



# The strategic implementation of Free Software in business

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## **Disclaimer**

This document and the associated course do not constitute legal advice. None of the information given is intended to be interpreted as legal guidance and/or legally binding.

If you require legal advice you should consult a qualified legal expert.

Free Software Foundation Europe does not give legal advice and does not provide legal services to individuals, projects or businesses. However, we do maintain an informal legal network and we might be able to suggest qualified legal advisers in your country of origin and business.

## Introduction

The course we are about to begin is intended to run through most of the topical areas of Free Software licensing and business concerns. While we cannot promise to address all of your questions inside the structure of this course itself, please don't hesitate to ask questions and introduce new topics of conversation.

If you look through this booklet you will notice that all of the primary topic areas are awaiting your input. We are going to foster conversation around the issues presented and work to ensure that everyone comes away with a clear idea of what Free Software can mean in the context of their business, project or area of interest.

Free Software is not a difficult field. It is simply one that requires a little immersion to facilitate full understanding.

## **What will you get from this course?**

This course will explain the types of licence used in the Free Software arena. It will examine the legal questions involved in projects with multiple participants, describing what possibilities and dangers exist in mixing code from different sources. We will cover dual-licensing models, where code is released both freely for community use and in a closed propriety form for specific markets, and best-practice models for developers and projects that adopt Free Software. In addition to this, we will examine how Free Software licensing can be used to produce commercial products within the context of existing business models.

## **What is the target group of this course?**

The course is of benefit to developers, technicians, project managers and coordinators who wish to become more knowledgeable regarding code distribution options.

## **What previous knowledge is required?**

Some knowledge of software development would be useful but is not required. We will introduce and explain the concepts used at each stage.

## **Intro: Perspectives**

### **What is Free Software?**

Free Software is a pretty simple concept. Free Software is software that you can:

- Use
- Study
- Share
- Improve

Software that does not give users these permissions is called “Non-Free Software” or “proprietary software”. The latter name is a reference to the software existing to benefit the proprietor.

### **How is Free Software different to proprietary software?**

You might be able to use proprietary software, but it is fairly certain you will not be able to modify, share and improve it. The licence applying to proprietary software does not provide that type of grant.

### **Can businesses use Free Software?**

Yes. Businesses can use Free Software according to the terms of its licence.

### **Can products be created using Free Software?**

Yes. You can sell software products that contain Free Software. You just have to ensure you follow the terms of the licence.

### **Case studies: applications**

Some well known Free Software:

- GNU/Linux operating system
- Mozilla Firefox
- OpenOffice.org
- Apache web server

Free Software is used in quite a lot of ICT services. Indeed, a lot of the software infrastructure of the Internet is Free Software.

## Case studies: embedded devices

Embedded devices are everywhere. Phones, wireless routers, cars.

A lot of embedded devices use Free Software. For example, many use the GNU/Linux operating system. GNU/Linux is very powerful software that you can also find on massive mainframes, super computers and desktops.

## Terminology

The operating system shipped by Debian, Red Hat, Ubuntu, Mandriva, etc. are a combination of the GNU operating system, the Linux kernel, and other third party software. We call these systems “*GNU/Linux*”. Some people call them “*Linux*”, but this misrepresents the operating system. Whichever term you use, the important issue is that they refer to the same operating system.

Similarly, while “*Free Software*” is the original, and in our opinion best, name for the topic of this course, some people call it “*open-source software*”. We ask people to prefer the original term, but again, contrary to the controversies that some journalists publish, these are two names for practically the same thing.

Richard Stallman, founder of Free Software Foundation:

*“Nearly all open source software is free software; the two terms describe almost the same category of software.”*

Bruce Perens, co-founder of Open Source Initiative:

*“My intent has always been for Open Source to simply be another way of talking about Free Software”*



## **Status of Free Software usage**

### **Who uses Free Software?**

The New York Stock Exchange run their mission critical system on GNU/Linux.

NASA have been sending Free Software into space since 1990.

Google – their data centres and web servers.

Wikipedia – the world's 8<sup>th</sup> most visited website uses 100% Free Software.

The City of Munich's 14,000 desktop computers.

The French Parliament, the French Police.

You?

### **Who has Free Software based revenue models?**

Red Hat

IBM

Sun Microsystems

MySQL

Trolltech

Computer distributors such as Dell, HP, Lenovo, Asus.

## **Copyleft – the share-alike licences**

### **What types of licence exist?**

The common ground of all Free Software licences is that they allow the recipient to use, share, modify and improve the software. The biggest differentiator between Free Software licences is whether or not they have a share-alike clause, called “Copyleft”.

### **How does Copyleft work?**

No Free Software licence requires you to share your software. If you want to keep your software to yourself, that's fine. However, *if you chose to share your software*, Copyleft licences require you to give the recipients all the rights that you got when you received the software.

### **What licences use Copyleft?**

Quite a few licences use a Copyleft provision including the most widely used Free Software licence, the GNU GPL.

### **How can Copyleft be applied to projects?**

A project simply has to adopt a Copyleft Free Software licence and distribute code under its terms.

### **Can that be compatible with business?**

Copyleft projects attract significantly more commercial contribution and support than non-Copyleft projects. This benefits businesses as well as other stakeholders.

### **Why is that?**

The key value proposition in the ICT field lies in the combination of technology, brand recognition and support provided by a product vendor. Copyleft does not compromise this proposition.

With non-Copyleft Free Software project, each contributing company can keep their improvement proprietary. Thinking on in an individual way, it doesn't make sense for any of them to.

## **Case study: GNU/Linux and the BSD derivatives**

FreeBSD is an operating system that is similar to GNU/Linux. The technical aspects of the two systems are roughly equal. One difference is that FreeBSD does not use a Copyleft licence. Their licence gives you the code and puts no requirements on you to publish your changes. Thus, their licence allows companies to apply the business models of the 80s and 90s i.e. they can add features, and they will be the only company with that feature, and they can charge per copy.

From time to time, companies have invested in FreeBSD, but each company keeps all or most of their improvements proprietary. The FreeBSD operating system does not benefit from all the improvements. Companies don't want to put their code under the permissive licence because they know that their competitors could add a further feature and not contribute that back, and then they would be competing against their own work.

With Copyleft licences, everyone has to play fair. No company can exploit the code in a way that others cannot equally exploit it. Thus companies feel secure in contributing their code and the software benefits from each contributor.

For users, this is a big win because instead of having multiple options of exclusive feature sets, they get to use the combination of all added features.

## **Case study: Licence switching**

Not only did GNU GPL'd projects flourish, but we have also seen projects which originally wrote their own licences but which are later switching to the GNU GPL. The Mozilla web-browser suite and the Qt toolkit are two examples.

