Introduction to the legal aspects of the information society

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Introduction

Rumours began in 2003 and the first attack was staged in March: it was not the second Gulf War, but the offensive action taken by SCO, first against IBM, and later against the community of free software developers, over the code included in the then current kernel of the GNU/Linux 2.4 operating system.

This offensive brought to the surface tensions that were already being felt between the non-free software and the free software worlds. By 2000, it was reported that Microsoft had already made several critical statements in the so-called "Halloween documents" against GNU/Linux, an operating system that had began to acquire a share of the market that had until then been reserved to Microsoft (Windows) and several other companies distributing various non-free versions of Unix (IBM AIX, Oracle-Solaris).

Also in 2003, the European Commission drafted and the European Parliament debated a proposal for a directive to allow –or deny– the granting of patents on inventive computer programs and to determine the formal requirements for obtaining this protection. After the mobilisation of a large part of the software development community (not only those involved in free software, but also commercial software development companies and other stakeholders in the sector), in 2005, the same Parliament finally rejected the proposal – the first time in the history of the European Union.

This didn't stop Microsoft alleging, in 2007, that the GNU/Linux operating system was infringing upon some 283 of its patents, quoting a report that actually said that Linux "potentially" infringed 283 patents.

These "horror stories", so to speak, are indicators that the legal aspects of software in general and free software in particular are at the heart of current debates in the world of new technologies. These tensions are not merely technical issues relating to the stability, scalability or security of software, but rather derive from more basic issues in terms of who is the legitimate owner of the code included in the program, who may distribute such code, how payment is to be made and in what amount for a computer system considered free and available without limitations to date.

Moreover: these discussions form part of a broader debate on the freedom, culture and exploitation of immaterial works –which are defined as any program, movie, music, text or image in digital form– in the new information society. This debate incorporates several similar controversies including, for instance, the controversy regarding the downloading of music or movies on peer-to-peer (P2P) networks or the fight to achieve enhanced control by the owners of the rights to works broadcast over the networks and the "scope"

of such control: geographic (in what countries), temporal (for how long) and functional (what can be done with them), with special emphasis on digital rights management (DRM) systems.

The dilemma of the "non-free" industry lies in this: as new technologies allow for the mass copying and dissemination (and at a low cost) of intangible works protected by law (intellectual and industrial property rights), how can new technological and legal control mechanisms be established to protect the authors and owners of the rights to such work?

Facing a 40 year-old (or more) trend to extend the protection of copyright and reduce individual freedoms, and to extend patents to software functionalities – lobbied above all by the large entertainment, publishing and software companies – a form of protest movement has arisen claiming the freedom of culture and knowledge and their constitutive elements: music, written texts, visual works, computer software...

This protest movement is not the work of "long-haired revolutionaries". Quite the opposite, a team of law professors from the universities of MIT, Harvard and Stanford, for instance, has formed a centre for assisting in the dissemination of digital works (Creative Commons), whereby a new system of licensing copyrights has been established, allowing authors to carefully establish their level of control over the copying, modification and dissemination of their works.

A key component of this protest is the free software movement, led in its day – and for some, to this day – by the Free Software Foundation (FSF). Software is an intrinsic part of culture, not only as technological knowledge, but also as a par excellence means of access to culture and knowledge. Software is the foundation of the network of all networks, the internet, interconnecting commercial entities, citizens and public institutions. We should also consider that software is run on computers and makes computers run, and that computers are essential elements of the creation of knowledge and of today's social, commercial, scientific and educational relations.

References

- For more on SCO see the Wikipedia or the Groklaw sites.
- Halloween Documents are commented online.
- Proposed EU Computer Implemented Inventions Directive is described at the Wikipedia and the FFII sites.
- Linux patent claims are reported for example, at CNNmoney.com and eWeek.com.
- Digital Rights Management Systems are described at the Wikipedia site.

1. The free software movement and the law

Facing the restrictive legal framework where the default rule is "all rights reserved", and the tendency to apply this and corner scientific and technological knowledge by the large computer companies – perhaps led by large corporations as Microsoft, Oracle, Apple and Adobe, the free software movement (free and open, we are not distinguishing at this point) was born. This movement seeks to maintain and protect freedom in this sector, which is fundamental to modern society. This movement argues that the "non-free" trend is threatening to make us into the society of permissions – of "permissions, please" – where the owners of the knowledge must be asked for permission to use a work, which is granted under ever more restrictive, sometimes draconian, conditions.

Free software

Free software is a matter of the users' freedom to run, copy, distribute, study, change and improve the software. More precisely, it means that the program's users have the four essential freedoms:

- The freedom to run the program, for any purpose (freedom 0).
- The freedom to study how the program works, and change it to make it do what you wish (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help your neighbour (freedom 2).
- The freedom to distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.

The Free Software Definition can be found at the GNU Operating System site.

