ATI DECLARATION ON SOFTWARE PATENTS

The term software patent, although extremely popular, is considered by some lawmakers as not rigorous, and therefore other terms are used, such as patents on computer-implemented inventions. In the rest of this declaration, on *software patent* we will refer to all those patents that may affect the commercialization of a software program. In other words, software patents are those patents that are used to claim rights against third parties due to the production, distribution or use of software programs.

With this definition, software patents may affect:

1. A service delivered by a software program. In this category we will include business models sustained by a given software piece.

2. Internal functionality of a software program. Let's give two views, depending on the concept of software programs that we apply:

   • If software programs are conceived as an information process that returns a given output data after processing some given input data, patents may affect how the program reads the input data, how it processes it, or how it produces the output data.

   • If software programs are conceived as a formal description of an algorithm, written in an executable form, any part of the algorithm may be subject of patentability.

Patents or copyright

Computer software has traditionally been protected by copyright legislation, a part of intellectual property legislation. This legislation grants exclusive rights of commercialization to the author of a program, and therefore prohibiting copying, redistribution or modification without permission.

Therefore, to have the rights on a program it is necessary and enough to be its creator. In other words, proving the authorship of a program is enough to ensure that the author has all the rights on the program.

Patents act in a very different way. First, a patent holder does not need to build a software program to show its functionality. Second, the author who writes a program

may perfectly use a patented element without knowing it, by simply "reinventing" the concept by him or herself. In simplistic terms, copyright legislation protects the creator of a program, while patent legislation gives rights to the persons who describes techniques that programs may use

This different protection is also noticeable because software is one of the few fields in which patents intend to protect an element, software programs, which is already protected specifically by another legislation.

Economic effects of patents

The most obvious economic effect of software patents is the possibility of patent holders to generate income either by exclusive commercialization of products or services based on those patents, or by requesting third parties royalties to use their patents. However, any study on the economic effects should include the costs that the software patent system will have on software creators and on the IT sector in general.

As a minimum, any software producer will have to consider the costs to perform a patent analysis of his products, in order to identify the number of patents that may affect him and to budget contingency provisions for royalties for patents not correctly identified in the analysis process.

As a more generic effect, is is important to consider effects on the sector and on specific companies of usual actions taken when patents exist on a given field: intimidating claims, reinforcement of monopoly positions, agreements among big players with large patent stocks, blocking of key technologies due to commercial interests of holders of basic patents, etc.

Knowledge is expensive to produce but cheap to reproduce, just the reverse of what happens with material goods. Marshall observed long ago, that nature is subject to decreasing yields while man to increasing ones. What really is under discussion, is the innovation and generation of knowledge that is at the heart of the debate. This is the core engine of all the economy of knowledge.

Patent and copyright protections are complementary. In very general terms, patents protect new technical ideas and principles, while copyright protects the form of expression used. For example, a patent might protect a new sort of paper, while the printed content of a newspaper would be protected by copyright. In computer terms, the actual code (whether machine-readable or in a form which is intelligible to human readers) would be subject to copyright protection, while underlying technological ideas may be eligible for patent protection.

On the other hand, a computer program will be accorded copyright protection where the form of expression is original in the sense of being the author's own intellectual creation. Third parties would not be able to produce substantially the same content material as the original author has produced, even if they used different technical principles to do so. But the third party will be able to use, copy, adapt, or rework such a program paying the corresponding royalty.

Accordingly, the same program may be protected by both patent and by copyright law. That protection may be cumulative only in the sense that an act involving exploitation of a particular program may infringe both the copyrights in the code and a patent whose claims cover the underlying ideas and principles of the invention using the program.

There is an absolute lack of a global knowledge, duly organised about the techniques and technologies available and in the public domain on computer software. The state of the art is normally well known, but there is not a single database that covers all the patents already granted both by the European Patent Office and by the U.S. Patent Office and other countries equivalent in the field of computer software.

Consequently the Patent Offices of the different countries and the patent applicants are before an enormous difficulty to find specifics about the prior art, even if it exists, so there is no guarantee that a patent will not be granted to program already existing. But what is worse, any computer program developer might find himself that he is breaking a patent without knowing that fact, and worse yet he might be prevented the exploitation of his own work and the progress of his own technology.