## **Business adoption**

### **How can Free Software licensing fit into your business model?**

Free Software can help your project or company benefit from an already substantial and continually growing ICT code base. As long as your business model is adapted to take into account licensing expectations and a small amount of retraining for key personnel, Free Software is likely to boost your overall value proposition.

### **How can products be differentiated from their code?**

By the realisation that products are a package consisting of features, support and the trust associated with the brand of distribution.

### **Does Free Software mean free products?**

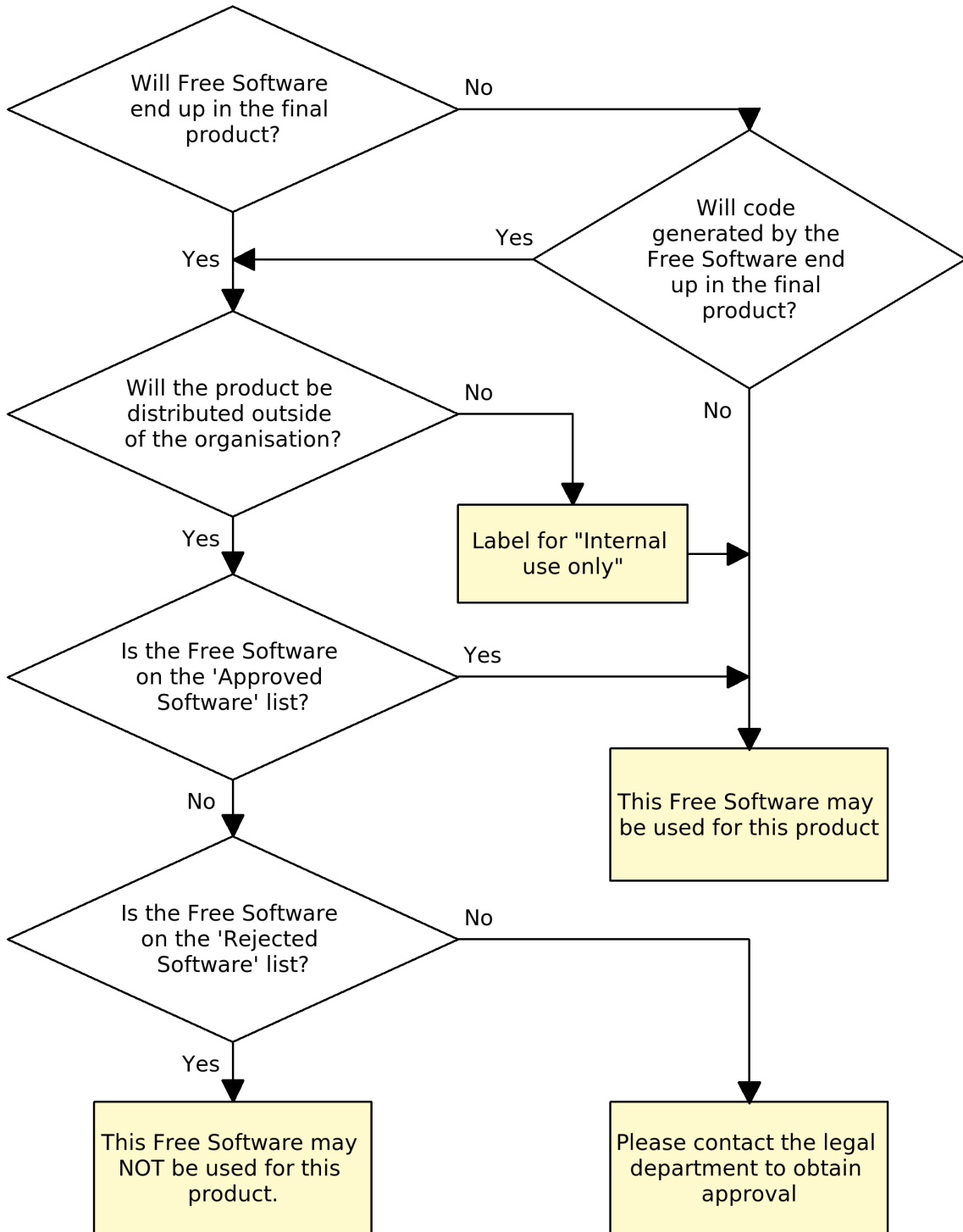
No. You can sell products made with Free Software.

### **How can Free Software be sold?**

The terms of Free Software licences apply to the distribution of Free Software products. These terms do not include any provisions that insist on distribution for zero cost. Many companies sell Free Software. Red Hat is a good example.

# Approval flow diagram

## Free Software Approval Flowchart



With thanks to Royal Philips Electronics

## **Project management**

### **How are Free Software projects different to proprietary projects?**

Free Software projects are build on the development and QA work of multiple parties. Proprietary products build on closed platforms are developed by one or few vendors.

### **How can communities be combined with project coherency?**

Free Software is frequently developed by 'communities' of programmers, users, designers and debugging volunteers. The question often arises about how to ensure that these communities do not lead to commercial product fragmentation.

However, a community helps to develop a product. It does not mean that the product itself or its development and release roadmap is fragmented.

### **How can a project avoid legal problems?**

By following 'best practice' processes developed by leading Free Software projects like KDE, GNOME, Debian and Red Hat's Fedora.

## **Licensing choices**

### **How can you choose the right Free Software licence?**

You need to define precisely what your project or product goals are, what your project or company expectations are, and to take into consideration the current and emerging market norms.

### **How can you apply a Free Software licence to your project?**

If you are starting a project from scratch, you can simply select any licence you wish and apply it to your new code. The licence itself will explain how to do this.

If you are using someone else's code as the basis for your project, you need to ensure that you do not contravene the terms of their licence by attempting to apply incompatible terms to your finished project.

# Dual licensing

## What is dual-licensing?

Dual-licensing refers to a model where code is distributed under two different (and potentially incompatible) sets of conditions.

## How can dual-licensing benefit a project?

Dual-licensing can allow a project to benefit from two different types of value proposition at the same time.

## What problems are associated with dual-licensing?

Dual-licensing is frequently frowned on by Free Software developers, and it also introduces the potential for confusion on the part of customers wishing to use a product.

## When should you choose dual-licensing?

This depends entirely on your project, product and expectations.

## Case study: MySQL

MySQL is both the name of a company and of the database technology the MySQL company delivers to the marketplace. MySQL database products are available under the terms of the GNU GPL licence or a proprietary licence.

The advantage of this model is that MySQL benefits from some external development and QA potential, which the disadvantage is that many potential developers are alienated by the thought of the MySQL company distributing code under proprietary terms.

## Case study: QT

QT is a windowing and development framework for graphical applications. It forms the basis of the popular KDE Free Software desktop. This framework is available under the terms of the GNU GPL and under proprietary licensing terms.



The advantages and disadvantages faced by Trolltech, the originators of the QT platform, are similar to MySQL.

