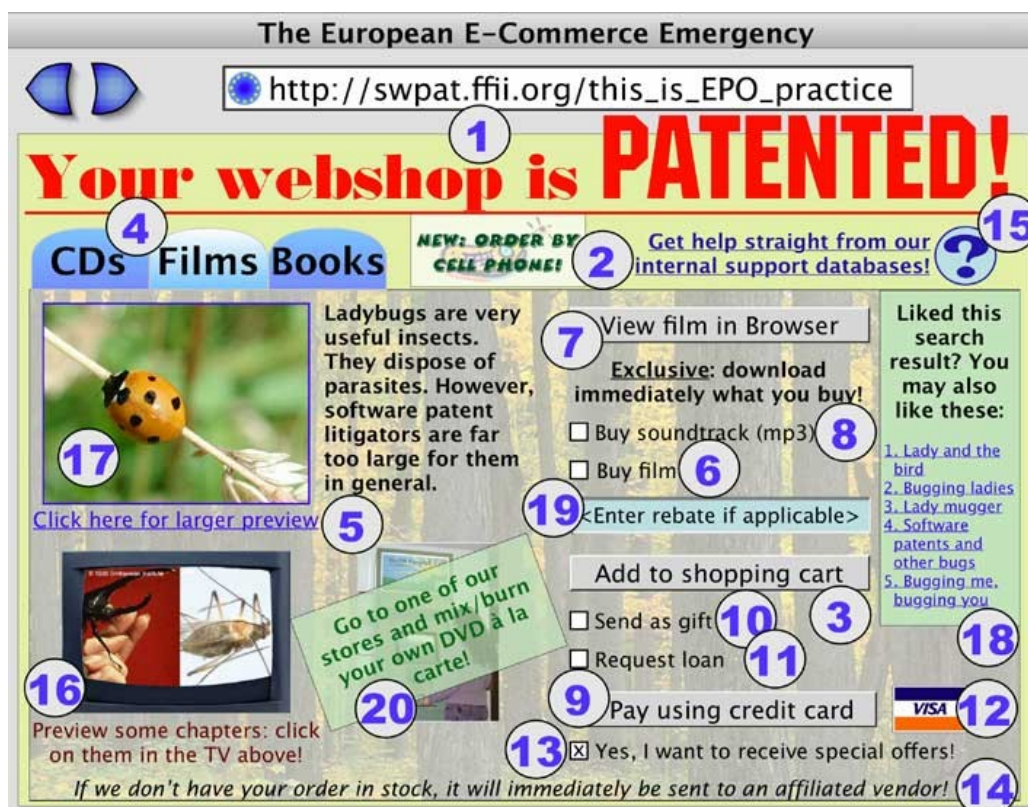
These points are taken from [11]. I would also suggest you read the IFSO's letter to the Irish Competitiveness Council (Appendix 4 and [12]) which explains some terms that appear here such as "Free Software".

1. There are **currently no costs, waiting periods, or application forms required for software development**. Patentability would radically change this and would invalidate many development and business models.
2. Software already has "ownership rights" via the copyright system. Copyright is instant, costs nothing, and doesn't interfere with independent development.
3. If companies could purchase exclusive rights to the use of techniques required by their de facto standards, they could choose their competitors. "Competition" would become an inside joke, and preventing competition would be completely legal and above board.
4. **Small and medium enterprises can't afford patents**, they can't spare time for patent searches and they can't risk the cost of contesting an accusation in court.
5. The patent term (20 years) is absurdly long in terms of the software industry.
6. **Innovation in software is incremental**, new ideas build on the old. To advance the state of the art, developers must be permitted to build on top of the state of the art.
7. Software is abstract, like maths. Software ideas can be described in any number of ways, so searches for software patents would be hit-and-miss. Reliably avoiding patent infringement would be impossible.
8. Engineering, manufacturing, and pharmaceutical patents are industrial regulations. **Software idea patents would place restrictions** on what all businesses and all individual computer owners **can do with their own computers**.
9. In the USA, to get around the burden of software idea patents, the "Big Players" of the software industry have formed cartel-like patent sharing agreements. Small and medium enterprises **cannot afford** to join these agreements, and **none** of the "Big Players" are European companies.
10. For Europe to develop it's own software industry, **we must retain the right to write our own software** - without having to ask permission or pay royalties to current (foreign) market leaders.

