Intellectual Property Law in a Global Economy

The hidden patent agenda of the European Commission

Jean–Paul Smets–Solanes

24/5/2000

Patent reform in Europe

On 7 October 1997, Mario Monti, Commissioner for Single Market and Taxation (DG XV), introduced the Green Paper on Patents. In this paper, the commission announced an ambitious program for a major overhaul of the European Union patent system. Major goals of this project include: reducing the cost of patents in Europe, establishing a community patent and... protect computer software by patents. 3 years later, a directive on patents is being prepared by the General Directorate of Internal Market, the new name for DG XV. According to the Commissioner for Internal Market, the European Commission if considering whether this directive "should go beyond the status quo (...) into the direction of the more liberal practice in the US". The content of this directive may actually well look like the one on "utility models[1]" which is already published as a revised proposition. Such directive includes a list of provisions which define which utility models may be granted and which rights are conferred to the holder. But it does not include indications of fees.

From the three goals announced by M. Monti, two goal will likely be reached: setting up a community legislation for inventions and extending patents to computer programmes. However patent cost reduction may well serve only as a decision–taking argument for the two other goals and be less significant than expected due to hidden oppositions from national patent offices and patent experts who are both worried to lose revenue. Still, the main goal of this directive will probably be reached: reform European Patent Law and put it in line with the US approach on patents in order to reach world wide harmonisation of intellectual property Law in a global economy.

This article provides the reader with an overview of the decision taking process which took place in the 5 last years at the European Commission. We shall first introduce the intellectual arguments publicised by the European Commission in favour of software patents. Then, we shall review the influence of reputable international organisations on the European Commission agenda as well as the involvement of the community of intellectual property experts in favour of software patents. Finally, we shall provide the reader with a independent analysis of the underlying ideology of the European Commission in the field of Intellectual Property Law.

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1 http://europa.eu.int/comm/internal_market/en/intprop/indprop/utility.htm
http://europa.eu.int/comm/internal_market/en/intprop/indprop/utilityen.pdf

We advice readers not knowledgeable of software patent issues to read first the "software patent overview" at the end of this paper. Readers should also take into consideration that this article does not intend to provide a scientific explanation to software patents nor does it provide solutions. Readers looking for economic or juridical solutions to software patents inconsistencies should read from the same author "Software Useright: Solving Inconsistencies of Software Patents[2]".

A consistent network of fallacies

Besides stating[3] that software patents "had a very positive impact on the development of the software industry" in the US and that "Microsoft now holds about 400 American patents for software programs", no study has ever been published by the European Commission to prove that patents on computer programmes do promote innovation and competition. Also, no study has ever been made by the European Commission on the numerous inconsistencies of software patents with the Rome Treaty.

On the other hand, DG XV has been very active in setting up a consistent network of fallacies. All speeches from the DG XV, and especially those from its General Director, John Mogg, are based on the following arguments:

1. The TRIPS agreements require software patents (and Europe must implement the TRIPS agreements)

2. There is a consensus in favour of software patents in Europe

3. Software patents are already legal in Europe according to the jurisprudence but the Law is not clear

4. Europe should do like the US in order to benefit from the economic growth of electronic commerce

Most of these arguments, although consistent each other, can be considered as fallacies.

On the TRIPS argument, Paul Hartnack, Comptroller General of the UK Patent Office, explained[4] at a conference organised by the British government and the European Commission, that "Some have argued that the TRIPS agreement requires us to grant patents for software because it says "patents shall be available for any inventions in all field of technology, provided they are capable of industrial application". However, it depends on how you interpret these words. Is a piece of pure software an invention? European law says it isn't. Is pure software technology? Many would say no. Is it capable of "industrial" application? Again, for much software many would say no. TRIPS is an argument for wider protection for software. But the decision to do so should be based on sound economic reasons. Would it be in the interests of European industry, and European

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2   http://www.freepatents.org/adapt/useright/
3   http://europa.eu.int/comm/internal_market/en/intprop/indprop/8682en.pdf
4   http://www.patent.gov.uk/softpat/en/1000.html

consumers, to take this step?"