## **Consolidation / copyright assignment**

One thing that can help with legal maintainability is something called copyright assignment. Because Free Software is often developed by large groups of people ranging from individuals to organisations, the copyright holders of a code base can become fragmented, making it hard to maintain the code base in legal terms.

Copyright consolidation helps resolve this. Even the issue of different legal systems in different countries (like common and civil law) can be overcome with suitably drafted assignment documents.

### **How can you manage copyright assignment?**

As with all issues concerning rights and the transfer of rights, you would be well advised to seek legal counsel.

Copyright assignment documents are available relatively freely on the Internet. For instance, FSFE has a copyright assignment document called the 'Fiduciary Licence Agreement' or FLA. This is a copyright assignment designed to explicitly work in common and civil legal systems.

### **How can a project ensure legal maintainability?**

Having many participants in a project potentially increases the chance of legal maintainability problems. Projects can reduce these risks by maintaining clear copyright attribution and having clear policies for contributions, trademarks and associated areas of development process and branding. It is also worth considering copyright consolidation in certain situations.

## **Trademarks and commercialisation**

### **How can value be built using a brand?**

The value proposition of modern ICT products lies in a combination of the technology, brand and associated support services. A good brand encompasses the user interaction with a technological solution.

### **Case study: Red Hat Enterprise Linux**

The Red Hat value proposition lies in providing enterprise operating systems and full-stack solutions with high quality support services.

People do not buy Red Hat solutions because of the functionality. They buy Red Hat solutions because the functionality delivered comes with enterprise quality support.

### **Case study: Mozilla Firefox**

Mozilla Firefox is a serious competitor to Microsoft's Internet Explorer. Mozilla deliver their product for free (as in price) to end users, while deriving profit from lucrative search content delivery deals with Google. Thus Mozilla leverage their brand as a quality product with zero cost to users while they leverage their user-base as a value proposition for Google service delivery.

### **How can trademarks be used to ensure coherent branding?**

Brand value is a key element of the modern ICT business market. Trademarks allow for visible branding on ICT products. By ensuring that you maintain a clear separation between your brand (protected by trademark) and your Free Software code (protected and shared by copyright), you can ensure that you benefit from community development while maintaining a unique value proposition.

### **How can Free Software licences and trademarks work together?**

They do not have to overlap or create a conflict. Free Software licences are copyright law documents. A trademark is a mark consisting of words and/or symbols that represent a business or single product. Products like Mozilla Firefox and Red Hat Enterprise Server use Free Software code to deliver features, and trademark-protected brands to deliver

unique identification. A good trademark policy can ensure that all interested parties feel comfortable with this.

## **Adoption and transition**

### **What are the advantages of Free Software licensing?**

Free Software allows projects and businesses to benefit from the widest possible amount of technologies and advancements in a fair and non-restrictive way.

### **What are the problems associated with Free Software licensing?**

Sometimes people assume that Free Software code can be used as if it were in the public domain. However, Free Software is licensed and it is important to ensure that your project meets the terms of the licences under which your adopted code is distributed.

### **Case studies: Projects like the Linux kernel**

The Linux kernel started in 1991 as a project by a Finnish university student. It has become one of the leading operating system kernels in the server marketplace, and is increasingly used on workstations and desktops as the basis of the GNU/Linux operating system.

There have been some licensing maintainability issues with Linux due to a combination of its massively distributed development and some licensing decisions taken early in the project life-cycle.

### **Case studies: Projects like Java**

Java is a programming language created by Sun Microsystems. It is exceptionally popular and powers virtually every mobile device on the market as well as a substantial proportion of web services.

Sun Microsystems has decided to release the Java platform as Free Software under the terms of the GNU GPL licence. This is a good example of a market-leading product transitioning from proprietary to Free Software.

## **FSFE and FTF**

### **Where can you go for more information?**

There is a great deal of information about Free Software available on the Internet.

For general information about Free Software you might want to consider visiting the Free Software Foundation Europe website. It's available in many European languages:  
<http://www.fsfeurope.org>

For licensing specific information about Free Software you might want to consider visiting the Freedom Task Force website:  
<http://www.fsfeurope.org/ftf>

You can also find useful information at the following websites:  
<http://www.fsf.org>  
<http://www.fsf.org/licensing>

### **Where can you go for help?**

The Freedom Task Force can help. We have an informal network of legal experts throughout Europe that currently covers most EU member states plus many East Asian countries, the USA and Australia.

You can contact the FTF through our website or email:  
<http://www.fsfeurope.org/ftf>  
[ftf@fsfeurope.org](mailto:ftf@fsfeurope.org)

## **Background reading**

Free Software is a big field. We are not going to present you with a huge amount of information in the background reading section of this guide, but we do want to ensure that you have access to some key ideas and documents.

In the following pages you will find detailed explanations of what Free Software is, how Free Software fits into the European marketplace, and you will be introduced to copies of the most famous and most widely used Free Software licences.

# ***An overview of Free Software licensing and the Freedom Task Force***

**By Shane Martin Coughlan, FTF Coordinator, FSFE**

## **Introduction**

Free Software licensing appears to be a formidable subject, encompassing as it does the specialised fields of both technology and law; an initial glance would suggest that two forms of expertise are required to understand it. However, Free Software licensing is less formidable than it appears.

This paper will introduce the reader to software, licensing, Free Software and the emerging Free Software support networks from first principles. By necessity it will be brief. By the conclusion of this paper the reader should have a clearer understanding of Free Software licensing as a concept and why Free Software Foundation Europe (FSFE) established the Freedom Task Force to support individuals, projects and businesses in Europe.

## **Defining software**

The term software was introduced in 1958 by a researcher called John Tukey to describe programs that run on computers.<sup>1</sup> Software is a broad term, encompassing the programs that allow a computer to function, programs that provides system services, and programs that the end-user interacts with. These myriad programs are created through what is called programming – the act of using a computer language to describe mathematical actions – and compiling the resulting code into machine readable programs.

Software is written by one or more programmers and is then distributed to end-users through various channels. The distribution of software is governed by the creator of the code through a licence which the end-user accepts. Software licences tell people how the rights holder of a certain piece of software wishes that software to be used. Such licences can either be restrictive or permissive, giving end-users more or less freedom to do things with the software.

