

From: Richard Castanet [richard.castanet@labri.u-bordeaux.fr]  
Sent: mardi 12 décembre 2000 18:37  
To: MARKT SOFTPAT  
Cc: castanet@labri.u-bordeaux.fr  
Subject: software patents

Dear Sirs and Madams,

My name is Richard Castanet, and I am the head of the LaBRI ("Laboratoire Bordelais de Recherche en Informatique"), a public-funded research laboratory in computer science, with more than 150 people (mostly EU citizens) researching in theoretic fields (combinatorics, logic, ...) as well as more practical ones, with immediate industrial applications (fault tolerance, network protocols, parallel computing, image processing, virtual reality, ...).

In the name of the Executive Board of the LaBRI, I would like to add our contribution to your public consultation [1]. Feel free to reproduce it and make it public if you wish.

#### 1) Software patents hinder research and innovation

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Although patents in general do not apply to research purposes, we are deeply convinced that software patents will have a negative impact on research, both public-funded (which is our case) as well as company-funded. It is by the way interesting to note that this restriction of the use of patents in research was originally set to prevent hindering innovation by self-censorship of researchers, which is indeed what will happen if software patents were granted.

Computer science is a domain where applied research can have immediate industrial application. Moreover, because of the desire of governments to limit public expenses, we are strongly encouraged to develop research collaborations with companies. If software patents were granted, the need for researchers to look for prior patenting and the induced risk for collaborating companies would put a risk on the usefulness of such contracts.

Moreover, due to patent regulations, research centers will hesitate to publish results in ways that would prevent their patenting them. This particular problem is due to regulations that prevent patenting of previously published material. In such case, the patent system will actually delay (or even suppress) publication of material that would otherwise be published; the effects are such that some research centers will have a default policy of not publishing without complex approval processes, that leads to a disincentive for researchers to publish. This is already the case for military-funded

laboratories, because of understandable defence matters, and everybody can experience the slow-down it provokes in the dissemination of their discoveries. A generalization of this scheme to all public research centers would be a catastrophe.

Moreover, research center that publish source code of software, like we do, will be put at high legal risk of being challenged on the ground of their source code, further reducing the dissemination of new ideas and tools, and impeding us in our mission of disseminating progress to society.

A bigger problem with patents is that they will be used to prevent use of techniques that could easily be reverse-engineered. Indeed, industries and research centers can only take advantage of a technique by exploiting it, wide-spreading it and finally making it be part of the common background of the discipline. Thus, if the extent in time of a patent is longer than the time it would take for a competitor to find a way to copy the technique, then the patent is a net technical loss to society (in addition to all of its economical drawbacks, see next section), since its effect will be to delay rather than speed up the use of the technique by the public.

## 2) Should software patents be granted in Europe?

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The European Commission study on software patents [2] has strived to build a frame for the international harmonisation of software patenting practices, based on the existence of software patenting in the USA and Japan.

The study itself recognizes that there is no clearly proven economic advantage in patenting software; other studies even stress the detrimental effects on innovation of strong patenting policies in general [3], and of software patents in particular [4].

Yet, in spite of this lack of economical benefit, this study proposes a system that allows software patents (thus restricting freedom and encouraging the dissipation of work and money in costly litigations), provided the software it is considered new, inventive and gives a technical contribution. The need to improve examination practices to reject trivial patent applications is recognised, but no clue on how to achieve examination quality is suggested, and not even does it explain whether it is achievable at all.

Common practice in the USA and of the EPO clearly show that software patents tend to be granted either for trivial algorithms or for broad principles without practical implementations, setting the ground for costly lawsuits for really innovative companies which would like to attack these established patents on the bases of prior art or over-breadth. Moreover, any definition of "technicity" that would encompass software is ambiguous, and will soon lead to litigation, as well as possible extension towards so-called "business methods".

We think that the nature of software makes it incompatible with patenting, that is, software should not be patentable in any way. Due to the incremental nature of software development, to the fact that the effort required to find ideas is much less than that needed to produce a working program, and to the fact that a program is only information, patents do not promote any kind of innovation in the software business. Due to the strong reactivity of the market, companies get rewarded for their innovative effort by sales in the first years, before any competitor can implement the same ideas into competing products. Society does not obtain anything useful from software patents, and temporal monopolies on software are a great burden to the industry and society as a whole. It makes a waste of innovative efforts of companies that did not get the patent first, preventing them from improving the patented ideas.