The intellectual nature of computer software and its equivalent of computer implemented inventions puts a big difficulty in accepting the use of the present day patent rights for its protection. Either the use of copyright is continued or a totally new concept of law of patents where the monopoly of exploitation is not granted should be developed.

The European Patent Convention

The rules of the Convention on the Grant of European Patents, *signed in Munich on 5 October 1973,* and in particular Article 52 thereof concerning the limits to patentability, should be confirmed and clarified. The consequent legal certainty should help to foster a climate conducive to investment and innovation in the field of software.

Under the Convention and the patent laws of the Member States, programs for computers together with discoveries, scientific theories, mathematical methods, aesthetic creations, schemes, rules and methods for performing mental acts, playing games or doing business, and presentations of information are expressly not regarded as inventions and are therefore excluded from patentability. This **exception applies because** such subject-matter and **activities do** not belong to a field of technology**.**

Therefore, the legal rules governing the patentability of computer-implemented inventions should be harmonised so as to ensure that the resulting legal certainty and the level of requirements demanded for patentability enable innovative enterprises to derive the maximum advantage from their inventive process and provide an incentive for investment and innovation.

In order to be patentable, inventions in general and computer-implemented inventions in particular must be susceptible of industrial application, new and involve an inventive step. In order to involve an inventive step, computer-implemented inventions must in

addition make a new technical contribution to the state of the art, in order to distinguish them from pure software.

Accordingly, an innovation that does not make a technical contribution to the state of the art is not an invention within the meaning of patent law.

However, the mere implementation of an otherwise unpatentable method on an apparatus such as a computer is not in itself sufficient to warrant a finding that a technical contribution is present.

Accordingly, a computer-implemented business method, data processing method or other method in which the only contribution to the state of the art is non-technical cannot constitute a patentable invention. If the contribution to the state of the art relates solely to unpatentable matter, there can be no patentable invention irrespective of how the matter is presented in the claims. For example, the requirement of technical contribution cannot be circumvented merely by specifying technical means in the patent claims.

Furthermore, an algorithm is inherently non-technical and therefore cannot constitute a technical invention. Nonetheless, a method involving the use of an algorithm might be patentable provided that the method is used to solve a technical problem. However, any patent granted for such a method should not monopolise the algorithm itself or its use in contexts not foreseen in the patent.

How the software patent affects informatics professionals

To start with, IT professionals have little to gain from Software patents. In our professional environment, it is really rare that a single person asks for a patent. In most cases, companies ask for patents related to the developments made by their employees. From a selfish point of view, patents show no gain for most of us.

From a more general point of view, software patents would cause a shift in influence and importance from IT professionals to industrial property specialists. Now, when developing a new software product, engineers are one of the most influential parties. In case software patents enter the game, even before an engineer can start working on a project, a lawyer should study the field, doing patent studies and searchs. Any work done should also be validated by patent specialists. IT professionals would no longer be able to decide which technology is better fro a product just in terms of technical and economical factors. The opinion of lawyers (for instance, in terms of exposition to patent lawsuits) would be of great importance too.

IT professionals are the best qualified to judge about the influence of software patents on IT innovation. Now the discussion about the convenience of software patents is mainly in the hands of lawyers (although fortunately more and more engineers are entering the field), who are deciding what we will be able to do in the next years in our everyday work. We should be at least helping to shape our future as professionals. Also, we should be explaining the society the implications of these measures in the general returns from the IT industry, its rate of development, and in general the balance between

what the society needs in terms of innovation and new products, and what it losses when gives commercial monopolies on technologies.

All in all, IT professionals will be affected in our daily work, with little to gain, and seeing at the very least several problems for us as professionals, and for the general good of society. In addition, and despite the opinion we may have about the matter, we should not let this decisions be taken without our input being taken into account.

What's ATI

ATI is the largest, oldest, most active and influential of the associations of information technology professionals existing in Spain. Founded in 1967, ATI has 4,500 members and permanent offices in Barcelona (Headquarters), Madrid, Seville, Silleda (Pontevedra), Valencia and Zaragoza.

ATI is a founding member of CEPIS (Council of European Professional Informatics Socities), an organization with a global membership of above 200,000 European informatics professionals.

ATI is also Spain's representative in IFIP (International Federation for Information Processing), a worldwide umbrella organization for national societies working in the field of information processing.

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