## **Defining Free Software**

One increasingly prominent type of software is called Free Software. Free Software describes all types of computer programs that adhere to a certain doctrine of how end-users should be able to make use of software, namely that users should be able to run, copy, distribute, study, change and improve software.<sup>2</sup> These freedoms are encapsulated

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1 Britannica Online, 2007, '*Computer software*',  
<http://www.britannica.com/eb/article-235920/computer> [12<sup>th</sup> April 2007]

2 Free Software Foundation, 2007, '*The Free Software Definition*',  
<http://www.fsf.org/licensing/essays/free-sw.html> [12<sup>th</sup> April 2007]



in four defined rights for end-users:

1. The freedom to run the program, for any purpose (freedom 0).
2. The freedom to study how the program works, and adapt it to your needs (freedom 1).
3. The freedom to redistribute copies so you can help your neighbour (freedom 2).
4. The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3).<sup>3</sup>

These freedoms are given to end-users through Free Software licences, a type of software licence designed to ensure that the rights holder of the software gives certain permissions to the end-user. There are quite a few Free Software licences, some of which are compatible with each other and others which are not.<sup>i</sup> The Free Software Foundation lists sixty seven software licences that qualify as Free Software licences.<sup>4</sup> Thirty of these licences are compatible with the most widely used Free Software licence of all, the GNU General Public Licence (GNU GPL). According to some sources, the GNU family of licences (GNU GPL and GNU LGPL) are used in between 65.35%<sup>5</sup> and 66.22%<sup>6</sup> of all Free Software projects.

The GNU GPL is a Free Software licence that uses something called Copyleft, a distribution method requiring that software with the four freedoms maintains those freedoms in further distribution of either the program itself or derivative works.<sup>7</sup> This idea facilitates what might be termed sustainable freedom. Not all Free Software licences ensure freedom is sustained through subsequent distributions of the program in question.

The GNU GPL has other features like a limited warranty and disclaimer of liability clause, though such features are also common in other areas of software licensing.<sup>8</sup> Less common is the preamble of licence, which contains a clear rationale for the use of the licence as a tool in providing freedoms to end-users. The GNU GPL and its sister licence, the GNU LGPL, are tools to enable the transfer of the four freedoms of software to each user without additional limitation or restriction.

## Free Software in the real world

Free Software is not just as abstract concept or a distant ideal. Since the launch of the GNU project in 1984, Free Software has grown continually and is now positioned as a

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3 Ibid.

4 Ibid.

5 Wheeler, D., 2002, '*More than a gigabuck: Estimating gnu/linux's size*', <http://www.dwheeler.com/sloc/redhat71-v1/redhat71sloc.html>, [12<sup>th</sup> April 2007]

6 Open Source Technology Group, 2007, '*SourceForge Software Map*', <http://sourceforge.net/softwaremap/> [12<sup>th</sup> April 2007]

7 Free Software Foundation, 2007, '*What is Copyleft?*', <http://www.fsf.org/licensing/essays/copyleft.html> [12<sup>th</sup> April 2007]

8 L. Guibault and O. van Daalen, 2006, '*Unravelling the Myth around Open Source Licences*', p.83, T.M.C. Asser Press, The Netherlands.

critical part of academic, public and commercial ICT infrastructure. Major companies have invested heavily in Free Software, including IBM, Oracle, Google and Sun Microsystems.

There are numerous reasons for this growing interest. Free Software allows developers to build on mature platforms and removes the need to reinvent the wheel when creating a new product or solution, thus fostering rapid evolution. It allows everyone to benefit from the power or utility of software, and improvements to the code are returned to the commons, sustaining benefits in the long-term. Free Software also appears to inherently encourage high reliability; a study in 1995 underscored this by confirming that Free Software was less likely to crash than non-Free software when fed random strings of information.<sup>9</sup>

Growing awareness of the advantages of Free Software in the general ICT marketplace has grown to such a level that non-Free software vendors have resorted to media campaigns in an attempt to discredit Free Software projects.<sup>ii</sup> Such actions would appear to be ineffective; according to Netcraft the Free Software web server Apache constituted 58.86% of the total market in April 2007.<sup>10</sup>

Adoption of Free Software has been particularly noticeable in the public sector. In Germany the city of Munich instituted a programme called LiMux to ensure Free Software could be deployed on their systems in the future.<sup>iii</sup> In the UK, Bristol City Council migrated to an office suite based on Free Software,<sup>11</sup> while Birmingham City Council deployed Free Software in libraries with encouraging results.<sup>12</sup>

In the United States, Free Software and the concept of access and sharing it champions is extremely prevalent. When the NSA's Information Assurance Research Group wanted a system to provide security in a wide range of computing environments they decided to extend the GNU/Linux operating system, thus creating SELinux.<sup>13</sup> Likewise, when the State of Massachusetts searched for a document format that would ensure access without restrictions in the long-term they selected OpenDocument format (ODF), a documentation format born out of the Free Software OpenOffice.org office suite.<sup>14</sup>

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9 Miller, B. P., Koski, D., Lee, C. P., Maganty, V., Murthy, R., Natarajan, A. & Steidl, J., 1995, '*Fuzz revisited: A re-examination of the reliability of unix utilities and services*', <http://www.suffritti.it/informatica/tco/fuzz-revisited.pdf> [12<sup>th</sup> April 2007]

10 Netcraft, 2007, '*April 2007 Web Server Survey*', [http://news.netcraft.com/archives/2007/04/02/april\\_2007\\_web\\_server\\_survey.html](http://news.netcraft.com/archives/2007/04/02/april_2007_web_server_survey.html) [12<sup>th</sup> April 2007]

11 Jono Bacon, 2006, '*Bristol Switches to StarOffice*', [http://www.linuxdevcenter.com/pub/a/linux/2006/02/23/bristol\\_migration.html](http://www.linuxdevcenter.com/pub/a/linux/2006/02/23/bristol_migration.html), [12<sup>th</sup> April 2007]

12 Birmingham City Council, 2006, '*Opening the door to open source?*', <http://www.opensourceacademy.gov.uk/solutions/casestudies/birmingham-city-council/file> [12<sup>th</sup> April 2007]

13 National Security Agency, 2007, '*Security-Enhanced Linux*', <http://www.nsa.gov/selinux/> [12<sup>th</sup> April 2007]

14 Peter Galli, 2006, '*Mass. Back on Track for ODF Implementation*',

## Organisations supporting Free Software licences

Free Software is an important and growing part of the overarching ICT arena. Given that Free Software depends on a specific type of licence for its success, it's worth asking what infrastructure is in place to help support individuals, projects and companies with licence questions.

Just as there are several organisations dedicated to promoting Free Software, there are several projects dedicated to dealing with Free Software licensing issues.

In the United States, Free Software Foundation's Compliance Lab offers licence education and works to ensure that people comply with the terms of the GNU licences. Originally started as an informal activity in 1992, the Compliance Lab was formally established in December 2001 under the management of David Turner. The current FSF Compliance Engineer is Brett Smith.<sup>15</sup> The Software Freedom Law Centre (SFLC) in New York also provides legal representation and other services for Free Software projects.<sup>16</sup>

In Europe, the GPL-Violations.org project, started by Linux kernel developer Harald Welte in January 2004, has engaged with over 100 successful violation resolutions, and continues to promote fair use of Free Software licences.<sup>17</sup> Today the project continues with Mr. Welte acting as project leader, Dr. Till Jaeger representing the project in court, and sviolation detection and analysis being undertaken by Armijn Hemel

However, while GPL-Violations.org continues to resolve compliance issues throughout Europe, there was until recently no organisation dedicated to dealing with licence education and broadening the overall legal infrastructure. For this reason Free Software Foundation Europe launched the Freedom Task Force (FTF) in November 2006.<sup>18</sup>

### FSFE's Freedom Task Force

FSFE's Freedom Task Force (FTF) was established to ensure that the legal infrastructure for Free Software in Europe matures coherently and inclusively.<sup>19</sup> It chairs Special Interest Groups, organises discussions and engages with as many parties as possible to ensure mutual understanding.