On the existing consensus, a petition[5] was organised by the FFII[6] association and received more than 10.000 signatures of computer experts and citizens. Students of Louvain University in Belgium[7] received more than 2.200 signatures, most of which from French Speaking European citizens. And 10 European Industry leaders, including inventors of the Web and "push technology", have raised their concerns[8] on the European Commission initiative on software patents. In February 1999, Jean–François Abramatic, President of the World Wide Web Consortium, repeated such concerns at a public conference[9] in Paris after experiencing the damage created by Internet Patents at the World Wide Web Consortium. Similar positions have been taken by German, Swede, French and Dutch companies.

On the legality of Software Patents, text books on intellectual property Law[10] clearly explain that "Software can not be patented." that "the game which is played nowadays consists in circumventing the rules", and that "the value of patents granted through this game is uncertain". Clearly, the EPO has abused the spirit of the Munich Convention on European patents.

On the requirement for Europe to follow the US, one may wonder if this is an argument in line with the European Construction effort and the Rome treaty. In particular, the Rome Treaty includes provisions for a high level of consumer protection, economic competition, security and cultural diversity which do no exist in the US. Certain aspects of software patents tend actually to be in contradiction with the Rome Treaty[11].

International organisations play the software patent game

Although most arguments of the European Commission are based on fallacies, although it is quite easy to show that software patents include numerous inconsistencies and tend to reduce competition or innovation[12], although software patents are likely to act against European economic interests, little opposition has been heard from European governments besides the French State Secretary of Industry who reminded[13] the necessity to study the impact of software patents before any reforms to the Law, in a wording quite in line with Paul Hartnack's comments.

But decision making in the case of Intellectual Property is a masterpiece of diplomatic

5   http://swpat.ffii.org/miert/msuben.html
6   http://www.ffii.org
7   http://lln.udev.org/sign.php3?list=1
8   http://www.freepatents.org/pr1.html
9   http://www.linux–expo.com/international/linux–expo/conferences.html
10 Lamy Informatique. http://208.239.226.6/store/product.asp?id=48&nav=affaires
11 http://www.freepatents.org/law/rome.html
12 http://www.freepatents.org/adapt/useright/
13 http://www.freepatents.org/law/summary24.html

strategy between the US, Japan and Europe, through international organisations such as the Word Trade Organisation (WTO)[14], the Word Intellectual Property Organisation (WIPO)[15] and the Trilateral Commission (TC)[16] where the European Union seems to act as a follower rather than as an opinion leader.

In the role of leader and initiator, the US Patent Office has extended its patent policy to software, then business methods and applications of mathematical formulae. The US supreme court confirmed this move in 1999, overruling a 1972 Supreme Court ruling that compared software's logical steps to "mental processes". At the same time, the US Patent Office has deliberately chosen a "liberal" policy for examination which results in granting patents to inventions with prior are or which are obvious[17]. As a result of this policy, more and more concerns are raised in the US because "there's ample historical evidence that overly broad patents have stifled innovation in emerging industries"[18].

But this policy remains the official policy of the US Government, the policy which is promoted abroad back from 1996 when Al Gore introduce the Global Information Infrastructure (GII) and explained that "to create a reliable environment for electronic commerce, patent agreements should (...) require member countries to provide adequate and effective protection for patentable subject matter important to the development and success of the GII; and establish international standards for determining the validity of a patent claim. The United States will pursue these objectives internationally. Officials of the European, Japanese, and United States Patent Offices meet, for example, each year to foster cooperation on patent–related issues. (...) In a separate venue, one hundred countries and international intergovernmental organizations participate as members of WIPO's permanent committee on industrial property information (PCIPI). The United States will attempt to establish a working group of this organization to address GII–related patent issues."