However, what distinguishes the software sector from other parts of this more general protest movement is that the free software movement is based strictly and directly, to mark its protest, on current laws. Free software is distinguished from non-free software by how those same laws are used. Free software is not distinguished from non-free software by its quality or technology, although it is argued that it presents advantages in these terms, but by the copyright licensing regime. A free software licence does not contain the protection and control measures traditionally included in non-free software licences.

We should note that now, as of 2007 and 2008, several "traditional" software companies, which had used a "non-free" or "exclusive" model for the distribution of their products, are now embracing the free movement (or at least, the open source movement). Microsoft has published several programs under free licences, using its own licences, two of which have been approved "Open Source" by the Open Source Initiative. Sun (now part of Oracle) has released the Java environment under the GPL licence (and has purchased MySQL). Ya-

hoo! has purchased and now manages the Zimbra project. We must now see if these are actual commitments to development, based on free principles and ethics, or merely commercial strategies...

The development of office automation solutions (OpenOffice.org) as an alternative to commercial packages (mainly MS-Office by Microsoft) also involves certain legal aspects. Due to the dominance of the commercial packages in the business and domestic worlds, if a user of OpenOffice.org wishes to share text files, presentations or spreadsheets with others using non-free programs, it is essential for there to be interoperability between data formats. Nonetheless, these formats are often private program elements (non-free) and protected by copyright and even patent laws. In the absence of a public and open standard for such data format (such as ODF for documents), does a developer have the right to decompile or study the original code of non-free applications to be able to export or import files from a non-free source into the free application? Does obtaining a patent on an XML file export format imply the need to obtain a licence for such interoperability?

> Consider the patent obtained by Microsoft in the United States in February 2004 on XML scripts for Office 2003 and the recent approval of OOXML as a standard format. Will the Open Specification Promise made by Microsoft suffice to protect users from such new "standard"?

In 1998, Netscape opened the code of its Navigator to create a free version now managed by the Mozilla Foundation (with projects such as Firefox, Thunderbird, Seamonkey...). This radical decision not only led to the resignation by the director of technology (who could not see the strategic and commercial reasons behind it), but also instigated a heated debate on the terms and provisions of the new licence or, better yet, the licences. Netscape was forced to draft one licence for the initial Navigator (the Netscape Public License, MPL) and another licence (broader) for any future modifications (the Mozilla Public License).

Ultimately, the creation of free software, its modification and dissemination, software reengineering, interoperability, patentability, etc. are current issues, constantly present in any activity revolving around the core subject of this course on the legal aspects and exploitation of the information society, with a special focus on free technologies. These are issues that raise important legal questions. The legal aspects of a free information society are numerous and extremely relevant, as they condition all aspects of the process of creation, distribution and use of software and content.

Thus it is essential for anyone interested in creating, developing, distributing or using free software, to have solid knowledge of the relevant legal aspects and that is precisely the purpose of this course.

2. The free software model

The free software movement uses several arguments to defend its position and it is important to consider that such arguments have important legal impacts. To understand the free and open source software initiative, we consider it to be useful to briefly comment on these arguments.

2.1. The theory of the social genesis of understanding

The first argument used by the defendants of free software is philosophical-ideological. The basic principle is that knowledge as such does not belong to any one person, as all knowledge is based on earlier knowledge and is a copy, to a greater or lesser extent, of other ideas. Think of what Newton said about "standing on the shoulders of giants".

In other words, no one has ideas that have not been directly or indirectly influenced by social relations maintained in the communities of which they form part and if the genesis is social, the use must in turn remain social. The main function of the generation of knowledge is to improve society and, therefore, to reach the largest possible number of people.

If we were to consider software as knowledge, the argument made by organisations such as FSF seems simple. The most direct consequence of this philosophy of the social genesis of knowledge, from a legal viewpoint, is that the copyright law limitation against copying, using or redistributing software makes no sense, as it hinders the generation of new knowledge and does not allow for the accomplishment of its main purpose: returning to the community.

Example

In Spain, for instance, in 2004, the Regional Government of Extremadura launched LinEX, a broad program to promote the creation of distribution based on Debian GNU/Linux, for the purpose of installing it at all public education centres in the region. There are clearly technological and economic reasons behind this decision. However, the legal consequences are equally important: the use of free software provides the freedom to disseminate software among all citizens and residents, without the need to acquire another licence. The Regional Government may also easily modify these systems to adapt them to local needs, without requesting permission from the original owners –a considerable legal independence strategy. Educational centres benefit from the program, as they do not depend on suppliers (of software or maintenance and upgrading services). And they may open the source code of the applications installed for educational purposes (computer classes, etc.).

2.2. Greater dissemination

There is another reason, which could be considered the "pragmatic" reason. Free software supporters claim that the distribution of work under a free licence (in the sense of guaranteeing the aforementioned four basic freedoms to users) is the best way to obtain benefits from the publication of content, particularly for those that are not established developers or authors.

The argument is that those who truly win with the current restrictive copyright system are famous authors and middlemen, i.e., publishing houses. The rest of the creators live off the prestige that they receive from the works (and not from royalties), allowing them to provide "additional services", such as providing maintenance or consulting or giving conferences, courses, speeches, writing for newspapers, etc.