The FTF wishes to foster dialogue between all parties involved in making use of Free Software. To accomplish this the FTF is building sustainable networks of legal and

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<http://www.eweek.com/article2/0,1895,2008246,00.asp> [12<sup>th</sup> April 2007]

15 <http://www.fsf.org/licensing/>

16 <http://www.softwarefreedom.org/>

17 <http://gpl-violations.org/about.html#history>

18 <http://www.fsfeurope.org/projects/ftf/>

19 Free Software Foundation Europe, 2007, '*FSFE Launching Freedom Task Force, Co-operating with gpl-violations.org*', <http://mail.fsfeurope.org/pipermail/press-release/2006q4/000159.html>

technical experts across the continent, and engaging with questions raised by all types of Free Software users.<sup>20</sup> A key aspect of the FTF's work is centred around providing education in Free Software licensing. These activities include answering questions, providing training and helping projects and businesses implement good licensing practices.<sup>21</sup>

The FTF can act as the legal guardian of Free Software projects, consolidating and managing legal affairs while the project itself focuses on developing code. This is done through a copyright assignment known as the Fiduciary Licence Agreement (FLA). The FLA is also available under permissive documentation licences so that projects can customise it and consolidate copyright under their own administrative umbrella.<sup>22</sup>

The FTF works in partnership with the GPL-Violations.org project to resolve Free Software licensing issues. Both projects wish to ensure that issues with code distribution in Europe are resolved for the long-term benefit of the community at large, rather than treated as an isolated incident. This feeds back into the primary goal of the FTF; educating people in the benefits and proper use of Free Software.<sup>23</sup>

In its first six months of operation, the FTF processed over one hundred requests from individuals, projects and companies. It established a list of recommended European Free Software lawyers and built internal networks of legal and technical experts. The fiduciary programme has grown to include Bacula<sup>24</sup> and pyswarm,<sup>25</sup> with discussions under way with several other projects.

The FTF has held talks with embedded device vendors, resulting in the launching of a Far Eastern compliance effort to reduce violations at source. This positive long-term development has occurred in tandem with a mid-term objective; two day licensing courses are now being offered with Internet Academy in Sweden and Digicomp in Switzerland.

## Conclusion

Free Software benefits society by allowing people to make the most of technology. The organisations that support Free Software offer a valuable service, not least by working to demystify the emerging digital society. Helping people understand Free Software licences is an important part of this. Free Software licensing need not be formidable. The principles underlying it are straightforward and there is an established body of literature discussing its details.

While Free Software licensing infrastructure is relatively immature in Europe, organisations like the FTF are pro-actively addressing this issue. Sustainable networks that link

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20 <http://www.fsfeurope.org/projects/ftf/about.en.html>

21 <http://www.fsfeurope.org/projects/ftf/education.en.html>

22 <http://www.fsfeurope.org/projects/fla/index.en.html>

23 <http://www.fsfeurope.org/projects/ftf/enforcement.en.html>

24 <http://bacula.org/>

25 <http://pyswarm.sourceforge.net/>

competent professionals are being fostered. Indeed, it is increasingly possible to find experts to answer questions that arise, and to offer guidance where necessary.

## ***The definition of Free Software***

(a.k.a. "Libre Software" or "Open Source")

By Georg C. F. Greve <greve@fsfeurope.org>

Free in Free Software exclusively refers to freedom, it never refers to price. This fact warrants highlighting because it is at times obscured by a particular weakness of the English language that is generally not shared by other languages. Primarily used in this definition since the 1980s, Free Software is defined by four fundamental freedoms:

- 1. The freedom to run the program, for any purpose.**  
Placing restrictions on the use of Free Software, such as time ("30 days trial period", "licence expires January 1st, 2004") purpose ("permission granted for research and non-commercial use") or geographic area ("must not be used in country X") makes a program non-free.
- 2. The freedom to study how the program works, and adapt it to your needs.**  
Placing legal or practical restrictions on the comprehension or modification of a program, such as mandatory purchase of special licences, signing of a Non-Disclosure-Agreement (NDA) or - for programming languages that have multiple forms or representation - making the preferred human way of comprehending and editing a program ("source code") inaccessible also makes it proprietary (non-free). Without the freedom to modify a program, people will remain at the mercy of a single vendor.
- 3. The freedom to redistribute copies so you can help your neighbour.**  
Software can be copied/distributed at virtually no cost. If you are not allowed to give a program to a person in need, that makes a program non-free. This can be done for a charge, if you so choose.
- 4. The freedom to improve the program, and release your improvements to the public, so that the whole community benefits.**  
Not everyone is an equally good programmer in all fields. Some people don't know how to program at all. This freedom allows those who do not have the time or skills to solve a problem to indirectly access the freedom to modify. This can be done for a charge.

## **Rights, not obligations**

These freedoms are rights, not obligations. Any institution and person can choose to not make use of them, but may also choose to make use of all of them. In particular, it should be understood that Free Software does not exclude commercial use. If a program fails to allow commercial use and commercial distribution, it is not Free Software. Indeed a growing number of companies base their business model completely or partially on Free Software, including some of the largest proprietary software vendors. Free Software makes it legal to provide help and assistance, it does not make it mandatory.

## **Implemented in Copyright**

These freedoms are generally implemented by means of copyright, although not in all cases: public domain software is also Free Software, although a special case. For the vast majority of Free Software it is the copyright licence that determines whether a particular program is indeed Free Software. If a copyright licence grants the freedoms described above, it is a Free Software licence, of which between 50 and 150 are in use today.

This surprisingly low number is caused by the tradition to choose established and well-understood licences for Free Software, rather than writing a new licence for every program. Thus, by examining a handful of comparatively simple licences, it is possible to understand the licensing terms of more than 90% of all Free Software, greatly reducing the overhead of licensing administration and compliance.

## **Terminology**

Free Software is discussed under various headings, with alleged antonyms and synonyms, which frequently cause confusion and doubt and will therefore be explained briefly.

### **Antonyms**

The antonym of Free Software is proprietary software, or non-free software. Commercial software is not an antonym to Free Software, being commercial is unrelated to freedom. Commercial Free Software is just as normal as non-commercial proprietary software, sometimes also referred to as "freeware".