## 5. Some Examples of Existing Patents

A number of MEPs have requested specific examples of just what the consequences could be for Irish (and European) SMEs if software ideas become patentability. One website gives a graphic illustration of the problem with allowing the patentability of software ideas.

The website is <http://webshop.ffii.org/> and it is reproduced here in part for the purposes of illustration.



All of the numbered elements and processes indicated in the image above are covered by **granted (not just requested) European Patents**. Such patents would be rendered enforceable by the directive in the versions adopted by the European Commission and the Council of Ministers. The directive with amendments as originally voted by the whole European Parliament however, makes sure these patents remain what they are today: examples of the EPO's drift towards unlimited patentability, without any legal value whatsoever.

The image depicts the standard features of a "web shop" - the selling of products and services over the internet – that are currently used by hundreds (if not thousands) of Irish (and thousands more of European) SMEs today. Just some of the **business methods** and **software ideas** that have been patented include (numbers follow the image above; see the actual website for the numbers omitted here):

1. The sale of goods and services over the Internet ("over a network using a server, client and payment processor, or using a client and a server" - EP803105 and EP738446).

This effects almost every SME in the country.

2. The ordering of goods by using a mobile phone ("selling over a mobile phone network" - EP1090494).
3. The use of an electronic shopping cart (EP807891 and EP784279). There are very few on-line stores that do not use some form of electronic shopping cart and specific examples are too numerous to mention but we would be happy to give a list of example Irish websites if requested.
5. The use of a smaller image as a preview – every current Irish MEP's party website uses preview windows (EP537100).
6. Video data distribution through the web (EP933892). Setanta Sports, for example.
7. Video streaming (EP633694) – most political party websites currently employ this as does the national broadcaster (R.T.E.) and other media outlets.
9. Paying for goods and services using credit card via the Internet (EP820620 and EP779587). What SME, guest house, charity, club, sole trader, etc does this not affect?
10. Ordering a gift for someone via the Internet by providing his/her email address (EP927945).
11. Automated loan applications (EP715740)
18. Show related results if customer likes the current ones (EP628919). A common technique used by companies currently in or setting up in Ireland such as Google, Yahoo, Amazon, Tesco, etc.

Can you believe some of these patents? Ordering goods over the internet or a mobile phone! Paying for goods by credit card over the internet!

**These are the consequences of allowing this directive to come into law in its current form. It needs to be amended or defeated by the E.U. Parliament. As we have already stated: an absolute majority will be required, irrespective of abstentions and absences and so it is vital that our MEPs are present in parliament for this vote.**

And these patents aren't just limited to a web shop. That was just one example illustrating how a simple website can violate 20 patents.

Do you know that Microsoft have patented the idea of "double-clicking" to launch an application? [13]

What about the idea of topping up your mobile phone at an ATM machine? [14]



## 6. References

- [1] <http://www.ifso.ie/projects/swpats.html#history>
- [2] <http://www.ifso.ie/documents/swpats-meps-00.html>
- [3] <http://www.ifso.ie/cgi-bin/wiki.cgi/SoftwarePatents>
- [4] <http://swpat.ffii.org/~blasum/pr/pr.en.txt>
- [5] <http://kwiki.ffii.org/Cons041215En>
- [6] <http://kwiki.ffii.org/Cons041221En>
- [7] <http://www.theinquirer.net/?article=20337>
- [8] [http://www.theregister.co.uk/2004/12/21/patents\\_dropped/](http://www.theregister.co.uk/2004/12/21/patents_dropped/)
- [9] <http://news.com.com/>
- [10] <http://kwiki.ffii.org/?Restart050202En>
- [11] <http://www.ifso.ie/projects/swpats.html#why>
- [12] <http://www.ifso.ie/documents/swpats-council-00.html>
- [13] <http://patft.uspto.gov/>
- [14] <http://www.freepatentsonline.com/6169975.html>

## 7. Authors and Contact Details

The authors of this document and their respective organisations listed below would implore all MEPs to ensure that only a directive which unambiguously ensures that software ideas and business methods are not patentable in the EU is passed into law; one which allows for patenting of algorithms and business methods is unacceptable.

Feel free to contact any or all of the authors regarding anything to do with this document or this directive.

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for and on behalf of:



The Irish Free Software Organisation

The IFSO works to promote awareness of Free Software: software that comes with the freedom to study it, modify it, and redistribute it. We also work within the political system to preserve the rights of those who use and write Free Software.