Continuing this argument, for most authors what is truly important, to increase their economic performance, is that their work reach the largest possible number of people. Along these lines, the conclusion they have reached, is that for an unknown author, the copyright system poses an obstacle to their reaching the public and benefiting from their creations. To counteract the impact of the legal framework, the works must be distributed under free licences, to ensure full freedom of redistribution.

Supplementary content

See Creative commons case studies for more examples.

2.3. Other arguments

We may cite other arguments used by the free software and content movement to support their position, all with legal impact or consequences:

- The enhanced dissemination of the work not only gives way to greater benefits, but also improves the work's quality (as mistakes are corrected, comments enrich the work, viewpoints are shared, etc.). To do this, it is necessary to provide the user with the right to modify and access the source code (when referring to programs). This is the philosophy behind Wikipedia, whose ranking in terms of quality is similar to that of the Encyclopaedia Britannica, in spite of the sometimes humble origins of its various contributors.

- The free software model is based on the participation of users, not only in the identification of errors, but also in terms of design and development. To do so, it is necessary to distribute the works (the software, for instance) as beta versions, with the freedom to install, use, test and contribute to the project or provide feedback (this is where the licence and lack of guarantees come in, as it is a beta version).

- The free software development model is more efficient: it is not necessary to reinvent the wheel, as the wheels –the software components, texts,

graphics, icons or photos– are available to be reused. This is possible in a digital world, as the "consumption" (use) of the digital object does not imply or require exclusive "ownership" of the product. Once again, this may solely be done with licences which allow free use (reproduction, distribution) in a non-exclusive way by the users.

3. Objectives of the course, key concepts

3.1. Objectives

Thus the main objective of this course is to provide the knowledge and necessary (legal) tools to be aware of the possible legal issues that are relevant in a Free Technology environment. In particular, it aims to help students understand the concepts and legal framework of free software and how to contribute and benefit from it in a safe and legal way.

We will look at the following concepts:

- The main legal reference framework for free software and technologies, and the information society in general, being:
  - **Copyright law** (known as "Intellectual Property Rights" on the European continent).
  - **Patent and trademark law** (also known as one of the "Industrial Property Rights).

  In the English and US legal framework, the concept of "Intellectual Property Rights" covers most forms of legal protection of intangibles, i.e. copyright, patents and trademark rights. This is confusing, as has been noted, and except when stated, we will avoid this term (see "key concepts").

  Concepts like existing legal systems of software protection – copyright, patents, trademark and key concepts like *copyleft* and free licences – will be studied to get a general background in those topics and to develop practical skills to use theme in different contexts.

- The **legal issues of online activities**, including ecommerce. The information society is a networked and "virtual" society, where many if not most activities take place online or are supported by online processes. We found it important for students to have an understanding of the legal issues raised by online activities – both as regards commerce and as regards citizen digital rights and obligations.

- **Privacy law** and how this impacts the processing of data and the defence of individuals' freedom and privacy in an ever more connected digital world.

- **Open Standards**, and how they are becoming more and more important in the context of software and format interoperability, cloud computing (where in fact the software doesn't matter, it is the interface and the format that do).

The principal legal framework for this work is European law, with examples taken from the laws of Member States (in particular England/Wales and Spain, where the author is qualified to practice). This work is under a free licence, thus examples, corrections and comments from other jurisdictions are welcome. Some non-authoritative references are also made to the US legal framework, mainly for comparing and contrasting approaches on how to regulate the Information Society.

3.2. Some key concepts

Any approach to the subject of the legal issues of the Information Society and free software and content implies facing a multitude of different definitions and terms. To unify criteria, in this section we will list some of the main concepts of the course and propose the definition that the authors will be using when referring to them.

By **intellectual property**, author's rights or copyright, we are referring to the system of protection of original, literary, artistic or scientific creations, which include software, and which reserve to their owners the rights to reproduction, transformation, distribution and public communication (upload to the internet) (see Module 2 for further details).

By **industrial property**, we refer to the legal system protecting the use or exploitation of distinguishing signs identifying products or companies (**trademarks**), inventions (**patents**) and confidential information of economic value (**industrial secrets**) (see Module 3 for further details).

A user **licence** is the legal instrument used by the owner of a work (software or other content) to grant permissions to third parties to use such work, in exchange for an economic remuneration or not.

Regarding the nomenclature relating to free and open source software licences in a broad sense, we shall use the following terminology:

- **Free software and free licence**: any licence respecting the four freedoms, thus allowing for its reproduction, distribution and modification, and granting access to its source code.

- **Open source software and open source licence**: software conforming to the guidelines of the definition of open code software (OSD), largely "synonymous" with free, but with another perspective (more commercial, more oriented to the access to its source code).

- **Copyleft software and copyleft licence**: applications and licences distributed with a copyleft clause, which may be strong (as the GPL) or weak (as the LGPL or the MPL).

- **Non-free or proprietary software**: applications distributed under non-free licences.