### **Synonyms**

As of 1992, the term "Libre Software" was promoted as a synonym to Free Software in parts of Europe to address the particular confusion of the English language. The term "Open Source" was proposed in 1998 as a marketing term for Free Software by the Open Source Initiative (OSI). The OSI definition of "Open Source" covers an identical body of copyright licences to that of the 1989 Free Software Definition explained above.

From the copyright licensing viewpoint, both "Libre Software" and "Open Source" are Free Software synonyms. Combination of terms, such as "FOSS" and "FLOSS" combine

synonyms, redundantly identifying the same body of software.

### Ambiguities

The term "Open Source" was occasionally used in various ways before its 1998 definition, and is used in several meanings today, which are often mutually exclusive with each other, and in particular the Open Source Definition of the OSI. So "Open Source" can refer to Free Software, but it can also refer to software not meeting the criteria above. It is also at times used to describe a particular software development model, although some parts of Free Software are developed in closed development models, and proprietary software is increasingly experimenting with open development approaches. This makes the term "Open Source" highly ambiguous, and indeed difficult for all areas that depend on precision in their language, such as science, law and politics.

### **Public Policy Considerations**

Unlike proprietary software, there is never any single company that has absolute control of a Free Software solution. By choosing Free Software, governments protect their independence from the corporate interests of any single vendor, local or foreign. Maintaining their ability to freely and independently live up to their political mandate is the sovereign right of any government. Preferring or mandating Free Software promotes this goal and is always non-discriminatory. It preserves technological and political neutrality because Free Software belongs to no single vendor or organisation, and any vendor is welcome to supply Free Software of third parties. If vendors seek to do business with governments, they can make the decision to give them independence by releasing their own software under a Free Software licence.



## ***Free Software in Europe***

By Georg C. F. Greve <greve@fsfeurope.org>

### **Introduction**

Free Software — especially the GNU/Linux operating system — and the FSFE have recently become more visible on the political agenda. This article will seek to explain some of the larger economic, social and political benefits that Free Software offers the European countries and Europe as a whole. It will also give an insight into the work of the FSFE.

As a concept and paradigm, Free Software addresses some of the most fundamental needs of any society in its development towards the post-industrial information era. The most visible organisation in this field, the Free Software Foundation (FSF), was founded in 1985, a time when people had barely begun grasping the most basic principles of information technology.

With the first formal definition of Free Software and the creation of the GNU General Public License (GPL) and GNU Lesser General Public License (LGPL), the FSF not only created (and still maintains) the two most popular licences for Free Software in use today, but also invented the notion of "Copyleft," referring to Free Software protected against being stripped of its freedom.

Free Software itself is defined by four basic freedoms. The first freedom — sometimes referred to as freedom 0 — is the unlimited use of a program for any purpose. This means that a Free Software licence must allow use for all commercial or non-commercial applications in order to fulfil this criterion.

The second freedom — freedom 1 in the Free Software definition<sup>26</sup> — is the freedom to study a program to learn how it works and to adapt it to your own needs. The remaining two freedoms are the freedoms to redistribute unmodified copies and the freedom to release modified copies that improve the state of the art.

As these are freedoms, people are free to choose to exercise one or several of them, but they may also choose to exercise none.

Licences providing these freedoms are referred to as Free Software licences.<sup>27</sup> A special case of Free Software licence, the so-called "Copyleft" licence, has already been mentioned above. These licences give any user the freedoms described above, but they explicitly forbid a distributor to remove that freedom, which would make recipients of such freedom-deprived software dependent on that specific distributor.

Since access to the source code is a necessity to exercise these freedoms for

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<sup>26</sup><http://www.gnu.org/philosophy/free-sw.html>

<sup>27</sup><http://www.gnu.org/licenses/license-list.html>

programming languages with distinct source code, some people suggested using "Open Source" as a marketing term for Free Software in 1998; nowadays Free Software is sometimes referred to under this marketing term.

The good intention of making Free Software more widely known has unfortunately had the unexpected side effect of weakening the distinction between Free and proprietary/non-free software.<sup>28</sup> Therefore the Free Software Foundation strongly recommends speaking about Free Software or the adequate term in the local language; as will be done in the remainder of this article.

## **Economic perspectives of Free Software**

Despite the attempts of proprietary software vendors — especially those located in the United States holding a monopoly in their respective areas — to make it seem so, Free Software is not an attack directed at specific companies.

Free Software should be understood as a new paradigm, a new model of dealing with software based upon mature concepts. It is a model based upon keeping the markets open and freely accessible; as such it cannot be an attack on specific companies, since any company can participate in this new market.

In a Free Software economy, there will be market leaders, but the possibility of uncontrollable monopolies is much lower.

To current monopolies this may seem threatening. But as one of the most important — maybe even the most important — problems of the European IT industry is its dependence on foreign IT monopolies, weakening these monopolies has become necessary for Europe to prosper.

That current monopolistic situation is a logical consequence of the proprietary software model, which has a strong system-inherent tendency towards proprietary software. The reason being that proprietary software tends to only work properly with itself.

With such proprietary software, communication between two users requires that both use the same software. Given that all people in western countries supposedly know each other over no more than five others, this leads to a kind of "viral" effect, where one user forces the next to use the same software, creating a monopoly.

In theory, open standards would provide a way out of this vendor lock-in, but history has shown that no open standard was ever truly successful unless it was implemented in Free Software.

The possibility to enlarge and lock-in a user base by modification of an open standard — a process euphemistically described as "improving" a standard — that in consequence allows only migrating to a certain piece of software, but not away from it, has proven to be

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<sup>28</sup><http://fsfeurope.org/documents/whyfs.html>

too much of a temptation for the major players in the field.

As the past has proven, it is ineffective to impose open standards on vendors of proprietary software because of the fast-paced development in this sector in combination with the in-transparency of proprietary software and the comparably slow workings of the political decision process.

That is if the vendors accept such measures and do not exert their monopoly-based clout to stop such actions altogether, as recent anti-trust cases in the United States have shown.

### **Structure of a Free Software economy**

The differences are much smaller than many people would make you believe. The financially most important sector today is software for business activities and most of the revenue is generated through service. This is unlikely to change.

It is true that licence revenue will most likely go down, probably significantly. However this only affects a very small part of the software generated revenue; a part which generates a negative trade balance between Europe and the United States today.

The by orders of magnitude largest source of revenue today is service. This sector will be able to grow significantly in a Free Software economy.

In the current system, dominated by proprietary software, only those companies supported by the monopolies can offer services; usually only a small part of what would be possible. The remainder is either done by the monopolies themselves — generating another stream of revenue flowing out of Europe — or not at all.

Free Software offers greater independence of European businesses, allowing them to offer the full array of services if they wish or cooperate with others if this seems economically more useful.

Also they will be able to provide solutions for those services that are already in demand, or that they can create a demand for, which are currently impossible because businesses lack adequate access and control over the software these services depend on.