**Web:** <http://www.ifso.ie/>  
**E-Mail:** [committee@ifso.ie](mailto:committee@ifso.ie)



## The Irish Linux Users' Group

ILUG was set up in 1997 to promote awareness of the Linux operating system within Ireland. ILUG also acts as a focal point both for developers wishing to contribute to the Open Source movement and for users of all levels seeking to solve their individual technical issues. ILUG boasts over 600 members including ICT professionals, computer science researchers, software developers and students. Membership of ILUG is free and is open to anyone.

**Web:** <http://www.linux.ie/>  
**E-Mail:** [committee@linux.ie](mailto:committee@linux.ie)



## The K Desktop Environment

KDE is a powerful graphical desktop environment for Linux and Unix workstations and is similar to the desktop environments found under the MacOS or Microsoft Windows. It is 'Free Software' and it is in use by many Irish SMEs, research institutes, charities and other organisations and individuals. The mission of KDE.ie is to represent and promote the K Desktop Environment throughout the island of Ireland.

**Web:** <http://www.kde.ie/>  
**E-Mail:** [info-ie@kde.org](mailto:info-ie@kde.org)

## **Appendix 1:**

### **Letter sent by IFSO to the MEPs of Ireland and the UK describing the problems of software patents on September 1, 2003.**

Dear MEP,

On September 1<sup>st</sup>, directive COD/2002/0047 on the patentability of computer implemented innovations will be presented to the plenary. It is widely believed that this directive will damage our economy but given the resources required to take the directive this far, many MEPs are looking for a list of amendments to fix this directive rather than vote No. At the end of this letter I will do my best to give such a list, but first I want to outline why if all the amendments on this list are not adopted, a No vote will be justified and required.

The term "software patents" is often used but it must be noted that the type of patents created by this directive do not cover complete pieces of software or specific implementations of an idea but ideas implementable through software. Business and teaching methods involving software will be included.

#### **Why is this issue so serious?**

When contemplating adding restrictions to software development, we must look at it not only from the point of view of the software industry but every software **using** industry. Negative effects on the quality or price of software will harm almost every company and individual in the European Union. Patents are private property; if legalised now, it will be impractical to revoke them later.

#### **Trying to reduce the damage:**

Pro-patent companies say that the EU won't suffer the over-patenting problem that American does because our patent offices will be more conservative about approving applications. This cannot be relied on. A patent is an asset created without raw materials. In a patent system, countries that hand out the most patents reap the largest rewards, also, patent offices get revenue from the applications they approve, not the ones they reject. Increasing patentability is a slippery slope and there is no incentive to consider the affect that restricting use of the technology will have on Europe's citizens and industries.

#### **Incompatible timeframes:**

When a patent is approved, it's claims are not made public for 18 months. This gives companies a period of privacy. In the software industry this is long enough for a complete development and marketing cycle. A company could have a new piece of software in widespread use before it's even possible to check if it infringes existing patents. Unbounded legal uncertainty would arise. The twenty year term of patents is also out of sync with the software market. Patents exist to give inventors a head start in developing their idea. In the software industry twenty years is far too long.

#### **Ease of complexity:**

Developing most patentable inventions requires an investment in materials, tools, production facilities, testing equipment, safety certification etc. However, software can be

## *(Appendix 1 cont.)*

developed by anyone with programming experience and a PC, no material limits currently exist. In just a few decades we have been able to develop software packages comprising hundreds of thousands of components. Software is a relatively new industry, thousands of new and old ideas are incorporated into each new product. Companies with enough resources could accumulate near limitless numbers of patents.

### **Inter-operability:**

The need for software packages to inter-operate lends itself to market monopolisation. Systems are more productive if data and user knowledge is transferable between different packages. For a package to compete with the current market leader, it must handle common document formats, and present the user with a recognisable interface. For market competition, new packages must be allowed to build on existing practices. Companies with large patent portfolios would have a legal tool to enforce monopoly status. Governments would have difficulty regulating these legitimate monopolies.

### **Collaboration and quality:**

Software companies currently collaborate to everyone's benefit. For example, MySQL AB develop a database package. Other companies can integrate this database into their own packages (for a fee). This type of collaboration reduces the development time of new products that require a database, and allows many companies to make use of widely tested software. If software becomes patentable, companies will have to ask *“does this code infringe any patents, will it get us sued?”* . These questions would be impossible to answer. Collaboration would become a risky practice.