Moreover, one of the original purposes of patents was to publicize innovations so as to be able to reproduce them if their contributors were to disappear. With software, publicization of the techniques (the program itself) is undistinguishable from the publicization of the product (the packaged software), nullifying the need for patents with respect to this matter.

We think that there is no need to come closer to the situation that actually prevails in the USA. The patent system in the USA is the result of a step-by-step, case-by-case extension of the patent system towards software, letting things happen as they come. It was not the result of decisions taken by experts after thorough review of the potential benefits, and there is no reason to think it achieves any benefit for the USA and world societies. On the opposite, even in the USA, it has lots of detractors [5]. The shockwave of the EU openly refusing to grant patents on software would favor this process.

Harmonisation by itself is not a goal. It can be a way for better dissemination of ideas, provided that it is made on sound bases. If any harmonisation should occur between USA, Japan and Europe it would have to be for all to drop software patents, which seems to have the less drawbacks.

The EU seems confident that methods of doing business should not be patentable, and that this discrepancy with the USA system is not a problem. Then, why should discrepancies in software patents be a problem, and why should harmonisation should be sought at any expense for software?

Moreover, allowing US companies to apply for patents in Europe, in a field on which they have far longer experience and bigger portfolios, will put most European software companies at a high risk of litigation and bankruptcy. The use of software patents as means of closing down competitors is common practice in the USA, and most European SMEs, which represent the majority of jobs in the IT business in Europe, are not prepared for costly litigations, or even expensive licencing that will cut their wings off.

Another traditional argument in favor of patents is that they help small and medium companies resist large ones. This is absolutely untrue, as shows the following excerpt from Think magazine, #5, 1990:

| "You get value from patents in two ways," says Roger Smith, IBM  
| Assistant General Counsel, intellectual property law. "Through  
| fees, and through licensing negotiations that give IBM access to  
| other patents". "The IBM patent portfolio gains us the freedom  
| to do what we need to do through cross-licensing---it gives us  
| access to the inventions of others that are the key to rapid  
| innovation. Access is far more valuable to IBM than the fees it  
| receives from its 9,000 active patents. There's no direct  
| calculation of this value, but it's many times larger than the  
| fee income, perhaps an order of magnitude larger".

With patent portfolios, large companies with powerful legal departments can get hold at no cost of any technique patented by any small company.

Successful patent monopolists and patent funds, deriving lots of revenues from their patents, are incited into finding ways to secure these revenues. They will try to accumulate new patents regularly, so that even when their original patent expires, they will still have a monopoly on the modern form of the technique. At first glance, it looks like this will foster innovation, but the kind of innovation which is incited is not superior ways to use the technique, for the benefit of the public; it is ways to secure monopolistic revenues. This means that a large part of the research will be diverted from making things cheaper, simpler and better, into making them more expensive, more complex to interface to; the most wicked kind of "innovation" that this leads to is tricks that make customers prone to paying additional money for derived services that would otherwise be free if there were competition. With industrial protection, technology becomes a way to put consumers into shackles, instead of a way to improve their tools.

A software industry that learns to compete in terms of research and quality will be in a better shape to compete with industries that have to worry with patent portfolios, lawsuits and exclusionary tactics.

#### References:

[1]

[http://www.europa.eu.int/comm/internal\\_market/en/intprop/indprop/soften.pdf](http://www.europa.eu.int/comm/internal_market/en/intprop/indprop/soften.pdf)

[2]

[http://www.europa.eu.int/comm/internal\\_market/en/intprop/indprop/study.pdf](http://www.europa.eu.int/comm/internal_market/en/intprop/indprop/study.pdf)

[3] <http://www.researchoninnovation.org/patent.pdf>

[4] "The benefits and costs of strong patent protection: a contribution to the current debate", Roberto Mazzoleni, Richard R. Nelson, Research Policy, (27) 1998, pp. 273-284 , Elsevier.

[5] [http://www.fnc.gov/nas\\_letter.html](http://www.fnc.gov/nas_letter.html)