In a Free Software economy, the current revenue in the service sector will be redistributed more in favour of the European vendors and the sector as a whole can be expected to grow.

### **Reducing dependencies**

It also must be considered that currently the holders of monopolies have control over the European IT industry as they could drive most companies out of business by denying them access to their monopoly or by making access so difficult that the economics of the situation will possibly drive the company out of business.

To further worsen the situation, software monopolies can effectively be coupled with hardware monopolies. So a piece of monopolistic software will run only on a special kind of hardware and in return the vendor(s) of that hardware will only deliver their machines with this particular software.

The Free Software paradigm does not allow building this kind of coupled monopoly. In fact Free Software encourages platform independence and the Free Software systems (e.g. GNU/Linux and the BSD systems) run on more hardware platforms than any proprietary operating system.

Because the freedom to modify allows adding support for other hardware platforms, Free Software provides a stable foundation for innovative hardware initiatives that might even start on a local or regional level.

That way Free Software not only brings back competition into the software, but also furthers it in the hardware field.

## **National Economy**

Because the largest part of software development is putting together old and well-known principles, these get reimplemented at least once by every company, sometimes even once for every project.

In terms of national economy, proprietary software is waste of highly skilled labour. The proprietary software paradigm keeps software developers busy reinventing the wheel, slowing down innovation.

Free Software allows building upon these old and well-known building blocks, consequently reducing the market-entry barrier for new and innovative companies.

Also, the software industry is only one part of economy as a whole. As software is the glue that ties together a digitally networked economy, all sectors pay the price for the inefficiency of the proprietary software model.

Today, most non-IT companies use proprietary solutions. This makes them relying entirely on their vendors for crucial aspects of their own economic activity such as keeping stocks, writing and paying bills or communication with their customers, suppliers and/or competitors.

Forced updates are one result, the need to sometimes replace a whole IT solution, downtimes and new training of employees included, is another. Solutions based upon Free Software remove this dependency almost entirely.

As the company gains the freedoms described above, updates can be made according to the economic situation of the company. In case of problems with the vendor, the solution will still remain usable and another vendor can be found.

In the latter case, an investment for the new vendor to work itself into the solution is required, but that cost is significantly lower than the cost of an entirely new solution. Also the indirect costs in terms of customer dissatisfaction, training of employees and downtimes usually do not arise.

It can be expected that these effects will help revitalising economy as a whole. In essence, Europe can only win economically by furthering massive deployment of Free Software.

## **Social issues**

Access to software becomes increasingly important to participate in the cultural, social and economic exchange of mankind. For the individual this means that access to software determines ones ability to communicate, to study and to work. Studies from the United States indicate that the average person interacts about 150 times each day with software.

In consequence, software has to be understood as a form of cultural property, a cultural technique. As long as mankind exists, new cultural techniques have risen the question of who is given access to them. Free Software ensures all people retain equal access to the cultural property that software has become.

In terms of data security and protection, another issue arises. As computers are always opaque — it is not possible to tell by mechanical observation what a computer does — it becomes even more important that the software is entirely transparent. Otherwise people lose the ability to determine what their computers do and consequently have no control over their personal or other data.

Free Software is by nature entirely transparent, preserving the maximum of informational self-determination.

## **2001: The Free Software Foundation Europe**

Networks tend to be more stable than single nodes and Europe is one of the leading — if not the leading — regions for Free Software. So in 2001, the Free Software Foundation Europe (FSFE) was founded as a sister organisation of the Free Software Foundation in North America. Legally, financially and personally independent of each other, they are working together on all aspects of Free Software in a spirit of equal cooperation.

The FSFE itself encompasses the vision of a strong Europe united in cooperation and mutual understanding with currently four countries (France, Germany, Italy, Sweden) fully represented, three others associated (UK, Portugal, Austria) and several others involved through regular cooperation.

A main function of the FSFE is providing a European competence centre for Free Software, offering advice to governments, commissions, companies, journalists and others.

In the scope of these activities, the FSFE was invited to provide an expert for the

Commission on Intellectual Property Rights in London<sup>29</sup> and presented Free Software at an OECD workshop in Tokyo on invitation of the German Ministry of Economics and Technology.

Other activities involve regular project work, for instance in AGNULA,<sup>30</sup> a project funded in the scope of the 5th framework programme of the European Commission (IST-2001-34879).

For the 6th framework programme, the FSFE issued a recommendation supported by over 50 parties, in which the advantages of Free Software for Europe are addressed in how they refer to accepted European goals; concrete recommendations on how Europe can capitalise on them are given.<sup>31</sup>

Also the FSFE is doing work to support the legal foundation of Free Software, for instance it helped a local institute for legal issues of Free Software, the ifross, with the amendment of a German copyright law revision and recently issued the Fiduciary Licence Agreement (FLA),<sup>32</sup> which will help upholding the legal maintainability of Free Software.  
Capitalising on Free Software

Free Software offers unique opportunities for Europe as a region and the European states. In fact Europe is currently the region with the best position to gain the full advantages of Free Software and go into the information age with a head-start.

Possible advantages include greater independence, increased sustainability, freedom from foreign mono- and oligopolies, alternative hard- and software possibilities, a strengthened domestic market and better protection of civil rights.

For these to become reality, it becomes increasingly important to make clear statements and policies in favor of Free Software, such as the evaluation bonus for Free Software projects defined in the IST work programme or the policy statement by Liikanen in the European Parliament<sup>33</sup> regarding Free Software in public administration.

In fact public administration happens to provide an excellent starting point for the transition towards Free Software for three reasons.

Firstly, a government using proprietary software creates a tendency to force its citizens to use the same software because of the aforementioned "viral" effect of proprietary software. As governments have the ethical obligation to be available to all its citizens, they can make a just case for Free Software based upon the consideration of not wanting to force their citizens into a harmful monopoly.

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<sup>29</sup><http://www.iprcommission.org>

<sup>30</sup><http://fsfeurope.org/projects/agnula/>

<sup>31</sup><http://fsfeurope.org/documents/fp6/recommendation.html>

<sup>32</sup><http://fsfeurope.org/projects/fla/>

<sup>33</sup><http://www3.europarl.eu.int/omk/omnsapir.so/cre?>

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Secondly, public administration is always short of resources, but the majority of resources spent on IT get squandered by creating a separate solution for each ministry or region, while the problems addressed tend to be similar and massive cooperation would be possible.

And finally, use of Free Software in public administration will provide a role model, encouraging citizens and businesses to get out of unhealthy dependencies, getting accustomed to the new model and becoming economically and socially active in it.

Several European regions already have initiatives to make use of Free Software mandatory for public administration. The commission entrusted with this question for the French speaking part of the region of Brussels came out in favor of such a regulation on February 11th, 2003, for instance.