### **Software development resources:**

Software development companies would have to regularly perform patent lookups while developing software, development resources would be diverted to legal issues. Development would have to be done cautiously, thus slowing innovation. Even the threat of a patent infringement charge would damage a small companies trading prices, whether the charge was true or not.

### **The American solution:**

In America, large software developing companies find it impossible to develop new software without infringing a few patents. Companies with large patent portfolios solve this by cross-licensing, thus forming patent sharing agreements. These companies can continue developing software but small and medium sized companies are locked out. Stagnation benefits market leaders, it allows them to maintain their revenues without the burden of competition.

### **The new American problem:**

A parasitic class of intellectual property firm is appearing. These small, usually new firms buy the patents of cash strapped companies and with nothing to lose, start suing anyone that they think they can get money out of. European companies would present an array of new targets for legal action and collection of royalties, a lot of money will start flowing from EU companies to America.

*(Appendix 1 cont.)*

**The company development problem:**

Laura Creighton, a European venture capitalist, gave testimony at a software patents hearing in the European Parliament in May. She said that investing in small companies would be risky if software patents existed because a cash injection would simply draw the attention of the above noted intellectual property firms. Without such cash injections, companies will find it harder to make the transition from small to medium sized enterprise. By impeding the growth of successful small companies, competition and employment will be hurt, and many innovative products won't reach the market.

**Telecommunications research:**

One global telecommunications company has claimed that software patents are required to make research economically viable. We are asked to believe that without software patents, research will cease, and an alternative approach will not be found. They omit that many of the telecoms biggest successes (such as VOIP) are based on patent-free technologies funded by agencies like CERN.

**To fix this directive:**

Please vote Yes for all amendments from the CULT committee. Vote Yes for thirty-three of ITRE committee's forty-six amendments, vote No on numbers 2, 5, 6, 7, 20, 27, 30, 31, 34, 35, 36, 41, and 42. When amendments voting is over, if CULT/Rocard, Greens/EFA and EDD don't all endorse the amended directive, vote No. If any of the CULT committee's amendments are rejected, vote No.

Yours Sincerely,  
Ciaran O'Riordan,

*[on behalf of the people listed on a supplementary page omitted here]*

## **Appendix 2:**

### **Press release from the Foundation for a Free Information Infrastructure (FFII):**

#### **“01/07/04: Dutch Parliament forces Minister Brinkhorst to withdraw support for software patents directive”**

Today, July 1st, the Dutch Parliament has decided to direct Minister Brinkhorst and Secretary of State van Gennip (Economic Affairs) to withdraw the Dutch vote in support of the Council of Ministers' text for the Directive on Software Patents. This is the first time in the history of the EU that such a course of action has been undertaken.

The idea of allowing patents on software has been strongly criticized among SMEs, scientists and consumer organisations. They inhibit investments in Research and Development and contribute to higher prices. Commentators also fear the rise of a "lawyers paradise" in Europe such as is found in the USA, where programmers are constantly threatened by lawsuits.

This act represents an incisive criticism of the European Council of Ministers' attempts to introduce broad patentability of software. Minister Brinkhorst, acting on behalf of the Netherlands, endorsed the Council's current proposal, which not only reiterated the terms of the Council's strongly criticized first proposal, but went even further, directly rebuffing the clear stance assumed by the EU Parliament, which voted to add numerous amendments which made clear how the category of logical algorithms would be treated.

The European Parliament's version asserted that patents would only be allowed for industrial inventions (e.g. washing machines) and would not be made possible for pure software. All these adaptations were removed in the Council of Ministers' controversial version.

Earlier, Brinkhorst described the Council proposal to the Dutch Parliament as a compromise with the EP. In recent legislative debates, Van Gennip was forced to admit that this was incorrect information, and attributed it to "an error in the word processor."

The Dutch Parliament rejected this explanation and today it rendered an historic and groundbreaking decision, calling upon Minister Brinkhorst and van Gennip to withdraw the Netherlands' supporting vote in the European Council and convert it to an abstention. This measure is possible because at the present moment there is only a "political agreement" and the "formal vote" can only take place after the contested text has been translated into the 20 European languages. An emergency brake move in the procedure such as this has never been exercised before.

With this decision, the Dutch Parliament demonstrates the active interest her public holds in the debate over software patents, and her recognition and appreciation for the adaptations introduced by the European Parliament.