The message has been well heard by at least one country: Japan. In the role of "good pupil", Japan has closely followed all US moves on patents. The MITI[19], which hosts the trilateral Web site of US, Japan and European Patent offices[20] and is in charge of controlling the Japan Patent Office, has for example allowed the Japanese Patent Office to grant patents on business methods, without any consultation of the Japanese parliament or any democratic debate in Japan. The MITI has also quickly implemented policies to develop electronic commerce in Japan, mainly concentrating on security of transactions. And, in comparison with the 5th generation program, little investment has been

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14 http://www.wto.org
15 http://www.wipo.org
16 http://www.trilateral.org
17 http://www.bustpatents.com
18 http://www.techreview.com/articles/ma00/shulman.htm
19 http://www.miti.go.jp
20 http://www.jpo–miti.go.jp/saikine/tws/twsindex.htm

concentrated in developing the Japanese electronic commerce software industry, leaving most of the japanese market to american publishers.

Europe is now the "bad pupil" of this game. At a recent meeting of the trilateral commission[21] in Tokyo, representatives of European Commission were urged once more to implement the International Property Law and to reform their structures in order to develop electronic commerce at the same pace as the US. Again, the notoriously fallacious "TRIPS" argument was mentioned. Similar discussions have been held at the WTO and are being held these days at the WIPO[22]. In particular, the status quo where Europe would grant patents only for technical solutions of technical problems in software does not seem to satisfy US representatives who are calling for an extension of patents to business methods.

Locking the European Commission

The recent nomination of M. Monti, former Commissioner for Single Market and Taxation, to the position of Commissioner for Competition, and the nomination of M. Bolkestein, as Commissioner for Internal Market may lock the possibility for the European Commission to discuss the most embarrassing inconsistencies of software and business patents – namely their impact on competition, industrial secret and interoperability – and make sure that the US point of view gets into the European Law. M. Monti, a former member of the Trilateral Commission and former administrator of multinational companies, is one of the key personalities who pushed the community patent reform and the extension of patents to computer programmes, together with John Mogg, General Director for Internal Market. One may then wonder whether Mario Monti, currently acting as Commissioner for Competition, will question the dangers for free competition of the initiatives he used to push when he was acting as Commissioner for Single Market and Taxation.

One may also wonder whether M. Bolkestein, now in charge of those initiatives at the General Directorate for Internal Market, will be informed by his administrative services of the economic impact, the political consequences and the juridical inconsitencies of those initiatives. In particular, one may wonder whether John Mogg will let M. Bolkestein discover the total absence of balance in the positions[23] taken in public by the General Directorate for Single Market and Taxation. One may finally wonder whether John Mogg will let M. Bolkestein know that there is a third possible scenario consisting in stopping the abuses of the European Patent Office and putting it back in line with the spirit of the Munich convention.

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21 http://www.trilateral.org The Trilateral Commission is a liberal economy think tank created by David Rockefeller
   which organises discussions between high profile civil servants, politicians, CEO of multinational companies,
   professors and journalists.
22 http://www.wipo.org/eng/dg_idris.htm
23 http://www.patent.gov.uk/softpat/en/1030.html

Recent interviews of M. Mueller, who is in charge of software patents at the European Commission, confirm a clear attitude towards adopting US approach without considering other approaches. M. Mueller stated for example to Computer & Recht[24] that "the basic question arises, whether the harmonisation shall be based on the basis of the status quo, as defined by jurisdiction in Europe, or whether it should go further, especially whether it should proceed further into the direction of US jurisdiction.". And the point of view of M. Nooteboom, manager of Industrial Property at the European Commission, who declared to representative of European SMEs and Open Source Software Associations[25] that Europe always follows the US in the field of industrial property may well be a sign of resignation in front a influent pressures rather than the sign of a personal belief.

Getting support from IP experts through a virtual debate

Still, even a masterpiece of international strategy may fail without visible local support. In a certain sense, this risk has been well considered by the European Commission.

First by getting support from the community of Intellectual Property experts working in National Patent Offices, working at the law department of multinational companies or in independent patent advising firms. For example, all but one of the speakers at the London conference[26] were intellectual property experts, that is people who make their living from patents. All of them have agreed on the usefulness of software patents. Most of them probably hope that an extension of the reach of patentability will generate more business to their community. The same kind of ratio between intellectual property experts and computer experts was experienced at other consultations held by the European Commission.

Second, by making sure the European Parliament voted in favour of software patents[27]. This was achieved through industrial lobbying of two commissions in charge of information technology ("Research" and "Industry", now folded into a single commission).