Public administrations in Europe should at least make sure to prefer Free Software over proprietary and require open standards for which a Free Software reference implementation exists.

Also wherever public money is spent, spending it on Free Software is making sure that it will benefit the public and economy. In the past, such money was usually spent on proprietary software, often benefiting only that proprietary vendor company directly at the cost of society and economy as a whole, or getting lost entirely.

For that migration period towards a more sustainable approach, especially the so-called "Copyleft" licences — the GNU General Public License (GPL) being the most widely known — provide a sound basis for such projects.

These licences will make sure that the results of resources spent will be available for all of economy and society equally, fostering a general increase of economic activity. They will resist having the results procured by any single company or person trying to restore old monopolistic situations.

### **Information Age aware governance**

Like information technology permeates all of economy and society, governance decisions in one area can influence chances in the information age significantly. Given the European goal of becoming an information economy, it becomes necessary to be aware of these issues in all areas of governance.

There are several policies pending or in implementation that are about to inflict serious harm on the European competitiveness. These should be prevented or abolished if seeking to increase the European edge.

One policy endangering proprietary and Free Software alike are software patents. Patents are an entirely unsuitable concept for software as it has very different properties. Experience indicates the United States are already paying dearly for their software patent

system with reduced innovation.

To quote Bill Gates from an internal memo: "If people had understood how patents would be granted when most of today's ideas were invented and had taken out patents, the industry would be at a complete standstill today. ... The solution is patenting as much as we can. A future start-up with no patents of its own will be forced to pay whatever price the giants choose to impose. That price might be high. Established companies have an interest in excluding future competitors."<sup>34</sup>

Another extraordinarily harmful law is the European Copyright Directive (EUCD). Its US counterpart, the Digital Millennium Copyright Act (DMCA) is already being used successfully by groups such as Scientology to censor unwelcome web sites.<sup>35</sup> Similar cases can be expected in Europe.

Economically, the EUCD is highly anti-competitive. As it makes it illegal to circumvent whatever is considered a protection measure, the company that created this technical measure is given ultimate control over who may or may not participate in the market based upon it or how these companies should behave.

Example is given by the recent case against the teenager Jon Johansen, in which the question whether buying a DVD in a store will entitle the customer to view that DVD on their computer has become the central issue. The EUCD also provides a serious impediment of the freedoms of speech, communication and choice of profession, giving it a somewhat anti-democratic air.

These two policies are either in the process of adoption or adopted already and should be abolished before they can do further harm to Europe's competitive edge.

The current new initiative to reduce competition in the market further are Palladium and its hardware counterpart proposed by the TCPA. This initiative, which wishes to be known as increasing the trustworthiness of computers, is best described as "Traacherous Computing."<sup>36</sup>

Under the pretence of trying to improve computer security, the TCPA apparently seeks to eliminate concepts and paradigms competing with the monopoly holders of the proprietary software model. Again, Europe would be on the losing side.

## **Résumé**

Free Software as a new paradigm offers a stable, lasting and sustainable approach with higher dynamics and increased efficiency. The first region to understand and adopt it on a larger scale is likely to become a leading force in the information age.

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34<http://swpat.ffii.org/archive/quotes/index.en.html>

35<http://www.theregister.co.uk/content/6/24533.html>

36<http://www.counterpane.com/crypto-gram-0208.html#1>



Currently it seems unlikely that Free Software will ever replace proprietary software completely, but by making Free Software the predominant model, Europe could relieve dependences on foreign monopolies, which currently create a highly unstable and unfavourable situation for the European information technologies industry.

Europe is right now in the unique situation of having a large supply of Free Software competence and growing network of smaller companies that are based upon or centred in Free Software. Also more of the old and traditional European IT companies have begun shifting at least partially towards Free Software.

If this is furthered now, Europe has the potential to become global leader in the information age.

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```
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```

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## ***GPLv3: Simplicity and Length***

By Ciarán O'Riordan <ciaran@fsfe.org>

Everyone wishes that free software licences were shorter. The good news from the GPLv3 process is that by changing the LGPL from being a whole licence to being an additional permission that can accompany the GPL, the LGPL has shrunk drastically and the proposed GPL and LGPL texts, combined, are shorter than the current GPL and LGPL combined. But GPLv3 itself will indeed be longer than version 2 is.

Additional words are necessary to protect against additional problems, to ensure it works the same across national boundaries, and to clarify the meaning of the licence. Since FSF started soliciting comments in January 2006 about how to improve the GPL, there have been few or no suggestions as to how it could be significantly shortened.

But longer doesn't have to mean more complex. GPLv3 is simpler in some ways, and I'd like to describe how it was made simpler so that maybe some people can see other parts of the licence that those same principles can be applied to.

- Clarity of wording: When something is not defined, the reader will have to check their local laws to see what happens in undefined cases. For example, "distribution" was undefined in GPLv2, but re-labelled as "conveying" in v3 to avoid clashing with existing definitions of "distribution" in local laws, and it has been defined. This should make it easier to comply with the licence.
- Clarity of intent: Similarly, GPLv3 adds words to clarify what is intended to happen in new circumstances, such as described in the recent piece I wrote on GPLv3 and the EUCD/DMCA.
- Labelling: Each section in v3 has a descriptive title, unlike version 2 where each section only had a number. This just makes it easier to find what you're looking for.
- Layout: All related things should be grouped together, and each clause should be in the section you'd most expect it to be in.

The number of words needed to ensure that software users had the four freedoms in the 1970s was zero. There were no software patents, no DMCA/EUCD laws, software generally came with source code, and there was generally nothing limiting a person from redistributing software.

As software distributors started blocking these freedoms by legal and technical means, it became necessary for software that was intended to come with those freedoms to be accompanied by licences granting those freedoms and requiring others to pass them on when they pass on the software.

GPLv1, written in 1989, had 1,500 words. GPLv2 has 2,984 words. The GPLv3 has 5,680 words. The most important implementation detail is that it has to work in court, and this can't be compromised for the sake of making a shorter text. But if you can see ways to

make it simpler, that would be very useful because it's not only technology lawyers that have to read the GPL, it's software developers and judges too.

## ***The GNU GPL version 3***

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(Version 1.2)

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acquired as employer in the context of a work and service

- hereinafter referred to as "Beneficiary" -

and the

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\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

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- i Free Software Foundation, 2007, '*Various Licenses and Comments about Them*', <http://www.fsf.org/licensing/licenses/> [12<sup>th</sup> April 2007]
- ii Microsoft, 2007, '*Get The Facts*', <http://www.microsoft.com/windowsserver/facts/default.mspx> [12<sup>th</sup> April 2007]
- iii Portal München Betriebs-GmbH & Co. KG, 2007, '*LiMux - The IT-Evolution*', <http://www.muenchen.de/Rathaus/dir/limux/english/147197/> [12<sup>th</sup> April 2007]