Dieter Van Uytvanck, spokesman of FFII Netherlands, stresses the importance of this

*(Appendix 2 cont.)*

decision:

*“This political signal reaches much further than just The Netherlands. We hope that other European countries that also have their doubts about the proposal of the Council will also withdraw their support, so that the current proposal no longer has a majority. The historic precedent has been set now.*

*Let this be a lesson to the lawmakers in Brussels: the European citizen watches you closely. It is much better to take this into account from the beginning than to get into trouble later.”*

## **Appendix 3:**

### **An Open Letter dated August 25, 2003, to the European Parliament Concerning the Proposed *Directive on the Patentability of Computer- Implemented Inventions***

The undersigned economists have grave concerns about the proposed *Directive on the Patentability of Computer-Implemented Inventions* that has emerged from the JURI committee of the European Parliament and that has been tabled for vote on 1 September 2003.

While clothed as an administrative clarification, the proposed *Directive* will provide opportunities and incentives for the construction of extensive portfolios of software patents. The exploitation of these portfolios will have serious detrimental effects on European innovation, growth, and competitiveness.

Unlike most complex technologies, the opportunity to develop software is open to small companies, and even to individuals. Software patents damage innovation by raising costs and uncertainties in assembling the many components needed for complex computer programs and constraining the speed and effectiveness of innovation. These risks and liabilities are particularly burdensome for small and medium sized enterprises, which play a central role in software innovation in Europe as well as North America. Moreover, within the ICT sector, expansion of patent protection has been found to lead to an increase in the strategic use of patents, but not to a demonstrable increase in innovation.

Copyright and other rules of competition permit small and medium sized software enterprises to grow despite the overwhelming resource advantages of large companies. As a recent report from the National Academy of Sciences in the US concluded: "[D]eveloping and deploying software and systems may cease to be a cottage industry because of the need for access to cross-licensing agreements and the legal protection of large corporations." While some small and medium-sized firms will be able to prosper in this new environment, many will not. In particular, validating loosened standards on patentability will cloud the prospects of Europe's ascendant free and open source software industry while preserving the dominance of present market leaders.

We are concerned that the analysis made available to Parliament by the Commission and the JURI committee fails to acknowledge the problems of strategic patenting that have been the growing focus of attention and research in the U.S., as well as the unique characteristics of software development and use. We urge the members of the European Parliament to reject the proposed *Directive* in its present form and to request that the Commission develop an economic analysis that properly considers the potential consequences of software patenting for European software developers and users.

Signed by:

- Birgitte Andersen, Birkbeck, University of London
- Paul A. David, Oxford Internet Institute and Stanford University
- Lee N. Davis, Copenhagen Business School



*(Appendix 3 cont.)*

- Giovanni Dosi, Scuola Sant'anna Superiore
- David Encaoua, Universite Paris I
- Dominique Foray, IMRI Universite Dauphine
- Alfonso Gambardella, Scuola Sant'anna Superiore
- Aldo Geuna, SPRU, University of Sussex
- Bronwyn H. Hall, University of California, Berkeley and Scuola Sant'anna Superiore
- Dietmar Harhoff, Ludwig-Maxmiliens Universitaet
- Bengt-Ake Lundvall, Aalborg University
- Peter Holmes, SEI, University of Sussex
- Luc Soete, MERIT, University of Maastricht
- W. Edward Steinmueller, SPRU, University of Sussex

## **Appendix 4:**

### **The Irish Free Software Organisation's letter to the Irish Competitiveness Council**

To An Tanaiste, Mary Harney,  
To whom it may concern,

I am writing to you regarding EU directive COD/2002/0047 "on the patentability of computer-implemented inventions", which will be discussed by the Competitiveness Council on the 17th and 18th of this month. Members of Irish Free Software Organisation (IFSO) have been involved in this directive since June of 2003 and we would like to offer our assistance.

#### **The Right to Write Software**

For software to be competitive, it must allow its users to share data with other people. To do this, it has to be able to read and write the files that software users have created with the market leaders' software. If companies are allowed to patent techniques required for writing certain file formats, compatibility could be made illegal. By rendering alternative software packages useless, competition would become a puppet show, and a lot of innovative software would go unused.

In addition to data compatibility, software users expect a certain level of functionality. If a new piece of software is to enter the market, it must do the work of the current market leader, plus something new. This incremental or cumulative development style is how the software industry has progressed, but if software developers are prohibited from implementing widely used features, new products will cease to be competitive.

Software already has "ownership rights" in the form of copyright. Use of copyright is instant, free, and doesn't interfere with other people's work. In contrast, patents would leave even independent software development open to patent infringement charges.