Third, a virtual debate will happen in order to let everyone believe that decisions are taken with a democratic in mind. The European Patent Office will suggest removing all exceptions to patentability from the Munich Convention (article 52), leaving exceptions to rulings from the President of the EPO. Opponents to this position, including the European Commission, will "only" ask for the elimination of the software exemption and the full implementation of the TRIPS agreements. Both positions sound different and, no doubt, there will be a passionate debate to decide who is going to take in charge Patent Law in Europe. But, whatever the outcome of this debate, the outcome will be the same for business: most exceptions to patentability will be removed in Europe, and especially

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24 http://www.computerundrecht.de
25 http://www.eurolinux.org/news/euipCAen.html
26 http://www.patent.gov.uk/softpat/en/
27 http://www.freepatents.org/agree/

exceptions to patents on software. Regarding the situation for business methods it is still unclear whether patents will be granted for business methods as such or "only" for software based on innovative business methods, which is actually the same in a society where most business practices and commerce are controlled through software.

When property matters more than competition

The current process of implementing software patents in Europe clearly shows the risk of having laws dictated to European citizens because of the ideology of a few civil servants and commissioners. In this case, the ideology which is promoted is a kind of conservative liberalism based on the fact that property is more important than competition[28]. As an evidence, the EC ordered a report to a german Law School in 1999 on the comparison between property law and competition law. The report concluded that property was a higher value than competition.

Also, Dominique Van Der Gheynst, predecessor of M. Mueller at DG XV and main author of the much debated directive on life patents, rejected in 1999 to consider the potential contradiction of software patents with the interoperability principle of software copyright law, claiming such matter was irrelevant. This contradiction had been raised at an internal meeting by a representative of DG IV, the general directorate in charge of competition.

Finally, it is quite surprising for the European Commission to push software patents without publishing a report on their impact on innovation, competition, SMEs, etc. Or, if such report existed, it would be even more surprising if it was kept secret before a major decision has to be taken by national governments.

Ideology at the European Commission

The European Commission clearly shows a strong ideology bias in the field of intellectual property. It considers property more important than competition, economic welfare, cultural and social liberties. The European Commission also tends to act as a follower of point of views spread by a few individuals from international organisations known for their liberal–conservative ideology. This bias acts in favour of multinational companies, industrial concentrations and acts against the interests of consumers as well as innovative SMEs.

Much of this situation remains unknown from national governments in Europe and from the European citizens.

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28 A kind of progessist liberalism is based on the fac that the State should always take regulations to protect competition from the potential abuses of property in order to reach a balance in the public interest.

References

Speech by Commissioner Frits Bolkestein, Nijenrode, Breukelen, 27 March 2000

http://europa.eu.int/comm/internal_market/en/speeches/spch101.htm

"The Software Directive announced for Summer of this year will be a further building block of the legislative framework. The Directive should put an end to a situation where computer programs "as such" are legally excluded from patentability but thousands of patents for technical inventions using a computer program have been granted by the patent offices. In addition, the jurisprudence of the European Patent Office and the Member States is not uniform. To remedy this situation, the Directive shall make the current legal framework more transparent and create legal certainty. Thus, it should provide incentives for increased investment in the development of software and make a major contribution to innovation in the software field. In fact, patents should stimulate innovation by providing inventors with a means to recoup investments on the basis of the grant of a temporary monopoly on the commercialisation of the patented products and processes. To compensate for the grant of the monopoly, the invention is disclosed to the public. Innovative industry should be able to build upon the disclosed knowledge.

My services are currently exploring if the Directive should be confined to a harmonisation of the status quo as defined by the jurisprudence or if it should go beyond the status quo and into the direction of the more liberal practice in the US.

In making this determination, the Commission will have to take into account the competitive situation of the European software industry in relation to its major trading partners. The gap in protection levels between Europe and its main trading partners could be further reinforced because distribution of computer programs on a world−wide scale via the Internet is steadily increasing.

Independent of the scope of the Directive, the quality of software patents is of paramount importance because only meritorious software patents will further innovation, competition and e−commerce."