An open letter from 14 notable European economists said:

``Unlike most complex technologies, the opportunity to develop software is open to small companies, and even to individuals. Software patents damage innovation by raising costs and uncertainties in assembling the many components needed for complex computer programs and constraining the speed and effectiveness of innovation."

The full letter is available at: <http://www.researchineurope.org/policy/patentdirltr.htm>

#### **Free Software, also known as "Libre Software", or "Open Source"**

Free Software is software that comes with royalty-free permission to run, study, modify, copy, and redistribute the software.

Since the mid-nineties, some businesses have been building a new business model based on the fact that it costs nothing to give people these rights, and there's no barrier to entry into the market. These businesses make money from providing software development

## *(Appendix 4 cont.)*

services such as writing extensions, customisation, system setup, technical support, etc. and each new company contributes to the pool of Free Software. The European Commissions' Information Society Initiative recently released a report on "Free / Open Source Software F/OSS", which says:

``On the provider side, F/OSS creates new opportunities for software and service providers, which may be a unique opportunity for the European software industry - somehow this may be a proverbial "second and last chance"."

([http://europa.eu.int/information\\_society/activities/opensource/text\\_en.htm](http://europa.eu.int/information_society/activities/opensource/text_en.htm))

Software patents are particularly harmful to Free Software, more so than unfree/proprietary software because Free Software cannot require per-copy royalties, so Free Software projects find it virtually impossible to get permission to use patented technologies.

### **The US Federal Trade Commission**

Finally, we'd like to draw your attention to the October 2003 report by the US Federal Trade Commission.

The report is 315 pages and covers the US patent system as a whole, but I have excerpted and attached the 13-page section specific to the patenting of software. In the printed copy, this section begins on page "44" of chapter 3 (each chapter starting at 1), or page 153 in the complete digital copy which can be found at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>

From the conclusion:

``Many panelists and participants expressed the view that software and Internet patents are impeding innovation. They stated that such patents are impairing follow-on incentives, increasing entry barriers, creating uncertainty that harms incentives to invest in innovation, and producing patent thickets."

The conclusion listed no redeeming qualities for software patents.

Software patents were introduced into the US in 1986 by a court decision rather than any democratic legislative procedure, and because the US was the first economy to permit software patents, their decision was made without the benefit of being able to study the effects of software patents in other countries. The EU has the advantage of being able to learn from their mistakes.

The US held the dominant position in the software industry long before 1986, so the existence of software patents in the US should not be construed to imply that they benefit the industry. In contrast, we believe that if software patentability spreads into Europe, it would stagnate the industry in a manner which would benefit only the very large software companies - none of which are European.

Last September, we were pleased that Ireland's MEPs, along with the majority of the European Parliament, voted to adopt a set of amendments which would clarify that software innovations are excluded from patentability. For the reasons given above, we believe it is clear that the introduction of legal software patents would be disastrous for

*(Appendix 4 cont.)*

Europe's software developers and software users, and we ask that you support the decision of the Irish MEPs and the parliament.

Please contact us if you would like any further input from IFSO, we would be glad to oblige.

Ciaran O'Riordan

Chairman,

Irish Free Software Organisation

## **Appendix 5:**

**Article published in The Guardian on March 10, 2005, “*Second Sight*”, by Glynn Moody.**

<http://www.guardian.co.uk/online/comment/story/0,12449,1433720,00.html>

If you think computer patent law is boring, think again. Over the past year, factions for and against the patenting of programs have fought a battle for the soul of European software, and the ramifications of a recent EU decision on the subject are likely to be huge - and not just for anoraks.

Things began quietly in 2002, when the European Commission's Directorate for the Internal Market submitted a proposal regarding the patentability of "computer-implemented inventions". In September 2003, the European Parliament added amendments that made clear that programming code and business methods could not be patented - a view widely held in Europe, if not in patent-happy America where they can be given for quite mundane or obvious concepts - as if you could patent the idea of a verb of motion in an English sentence. It would turn the life of a programmer into a nightmare.

But last May, for no apparent reason, the clarifications were discarded, and a text close to the original draft that did allow US-style software and business method patents was pushed through by Ireland, which held the presidency of the European Council. The software patent proposal finally turned up on a Fishery Meeting agenda in December as what is known as an "A" item: something that would be adopted without a discussion or a vote.

Poland's science minister raced to the meeting to request that the item be removed from the agenda. Poland did this twice, but these were simply postponements of the vote, not a restart to the whole patent legislation process.

Meanwhile, the backlash against the European Commission's attempts to steamroller this legislation through had been growing. At the beginning of the year, German, Spanish and Dutch politicians formally called on their respective governments not to support the proposed text. The Legal Affairs Committee of the European Parliament asked for a restart of the legislative process, as did the European Parliament itself.

Against this background, Monday's meeting of the EU Council, where the software patent directive was again an "A" item, was a critical one. Denmark requested that the matter become a "B" item, which would allow more discussions, a move supported by several others. But the country currently holding the presidency, Luxembourg, flatly refused - "for institutional reasons"; the item remained on the "A" list, and the "common position" was adopted, despite the manifest lack of unanimity.

This is a major victory for the pro-software patent lobby, but it is by no means the end of the story. The directive now goes back to the European parliament, which has the option of modifying it - theoretically, at least, since an absolute majority is required to do so, irrespective of abstentions and absences, and MEPs are not known for their rigorous

*(Appendix 5 cont.)*

attendance levels.

But this time, things may be different. The European Commission has gone out of its way to thwart the European parliament, disregarding the wishes of various elected bodies by its insistence that bureaucracy trumps democracy, and that fiats beat votes. A time was bound to come when there would be a power struggle over who really runs Europe: the commission or parliament.

Maybe an apparently obscure battle over software patents will not only go down in computing history, but also be counted as a decisive moment in shaping the 21st century's political landscape, too.

## **Appendix 6:**

### **The second letter sent by IFSO to the MEPs of Ireland and the UK, specifying which amendments should be accepted and rejected for the proposed directive (September 2003).**

Dear MEP,

My name is Ciaran O'Riordan, I am writing regarding the September 24<sup>th</sup> vote on directive COD/2002/0047 "on the patentability of computer implemented inventions". At the end of August, with help from 24 concerned citizens and companies, I mailed you a letter about the economic and industry problems that would be created if software implementable ideas were to become patentable. A large number of beneficial amendments have been tabled for this directive. I've read through each of them and drawn up a voting list which I hope you'll find useful. The purpose being to clarify the text of the European Patent Convention which lists "programs for computers" among that which "shall not be regarded as inventions" (Article 52).

#### **The most important amendments:**

Amendment **45** : *Article 3 (a) (new)*: Member states shall ensure that data processing is not considered to be a field of technology in the sense of patent law, and that innovations in the field of data processing are not considered to be inventions in the sense of patent law.

Amendment **50** : *Article 6a (new)*: Member States shall ensure that, wherever the use of a patented technique is needed for the sole purpose of ensuring conversion between the conventions used in two different data processing systems so as to allow communication and exchange of data content between them, such use is not considered to be a patent infringement.

Amendments **97, 55, 108**: *Article 2 (ba) (new)*: "technical field" means an industrial application domain requiring the use of controllable forces of nature to achieve predictable results. "Technical" means "belonging to a technical field". The use of forces of nature to control physical effects beyond the numerical representation of information belongs to a technical domain. The production, handling, processing, distribution and presentation of information do not belong to a technical field, even when technical devices are employed for such purposes.

Amendments **39, 43** : *Article 2 (bb) (new)*: "invention" in the sense of patent law means "solution of a problem by use of controllable forces of nature".

Amendments **46, 83** : *Article 4.4 (d) (new)*: Member States shall ensure that patents on computerised innovations are upheld and enforced only if they were granted according to the rules of Article 52 of the European Patent Convention of 1973, as explained in the European Patent Office's Examination Guidelines of 1978.

*(Appendix 6 cont.)*

**Complete voting list:**

The following amendments are beneficial to Europe and should be adopted:

3, 7, 15, 20, 29-36, 38, 39, 41-44, 46-51, 54-62, 68-70, 72, 82, 83, 88, 91, 95, 97-104,  
107-120.

The following create uncertainty or greatly extend patentability, and should be rejected:

1, 2, 4-6, 8-14, 16-19, 21, 71, 74-76, 84, 86, 96, 105.

Yours sincerely,

Ciaran O'Riordan



## **Appendix 7:**

**Article published in The Observer on March 13, 2005, "*It's Patently Absurd to Let the Bureaucrats Take Over*", by John Naughton**

<http://observer.guardian.co.uk/business/story/0,6903,1436170,00.html>

Do you know who your MEP is? If not, can I respectfully suggest that you click on [www.europarl.org.uk](http://www.europarl.org.uk) and find out, pronto? There are 12 European constituencies in the UK, and each has between three and 10 MEPs. They need to hear from you, because they hold your future in their hands. And the irony is that many of them probably don't know that yet.