A quick overview at software patents

First, here is an example of programme:

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for (x = 0; x < height ; x++)
 for (y = 0; y < width ; y++)
  screen[x + xpos][y + ypos] ^= arrow[x][y];
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As the reader can see, a programme is a series of words and signs which form together a series of instructions in a so–called "computer language". Programmes, and computer languages, can be understood either by human beings or by computers. The previous 3 line programme allows for example to change the colour of the arrow from black to white whenever it moves over a black object on the screen, as illustrated bellow:

Now, here is an simplified example of software patent application:

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Summary: method to display overlapping objects on a screen
Description: use of the XOR mathematical function to compute
overlapping objects
Claim: any software which allows to manipulate graphic objects
on screen and has an overlapping functionnality
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A patent is a property title which is granted after a patent application is filed and has passed an examination process at the patent office. The patent application contains a summary, a description, claims and drawings (not shown on these examples). The description contains a technical description of the processes involved. The claims define the commercial reach for which the patent is claimed, which means a list of commercial products and applications for which the patent holder may exercise its property title. In the above example the patent holder may sue anyone who writes without his permission a "software which manipulates overlapping graphic objects on screen thanks to the use of the XOR function" but may not sue someone who builds a "refrigerator which optimises the temperature thanks to the use of the XOR function to compute overlapping objects."

Historically, programmes in Europe are covered by <u>copyright only</u>. Programmes are considered as works, just like novels or paintings. This means that anyone can write an original programme and publish it. And two persons may write and publish two different original programmes which functionalities or abstract design are similar, just like it is legal for two painters to paint two different, yet original, paintings of the same old mountain[29]. In Europe, publishing the previous 3 line example programme is perfectly legal.

In the US, programmes are covered by <u>copyright and patent</u>. On the one hand, this means

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29 The mountain does not need to be novel for the painting to be original.

that anyone who invents a new programme design or functionality may be granted a patent for it, <u>even without ever writing a programme</u> which implements it. On the other hand, programme writers are required to ask permission to patent holders before they write a programme based on patented abstract designs or a functionalities. In the US, writing or publishing the previous 3 line example programme, without permission from Nugraphics Inc., is a patent infringement because this company holds a patent on the application of the XOR[30] function to change black into white. And although, from a copyright point of view, one may be the author of those 3 lines of original programme, the fact that Nugraphics Inc. holds a patent is sufficient to prevent anyone from writing computer graphics programmes which use the XOR function to change black into white, including those 3 lines.

Recently, the European Patent Office decided to grant patents on "computer machines which include innovative software" in an effort to circumvent the European Patent Law which prohibits granting software patents. The Nugraphics patent described above was for example granted in France, Germany and the United Kingdom. However, it is not certain whether and how this patent will be enforced in Europe because this patent is clearly a patent on "pure software" although it was written on purpose to appear as a patent on a machine.

There are more than 100,000 software patents in the US. There are more than 10,000 pseudo–software patents in Europe.

Software patents raise different issues:

1. Any programme currently published on the market is potentially covered by thousands of US software patents. Software publishers have more probablity of being sued themselves for patent infringement than suing someone else for patent infringement. It generates a permanent patent battle game which tends to eliminate smaller innovative software publishing companies while, at the same time, feeding intellectual property firms. This has potential consequences on the competition and innovation.

2. There are inconsistencies between copyright–based software reverse–engineering laws and software patents. This has potential consequences on interoperability, compatibility and security.

3. Business method patents are a simple application of software patents because most business methods nowadays require software to be implemented. It is for example possible to get a patent on "internet auctions" by filing a patent on "130 ways to implement a software which does 240 kinds of internet auctions".

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30 The XOR (exclusive–or) function is one the 3 most elementary functions of all mathematics, together with the NOT and the AND function. All modern mathematics and computer science can be built with those 3 functions only.

Business method patents raise even more issues than software patents.

4. There is very little difference between patents on software and patents on thought due to the fact that human beings are able to understand computer programmes, without the help of a computer. This has potential consequences on the society.

All those issues, as well as possible solutions, are discussed in detail in an article from the same author: "Software Useright: Solving Inconsistencies of Software Patents[31]". It is not the purpose of this article.

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31 http://www.freepatents.org/adapt/useright/