At stake is a simple but overarching question: who runs Europe: the elected European Parliament or the unelected European Commission? This may seem a rather grand question for a technology column, but bear with me.

It just so happens that the issue which has brought the power struggle between the parliament and the commission to a head concerns the future of software, and especially the future of open source software, the stuff that makes the internet (and a great deal more besides, including your broadband modem) work. What's happening is that the commission has been nobbled by a small number of large software companies (among them a noted US monopolist), and is trying to railroad through a directive that would enable them to control the evolution of software.

Here's the story so far. In 2002, the commission proposed that 'computer-implemented inventions' should be patentable in Europe. In 2003, the European Parliament amended the proposal to exclude computer programs and 'business methods'. Last May, these amendments were discarded by the commission and the original draft directive was resurrected.

In December, the commission tried to push the directive through by making it an 'A-list' item at the (wait for it) European Fisheries meeting. (An A-list item is one that is approved without either a discussion or a vote.) This wheeze was initially foiled by Poland. The parliament then considered the whole affair and demanded that the commission think again about software patents.

The commission refused and tabled the directive as an A-list item at last Monday's council of ministers meeting. This time, Denmark requested a postponement but Luxembourg (currently holding the presidency) refused the request - on 'institutional' grounds. The directive now goes back to the parliament, where it can be stopped - but only by a majority vote of MEPs.

Why are software patents bad news? Simply because patents (unlike copyright) allow someone to control access to an idea. Ideas are not copyrightable - only tangible expressions of them are. Thus James Joyce's idea of stream-of-consciousness narrative could not be copyrighted, but the text of *Ulysses* (in which the idea was given expression) could be. And that's fine.

## *(Appendix 7 cont.)*

But a patent gives the patentee monopoly control of an idea - not of a tangible implementation of it - for 20 years. There is a valid US patent for a method of exercising one's cat by using a laser pointer to create a moving spot of light. (I'm not making this up - it's US patent no. 5,443,036). So if you decide to exercise your moggie by using a small mirror to deflect sunlight onto the floor you may be infringing someone's intellectual property.

In most areas of life, we can live with that. But the trouble with software is that it is pure 'thought-stuff'. A computer program is a set of ideas turned into instructions that a computer can execute. Software is thus the expression of an idea, and is rightly covered by copyright. And again, that's fine. If I have the talent and dedication to write a great program, it's reasonable that my creation should be protected.

But extending patent law to cover software would have a chilling effect on creativity and competition. Take for example the idea of using a computer to organise the composition of documents - ie what we now call word-processing. There are innumerable programs on the market that do this - all protected by copyright. But imagine if someone had been able to patent the original idea. That would have meant that nobody could have developed a word-processing program without the permission of the patentee and paying a royalty for the privilege.

The fact that software hasn't been patentable has led to an explosion in creativity because the barriers to entry to the market are very low. To create a great program, all you need is an idea, programming talent, dedication and a computer. But in the world desired by the European Commission, the first thing you will need is a patent lawyer - to check that the ideas embodied in your embryonic program are not owned by someone else.

And if your program turns out to be popular, it will only be a matter of time before a patent lawyer acting for a big company claims that you may have infringed one of his client's patents. So you stop selling and spend months checking whether this is true. Even if you're sure you're not infringing, there is the risk that he will raise the ante by threatening to take you to court anyway. And he's got a colossal budget for litigation, whereas you don't. So perhaps the best thing is to cave into the blackmail and pay the royalty. After all, you're a programmer, not a poker player.

The only people who can play this kind of poker are big companies with huge patent portfolios which they trade with one another - thereby keeping troublesome outsiders out. These are precisely the outfits that have nobbled the commission and led it to cock a snook at the parliament. They must not be allowed to get away with it.

Which brings us back to your MEPs. They may not be aware of the technical issues involved, but they will understand that there is a big political issue here. The European Parliament is the only democratically accountable institution in the EU. So far it has displayed a good understanding of the patent issue.

It is being treated with contempt by the commission's unelected bureaucrats. Sanity can

*(Appendix 7 cont.)*

be restored - but only if politicians turn up and vote on the issue. So email your MEPs now. And if you need a basic text to work from, follow the Footnotes link below.